

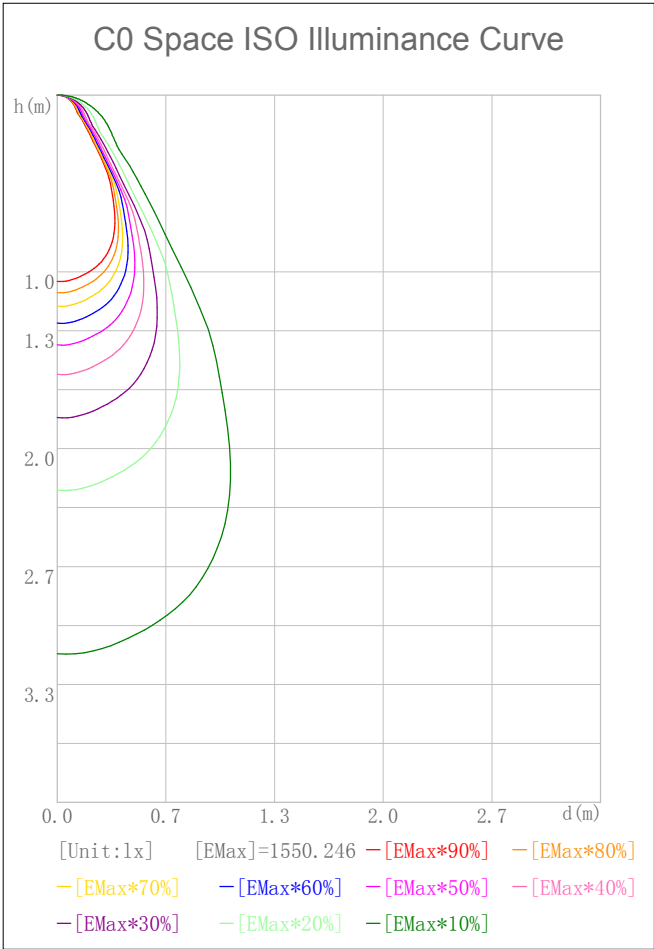
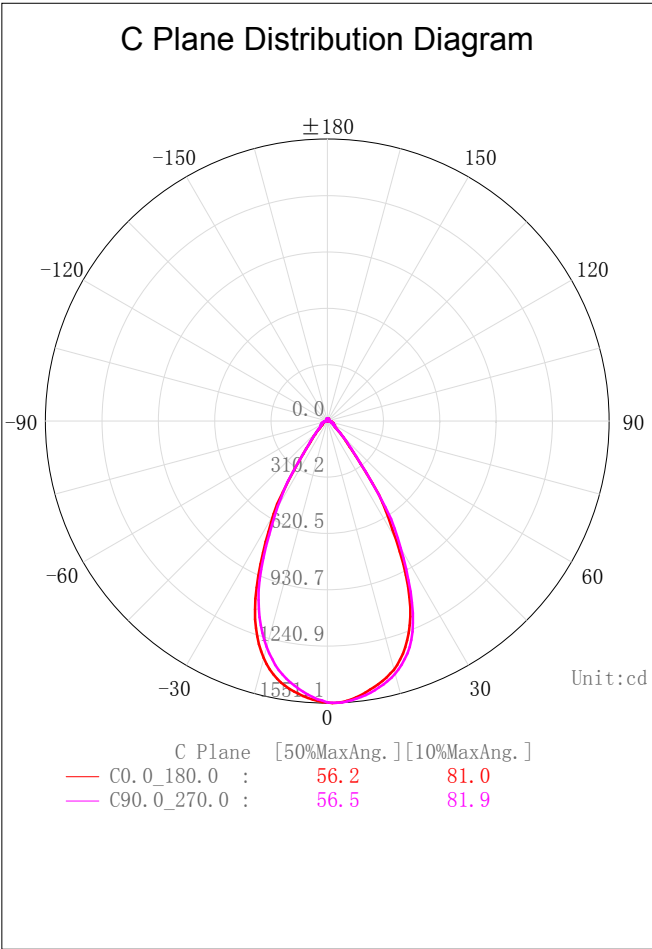
Indoor Luminaire Photometric Data

Description Information

| | | | |
|---|-------------------------|--------------------|-----------------------|
| Luminary Name: TR04-20-XX-01 2700K RA90 60D | | Lum. Catalog: | Test ID: QIU MEI |
| Lamp Name: | | Lamp Catalog: LED | Test Date: 2019/09/05 |
| Manufacture: Shenzhen Norming Lighting Co., Ltd | | Shld.Ang(°): | Test Machine:GON-2000 |
| Test Lab: Quality Department | | Frequency(Hz): | Lamp CCT(K): Ra: |
| Lum.Size(W*L*H):0.060m*0.060m*0.250m | | Lum.Area(m2):0.019 | Lum.W(kg): 0.000 |
| Test System: C, γ | Test Step: C=90.0 γ=1.0 | Temp.(°C): 25 | Humidity(%): 50.0 |

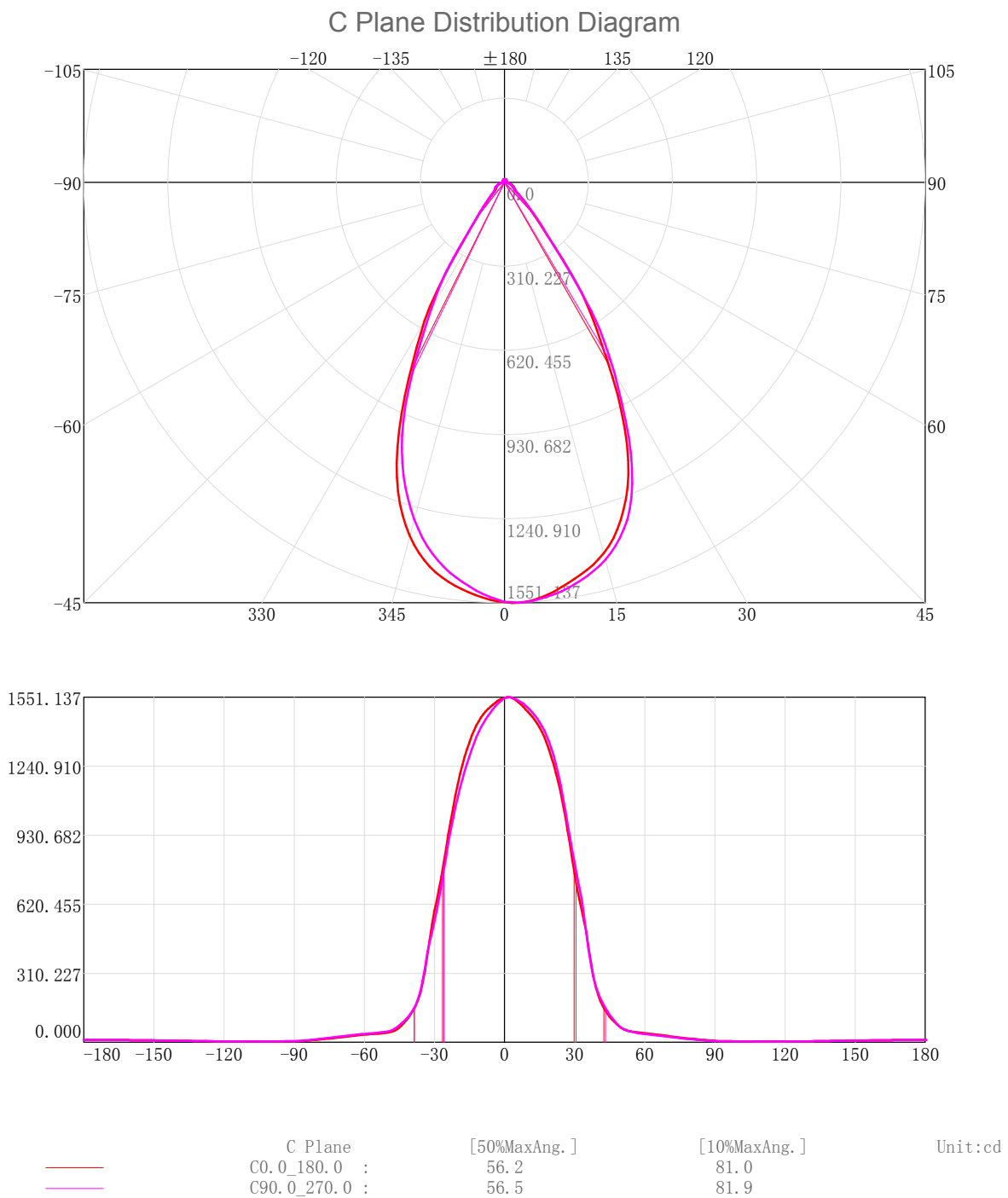
Character Parameter

| Lamp Speciality Parameter | | Luminaire Speciality Parameter | |
|--|-------------------------------|--|--|
| Rated Flux(lm): 1424.970 | Luminary Flux(lm): 1424.970 | Field Angle(10%Imax): 81.0(°) | |
| Rated Power(W): | Luminary Efficiency: 100.00% | Down Lumens&Percent: 1386.748lm 97.32% | |
| Rated Voltage(V): | Luminary EER(lm/W): 74.841 | Up Lumens&Percent: 38.222lm 2.68% | |
| Tested Power(W): 19.040 | Max.Candela(cd): 1551.137 | S/MH: C0_a180=0.899 C90_270=0.896 | |
| Lamps' Inside: 1 | Max Cand@Ang.(°): C=0.0 γ=2.0 | CIE Type: Semi-Direct | |
| Tested Electrics(V, A, pf):239.9, 0.081, 0.976Beam Angle(50%Imax): 56.2(°) | | ErP Φuse(90°): 1259.509lm | |
| Lamp Size(W*L*H):0.060m*0.060m*0.250m | | IRF(%): 238.593 | |



2D Plane Light Intensity Distribution Curve

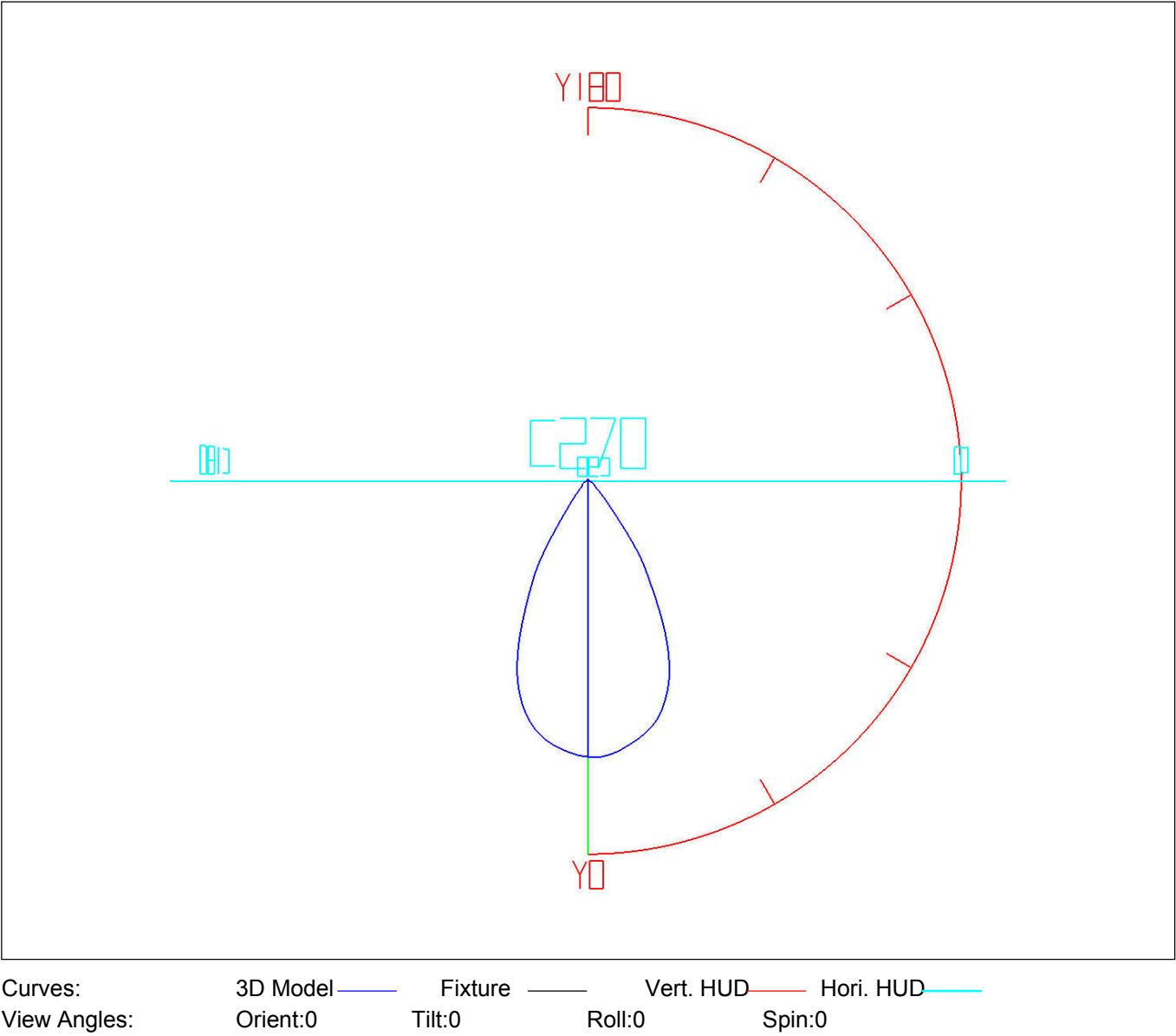
| | | |
|--|-----------------------|-----------------------------|
| Lum. Name:TR04-20-XX-01 2700K RA90 60D | Lum. Catelog: | Test ID:QIU MEI |
| Lamp Name: | Lamp Catelog:LED | Test Lab:Quality Department |
| Manufacture:Shenzhen Norming Lighting Co., Ltd | Test Machine:GON-2000 | Test Date:2019/09/05 |



3D Light Intensity Distribution Modal

| | | |
|--|-----------------------|-----------------------------|
| Lum. Name:TR04-20-XX-01 2700K RA90 60D | Lum. Catelog: | Test ID:QIU MEI |
| Lamp Name: | Lamp Catelog:LED | Test Lab:Quality Department |
| Manufacture:Shenzhen Norming Lighting Co., Ltd | Test Machine:GON-2000 | Test Date:2019/09/05 |

3D Light Intensity Distribution Modal



Photometric Filename:TR04-20-XX-01 2700K RA90 60D.IES

| Zone (γ) | Zone Flux (1m) | Sums Flux (1m) | Zone%Lamp | Sums%Lamp | Zone (γ) | Zone Flux (1m) | Sums Flux (1m) | Zone%Lamp | Sums%Lamp |
|-----------|-------------------|-------------------|-----------|-----------|-----------|-------------------|-------------------|-----------|-----------|
| 0.0-1.0 | 1.48 | 1.48 | 0.10 | 0.10 | 47.0-48.0 | 5.80 | 1272.19 | 0.41 | 89.28 |
| 1.0-2.0 | 4.43 | 5.91 | 0.31 | 0.41 | 48.0-49.0 | 5.29 | 1277.48 | 0.37 | 89.65 |
| 2.0-3.0 | 7.37 | 13.28 | 0.52 | 0.93 | 49.0-50.0 | 4.89 | 1282.37 | 0.34 | 89.99 |
| 3.0-4.0 | 10.27 | 23.55 | 0.72 | 1.65 | 50.0-51.0 | 4.59 | 1286.97 | 0.32 | 90.32 |
| 4.0-5.0 | 13.14 | 36.69 | 0.92 | 2.57 | 51.0-52.0 | 4.38 | 1291.35 | 0.31 | 90.62 |
| 5.0-6.0 | 15.96 | 52.65 | 1.12 | 3.69 | 52.0-53.0 | 4.23 | 1295.58 | 0.30 | 90.92 |
| 6.0-7.0 | 18.73 | 71.38 | 1.31 | 5.01 | 53.0-54.0 | 4.10 | 1299.68 | 0.29 | 91.21 |
| 7.0-8.0 | 21.44 | 92.82 | 1.50 | 6.51 | 54.0-55.0 | 4.00 | 1303.67 | 0.28 | 91.49 |
| 8.0-9.0 | 24.09 | 116.91 | 1.69 | 8.20 | 55.0-56.0 | 3.91 | 1307.58 | 0.27 | 91.76 |
| 9.0-10.0 | 26.66 | 143.57 | 1.87 | 10.08 | 56.0-57.0 | 3.83 | 1311.41 | 0.27 | 92.03 |
| 10.0-11.0 | 29.15 | 172.72 | 2.05 | 12.12 | 57.0-58.0 | 3.77 | 1315.19 | 0.26 | 92.30 |
| 11.0-12.0 | 31.55 | 204.27 | 2.21 | 14.33 | 58.0-59.0 | 3.71 | 1318.90 | 0.26 | 92.56 |
| 12.0-13.0 | 33.83 | 238.10 | 2.37 | 16.71 | 59.0-60.0 | 3.66 | 1322.56 | 0.26 | 92.81 |
| 13.0-14.0 | 35.99 | 274.09 | 2.53 | 19.23 | 60.0-61.0 | 3.60 | 1326.16 | 0.25 | 93.07 |
| 14.0-15.0 | 38.00 | 312.09 | 2.67 | 21.90 | 61.0-62.0 | 3.54 | 1329.70 | 0.25 | 93.31 |
| 15.0-16.0 | 39.85 | 351.94 | 2.80 | 24.70 | 62.0-63.0 | 3.47 | 1333.16 | 0.24 | 93.56 |
| 16.0-17.0 | 41.52 | 393.46 | 2.91 | 27.61 | 63.0-64.0 | 3.39 | 1336.55 | 0.24 | 93.79 |
| 17.0-18.0 | 42.98 | 436.44 | 3.02 | 30.63 | 64.0-65.0 | 3.30 | 1339.85 | 0.23 | 94.03 |
| 18.0-19.0 | 44.23 | 480.67 | 3.10 | 33.73 | 65.0-66.0 | 3.20 | 1343.05 | 0.22 | 94.25 |
| 19.0-20.0 | 45.22 | 525.89 | 3.17 | 36.91 | 66.0-67.0 | 3.10 | 1346.15 | 0.22 | 94.47 |
| 20.0-21.0 | 45.94 | 571.84 | 3.22 | 40.13 | 67.0-68.0 | 2.99 | 1349.14 | 0.21 | 94.68 |
| 21.0-22.0 | 46.35 | 618.19 | 3.25 | 43.38 | 68.0-69.0 | 2.88 | 1352.01 | 0.20 | 94.88 |
| 22.0-23.0 | 46.41 | 664.60 | 3.26 | 46.64 | 69.0-70.0 | 2.76 | 1354.78 | 0.19 | 95.07 |
| 23.0-24.0 | 46.08 | 710.68 | 3.23 | 49.87 | 70.0-71.0 | 2.65 | 1357.42 | 0.19 | 95.26 |
| 24.0-25.0 | 45.36 | 756.04 | 3.18 | 53.06 | 71.0-72.0 | 2.53 | 1359.95 | 0.18 | 95.44 |
| 25.0-26.0 | 44.27 | 800.31 | 3.11 | 56.16 | 72.0-73.0 | 2.41 | 1362.37 | 0.17 | 95.61 |
| 26.0-27.0 | 42.90 | 843.21 | 3.01 | 59.17 | 73.0-74.0 | 2.30 | 1364.66 | 0.16 | 95.77 |
| 27.0-28.0 | 41.34 | 884.55 | 2.90 | 62.08 | 74.0-75.0 | 2.18 | 1366.85 | 0.15 | 95.92 |
| 28.0-29.0 | 39.67 | 924.22 | 2.78 | 64.86 | 75.0-76.0 | 2.07 | 1368.91 | 0.15 | 96.07 |
| 29.0-30.0 | 37.90 | 962.12 | 2.66 | 67.52 | 76.0-77.0 | 1.95 | 1370.86 | 0.14 | 96.20 |
| 30.0-31.0 | 36.00 | 998.12 | 2.53 | 70.04 | 77.0-78.0 | 1.84 | 1372.70 | 0.13 | 96.33 |
| 31.0-32.0 | 33.88 | 1032.00 | 2.38 | 72.42 | 78.0-79.0 | 1.73 | 1374.43 | 0.12 | 96.45 |
| 32.0-33.0 | 31.52 | 1063.52 | 2.21 | 74.63 | 79.0-80.0 | 1.62 | 1376.05 | 0.11 | 96.57 |
| 33.0-34.0 | 28.77 | 1092.29 | 2.02 | 76.65 | 80.0-81.0 | 1.51 | 1377.56 | 0.11 | 96.67 |
| 34.0-35.0 | 25.68 | 1117.97 | 1.80 | 78.46 | 81.0-82.0 | 1.40 | 1378.96 | 0.10 | 96.77 |
| 35.0-36.0 | 22.46 | 1140.43 | 1.58 | 80.03 | 82.0-83.0 | 1.30 | 1380.26 | 0.09 | 96.8 |

IES Indoor Report

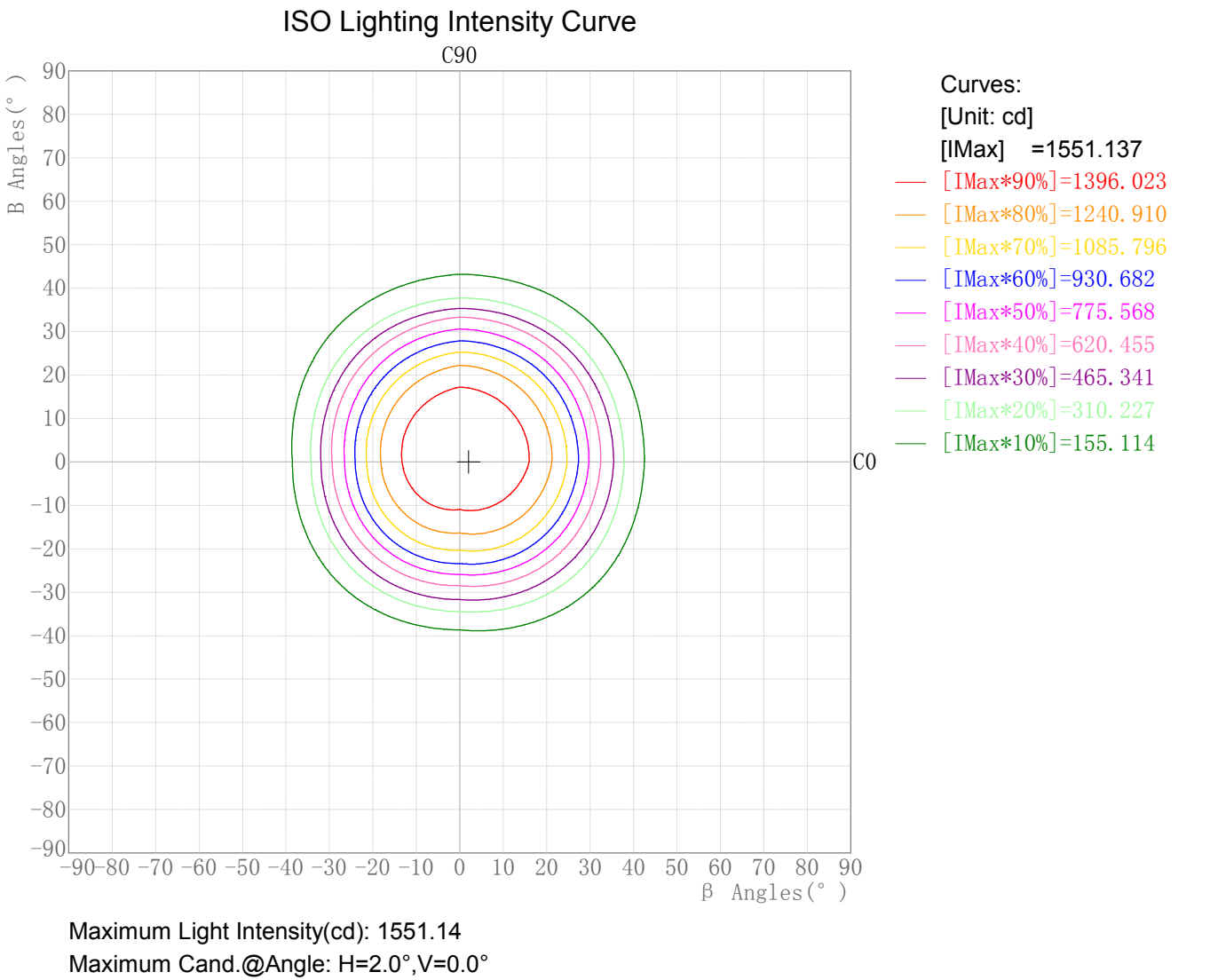
Photometric Filename:TR04-20-XX-01 2700K RA90 60D.IES

Zonal Flux Tabulation - (Cont.)

| Zone (γ) | Zone Flux (lm) | Sums Flux (lm) | Zone%Lamp | Sums%Lamp | Zone (γ) | Zone Flux (lm) | Sums Flux (lm) | Zone%Lamp | Sums%Lamp |
|---------------|-------------------|-------------------|-----------|-----------|---------------|-------------------|-------------------|-----------|-----------|
| 94. 0-95. 0 | 0. 59 | 1389. 85 | 0. 04 | 97. 54 | 141. 0-142. 0 | 0. 51 | 1412. 54 | 0. 04 | 99. 13 |
| 95. 0-96. 0 | 0. 58 | 1390. 43 | 0. 04 | 97. 58 | 142. 0-143. 0 | 0. 51 | 1413. 05 | 0. 04 | 99. 16 |
| 96. 0-97. 0 | 0. 57 | 1391. 00 | 0. 04 | 97. 62 | 143. 0-144. 0 | 0. 51 | 1413. 56 | 0. 04 | 99. 20 |
| 97. 0-98. 0 | 0. 56 | 1391. 55 | 0. 04 | 97. 66 | 144. 0-145. 0 | 0. 51 | 1414. 07 | 0. 04 | 99. 23 |
| 98. 0-99. 0 | 0. 54 | 1392. 10 | 0. 04 | 97. 69 | 145. 0-146. 0 | 0. 50 | 1414. 57 | 0. 04 | 99. 27 |
| 99. 0-100. 0 | 0. 53 | 1392. 63 | 0. 04 | 97. 73 | 146. 0-147. 0 | 0. 50 | 1415. 07 | 0. 04 | 99. 31 |
| 100. 0-101. 0 | 0. 52 | 1393. 16 | 0. 04 | 97. 77 | 147. 0-148. 0 | 0. 50 | 1415. 57 | 0. 03 | 99. 34 |
| 101. 0-102. 0 | 0. 51 | 1393. 67 | 0. 04 | 97. 80 | 148. 0-149. 0 | 0. 49 | 1416. 06 | 0. 03 | 99. 37 |
| 102. 0-103. 0 | 0. 50 | 1394. 17 | 0. 04 | 97. 84 | 149. 0-150. 0 | 0. 49 | 1416. 55 | 0. 03 | 99. 41 |
| 103. 0-104. 0 | 0. 50 | 1394. 67 | 0. 03 | 97. 87 | 150. 0-151. 0 | 0. 48 | 1417. 03 | 0. 03 | 99. 44 |
| 104. 0-105. 0 | 0. 49 | 1395. 16 | 0. 03 | 97. 91 | 151. 0-152. 0 | 0. 47 | 1417. 50 | 0. 03 | 99. 48 |
| 105. 0-106. 0 | 0. 48 | 1395. 64 | 0. 03 | 97. 94 | 152. 0-153. 0 | 0. 46 | 1417. 96 | 0. 03 | 99. 51 |
| 106. 0-107. 0 | 0. 47 | 1396. 11 | 0. 03 | 97. 97 | 153. 0-154. 0 | 0. 45 | 1418. 42 | 0. 03 | 99. 54 |
| 107. 0-108. 0 | 0. 47 | 1396. 58 | 0. 03 | 98. 01 | 154. 0-155. 0 | 0. 44 | 1418. 86 | 0. 03 | 99. 57 |
| 108. 0-109. 0 | 0. 46 | 1397. 04 | 0. 03 | 98. 04 | 155. 0-156. 0 | 0. 43 | 1419. 30 | 0. 03 | 99. 60 |
| 109. 0-110. 0 | 0. 46 | 1397. 50 | 0. 03 | 98. 07 | 156. 0-157. 0 | 0. 42 | 1419. 72 | 0. 03 | 99. 63 |
| 110. 0-111. 0 | 0. 45 | 1397. 95 | 0. 03 | 98. 10 | 157. 0-158. 0 | 0. 41 | 1420. 13 | 0. 03 | 99. 66 |
| 111. 0-112. 0 | 0. 45 | 1398. 40 | 0. 03 | 98. 14 | 158. 0-159. 0 | 0. 40 | 1420. 53 | 0. 03 | 99. 69 |
| 112. 0-113. 0 | 0. 45 | 1398. 84 | 0. 03 | 98. 17 | 159. 0-160. 0 | 0. 38 | 1420. 91 | 0. 03 | 99. 72 |
| 113. 0-114. 0 | 0. 44 | 1399. 29 | 0. 03 | 98. 20 | 160. 0-161. 0 | 0. 37 | 1421. 28 | 0. 03 | 99. 74 |
| 114. 0-115. 0 | 0. 44 | 1399. 73 | 0. 03 | 98. 23 | 161. 0-162. 0 | 0. 36 | 1421. 64 | 0. 02 | 99. 77 |
| 115. 0-116. 0 | 0. 44 | 1400. 17 | 0. 03 | 98. 26 | 162. 0-163. 0 | 0. 34 | 1421. 98 | 0. 02 | 99. 79 |
| 116. 0-117. 0 | 0. 44 | 1400. 61 | 0. 03 | 98. 29 | 163. 0-164. 0 | 0. 32 | 1422. 30 | 0. 02 | 99. 81 |
| 117. 0-118. 0 | 0. 44 | 1401. 05 | 0. 03 | 98. 32 | 164. 0-165. 0 | 0. 31 | 1422. 61 | 0. 02 | 99. 83 |
| 118. 0-119. 0 | 0. 44 | 1401. 50 | 0. 03 | 98. 35 | 165. 0-166. 0 | 0. 29 | 1422. 90 | 0. 02 | 99. 85 |
| 119. 0-120. 0 | 0. 44 | 1401. 94 | 0. 03 | 98. 38 | 166. 0-167. 0 | 0. 27 | 1423. 18 | 0. 02 | 99. 87 |
| 120. 0-121. 0 | 0. 45 | 1402. 38 | 0. 03 | 98. 41 | 167. 0-168. 0 | 0. 26 | 1423. 44 | 0. 02 | 99. 89 |
| 121. 0-122. 0 | 0. 45 | 1402. 83 | 0. 03 | 98. 45 | 168. 0-169. 0 | 0. 24 | 1423. 67 | 0. 02 | 99. 91 |
| 122. 0-123. 0 | 0. 45 | 1403. 28 | 0. 03 | 98. 48 | 169. 0-170. 0 | 0. 22 | 1423. 89 | 0. 02 | 99. 92 |
| 123. 0-124. 0 | 0. 45 | 1403. 74 | 0. 03 | 98. 51 | 170. 0-171. 0 | 0. 20 | 1424. 09 | 0. 01 | 99. 94 |
| 124. 0-125. 0 | 0. 46 | 1404. 19 | 0. 03 | 98. 54 | 171. 0-172. 0 | 0. 18 | 1424. 28 | 0. 01 | 99. 95 |
| 125. 0-126. 0 | 0. 46 | 1404. 65 | 0. 03 | 98. 57 | 172. 0-173. 0 | 0. 16 | 1424. 44 | 0. 01 | 99. 96 |
| 126. 0-127. 0 | 0. 47 | 1405. 12 | 0. 03 | 98. 61 | 173. 0-174. 0 | 0. 14 | 1424. 58 | 0. 01 | 99. 97 |
| 127. 0-128. 0 | 0. 47 | 1405. 59 | 0. 03 | 98. 64 | 174. 0-175. 0 | 0. 12 | 1424. 70 | 0. 01 | 99. 98 |
| 128. 0-129. 0 | 0. 47 | 1406. 06 | 0. 03 | 98. 67 | 175. 0-176. 0 | 0. 10 | 1424. 79 | 0. 01 | 99. 99 |
| 129. 0-130. 0 | 0. 48 | 1406. 54 | 0. 03 | 98. 71 | 176. 0-177. 0 | 0. 08 | 1424. 87 | 0. 01 | 99. 99 |
| 130. 0-131. 0 | 0. 48 | 1407. 02 | 0. 03 | 98. 74 | 177. 0-178. 0 | 0. 06 | 1424. 93 | 0. 00 | 100. 00 |
| 131. 0-132. 0 | 0. 49 | 1407. 51 | 0. 03 | 98. 77 | 178. 0-179. 0 | 0. 03 | 1424. 96 | 0. 00 | 100. 00 |
| 132. 0-133. 0 | 0. 49 | 1408. 00 | 0. 03 | 98. 81 | 179. 0-180. 0 | 0. 01 | 1424. 97 | 0. 00 | 100. 00 |
| 133. 0-134. 0 | 0. 49 | 1408. 49 | 0. 03 | 98. 84 | | | | | |
| 134. 0-135. 0 | 0. 50 | 1408. 99 | 0. 03 | 98. 88 | | | | | |
| 135. 0-136. 0 | 0. 50 | 1409. 49 | 0. 04 | 98. 91 | | | | | |
| 136. 0-137. 0 | 0. 50 | 1410. 00 | 0. 04 | 98. 95 | | | | | |
| 137. 0-138. 0 | 0. 51 | 1410. 50 | 0. 04 | 98. 98 | | | | | |
| 138. 0-139. 0 | 0. 51 | 1411. 01 | 0. 04 | 99. 02 | | | | | |
| 139. 0-140. 0 | 0. 51 | 1411. 52 | 0. 04 | 99. 06 | | | | | |
| 140. 0-141. 0 | 0. 51 | 1412. 03 | 0. 04 | 99. 09 | | | | | |

Rectangle ISO Lighting Intensity Diagram

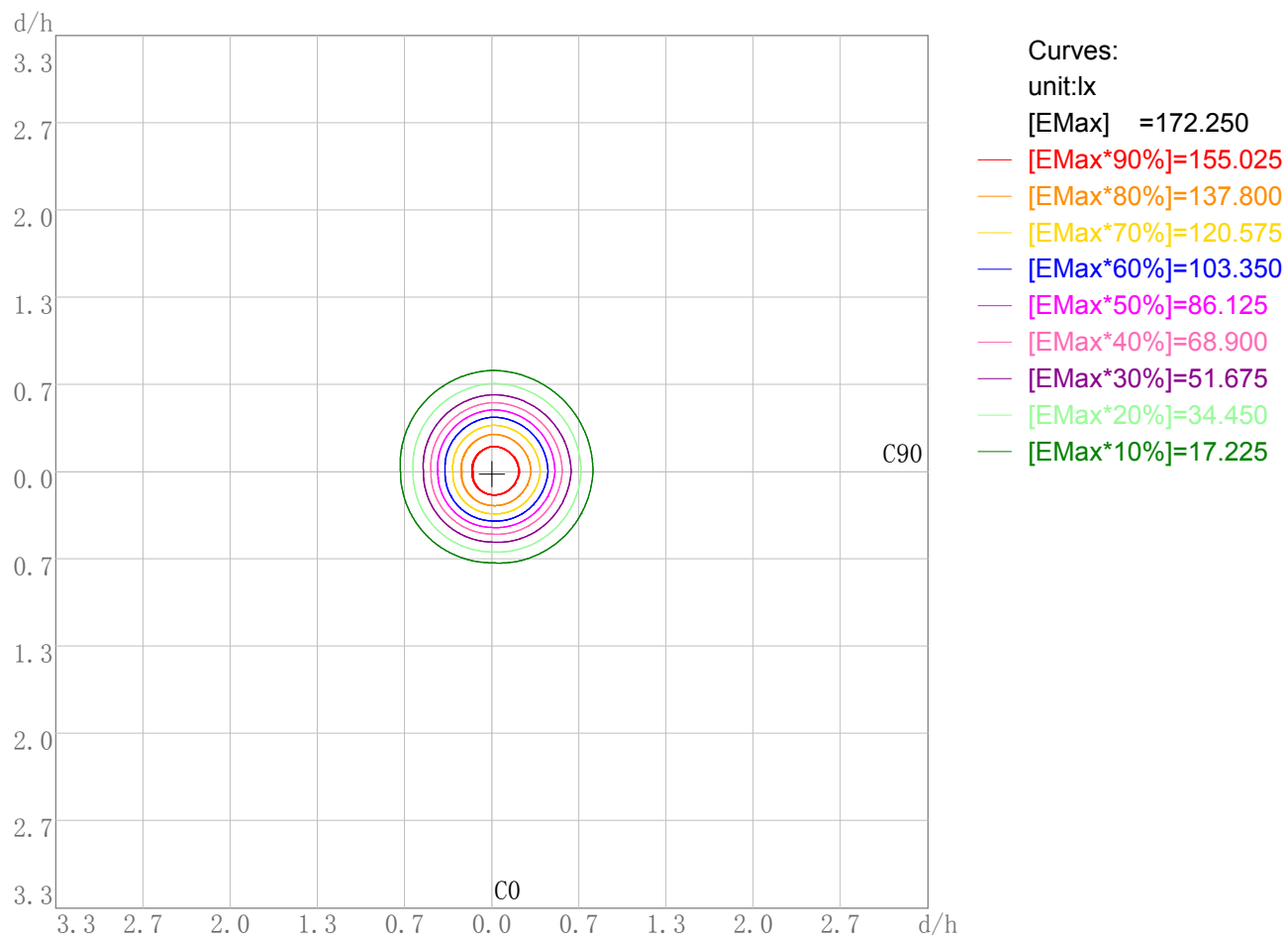
| | | |
|--|-----------------------|-----------------------------|
| Lum. Name:TR04-20-XX-01 2700K RA90 60D | Lum. Catelog: | Test ID:QIU MEI |
| Lamp Name: | Lamp Catelog:LED | Test Lab:Quality Department |
| Manufacture:Shenzhen Norming Lighting Co., Ltd | Test Machine:GON-2000 | Test Date:2019/09/05 |



Plane ISO-Illuminance Diagram

| | | |
|--|-----------------------|-----------------------------|
| Lum. Name:TR04-20-XX-01 2700K RA90 60D | Lum. Catelog: | Test ID:QIU MEI |
| Lamp Name: | Lamp Catelog:LED | Test Lab:Quality Department |
| Manufacture:Shenzhen Norming Lighting Co., Ltd | Test Machine:GON-2000 | Test Date:2019/09/05 |

Plane ISO-Illuminance Curve

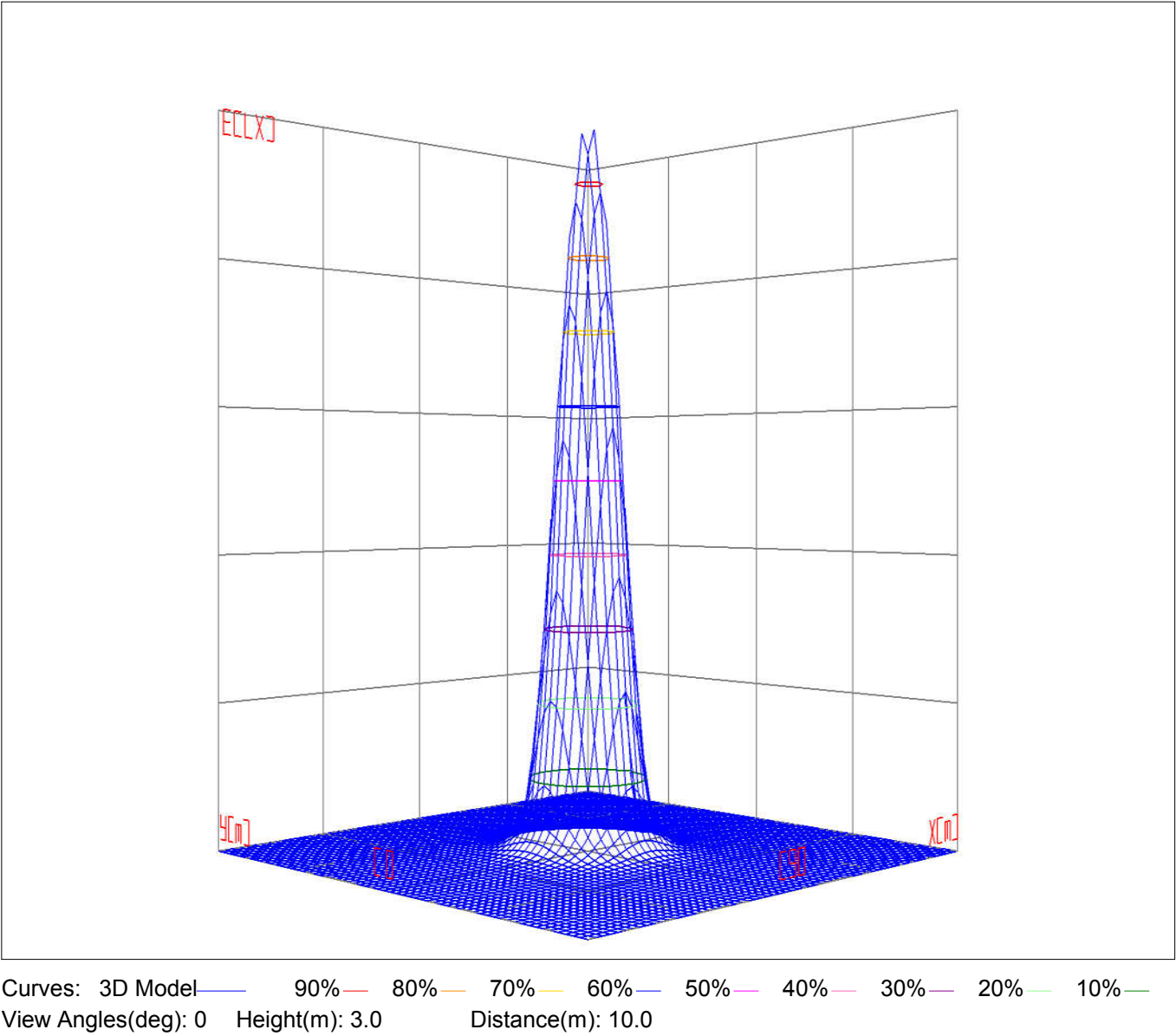


Working Plane Luminaire Mounting Height(m): 3.00
Working Plane Maximum Illuminance(lx): 172.25
Working Plane Maximum Illuminance Position(d/h):H0.0 V0.0

3D Plane ISO Illuminance Diagram

| | | |
|--|-----------------------|-----------------------------|
| Lum. Name:TR04-20-XX-01 2700K RA90 60D | Lum. Catelog: | Test ID:QIU MEI |
| Lamp Name: | Lamp Catelog:LED | Test Lab:Quality Department |
| Manufacture:Shenzhen Norming Lighting Co., Ltd | Test Machine:GON-2000 | Test Date:2019/09/05 |

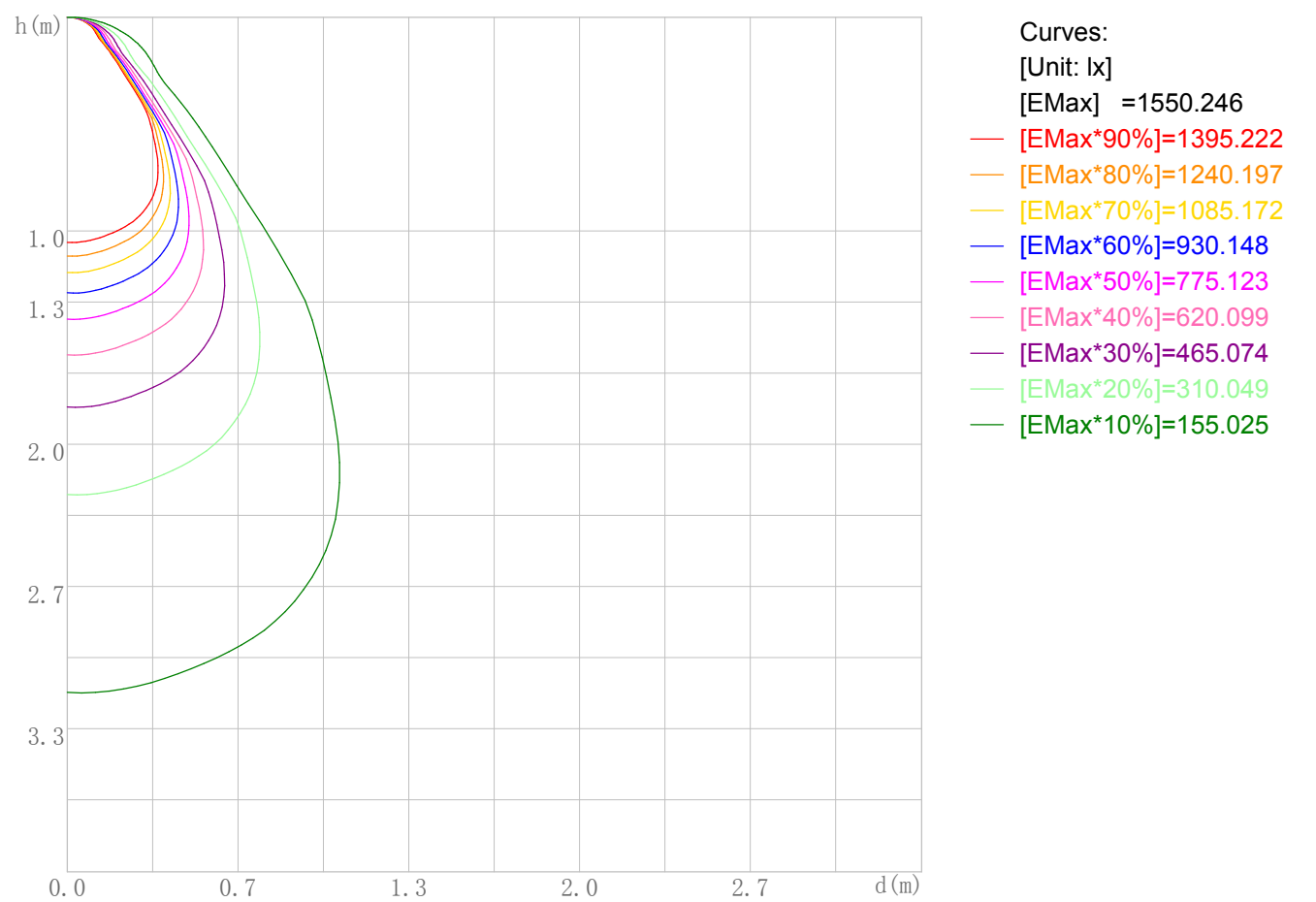
3D Plane Illuminance Modal



Space ISO Illuminance Diagram

| | | |
|--|-----------------------|-----------------------------|
| Lum. Name:TR04-20-XX-01 2700K RA90 60D | Lum. Catelog: | Test ID:QIU MEI |
| Lamp Name: | Lamp Catelog:LED | Test Lab:Quality Department |
| Manufacture:Shenzhen Norming Lighting Co., Ltd | Test Machine:GON-2000 | Test Date:2019/09/05 |

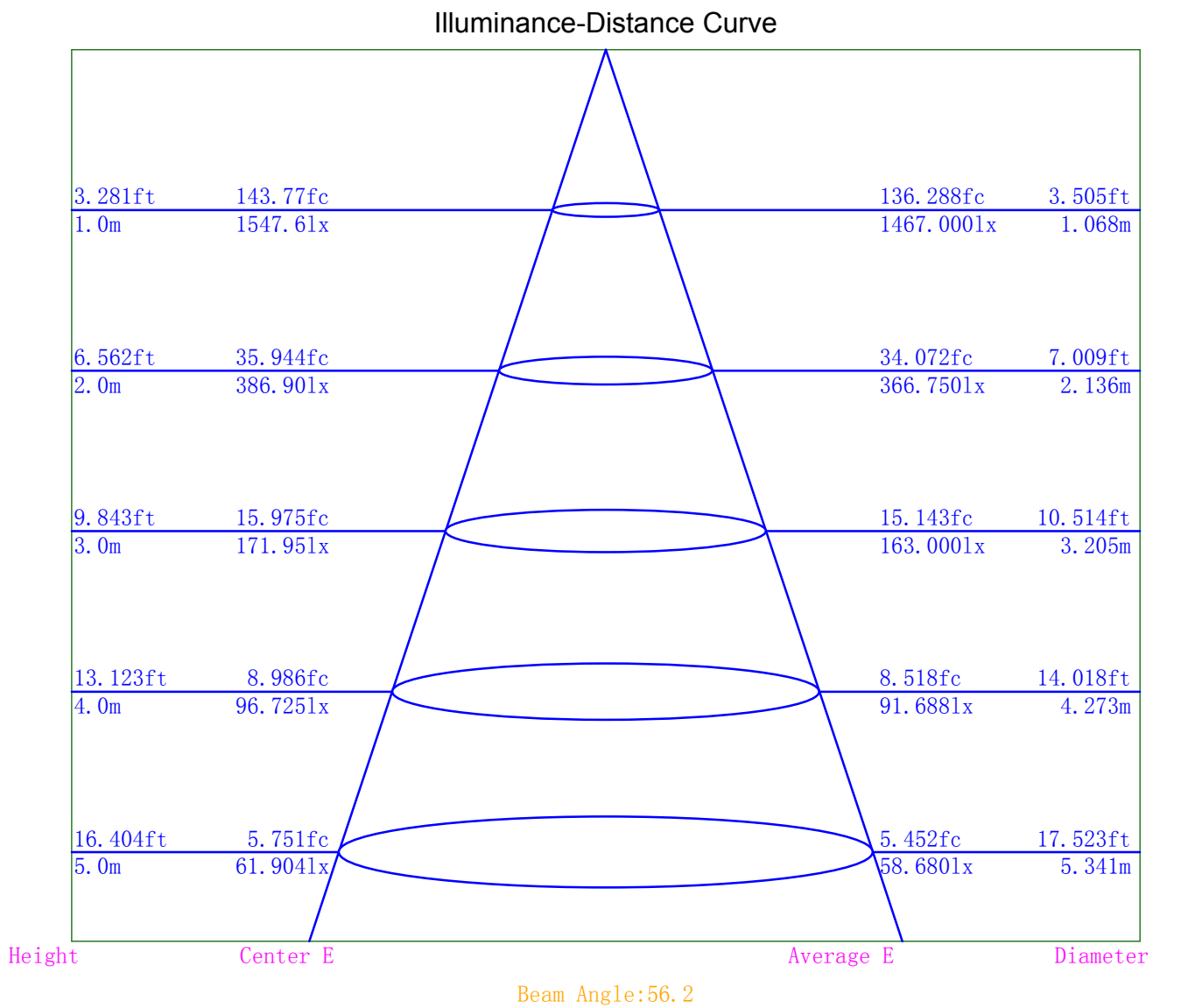
Space ISO Illuminance Curve



Space Plane Maximum Illuminance and @Angle:1550.25lx,1.0deg
Plane Maximum Lighting Intensity and @Angle:1551.137cd,0eg

Illuminance-Distance Diagram

| | | |
|---|-----------------------|------------------------------|
| Lum. Name: TR04-20-XX-01 2700K RA90 60D | Lum. Catalog: | Test ID: QIU MEI |
| Lamp Name: | Lamp Catalog: LED | Test Lab: Quality Department |
| Manufacture: Shenzhen Norming Lighting Co., Ltd | Test Machine:GON-2000 | Test Date: 2019/09/05 |



Indoor Luminance Limiting Curves

| | | |
|--|-----------------------|-----------------------------|
| Lum. Name:TR04-20-XX-01 2700K RA90 60D | Lum. Catalog: | Test ID:QIU MEI |
| Lamp Name: | Lamp Catalog:LED | Test Lab:Quality Department |
| Manufacture:Shenzhen Norming Lighting Co., Ltd | Test Machine:GON-2000 | Test Date:2019/09/05 |

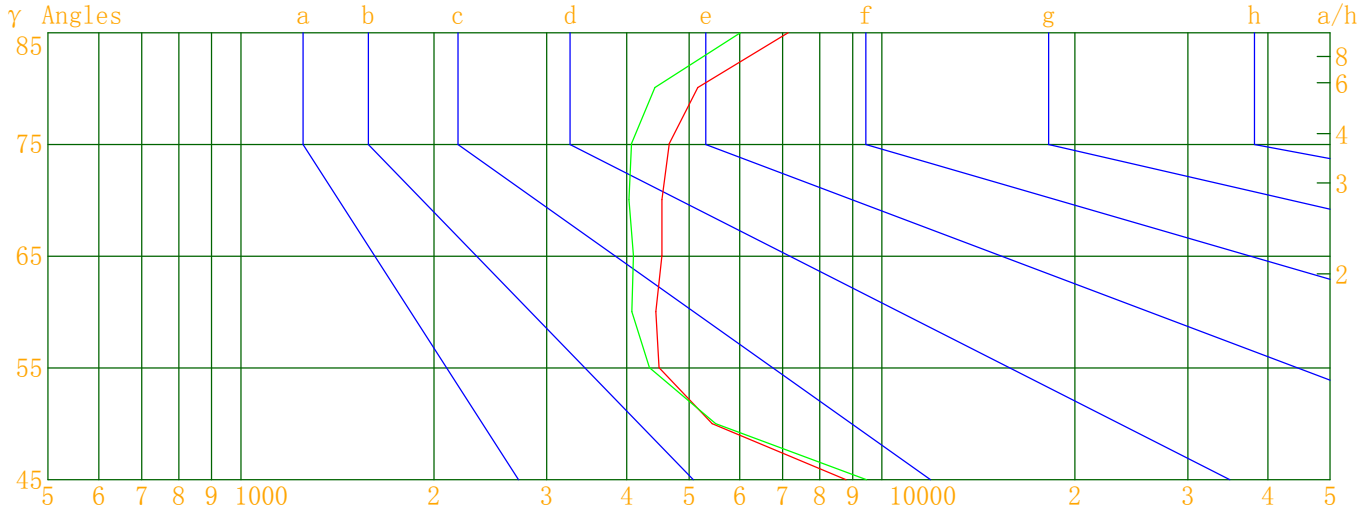
Glare Grade Table

| GI | Quality | Using Illuminance | | | | | | | |
|------|---------|-------------------|------|------|-------|-------|-------|-------|-------|
| 1.15 | A | 2000 | 1000 | 500 | <=300 | | | | |
| 1.5 | B | | 2000 | 1000 | 500 | <=300 | | | |
| 1.85 | C | | | 2000 | 1000 | 500 | <=300 | | |
| 2.2 | D | | | | 2000 | 1000 | 500 | <=300 | |
| 2.55 | E | a | | | | 2000 | 1000 | 500 | <=300 |
| | | | b | c | d | e | f | g | h |

Luminance Table

| Gama (deg) | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 |
|------------|------|------|------|------|------|------|------|------|------|
| C0 | 8788 | 5432 | 4493 | 4441 | 4539 | 4539 | 4660 | 5162 | 7138 |
| C90 | 9460 | 5502 | 4339 | 4074 | 4097 | 4030 | 4069 | 4424 | 6014 |

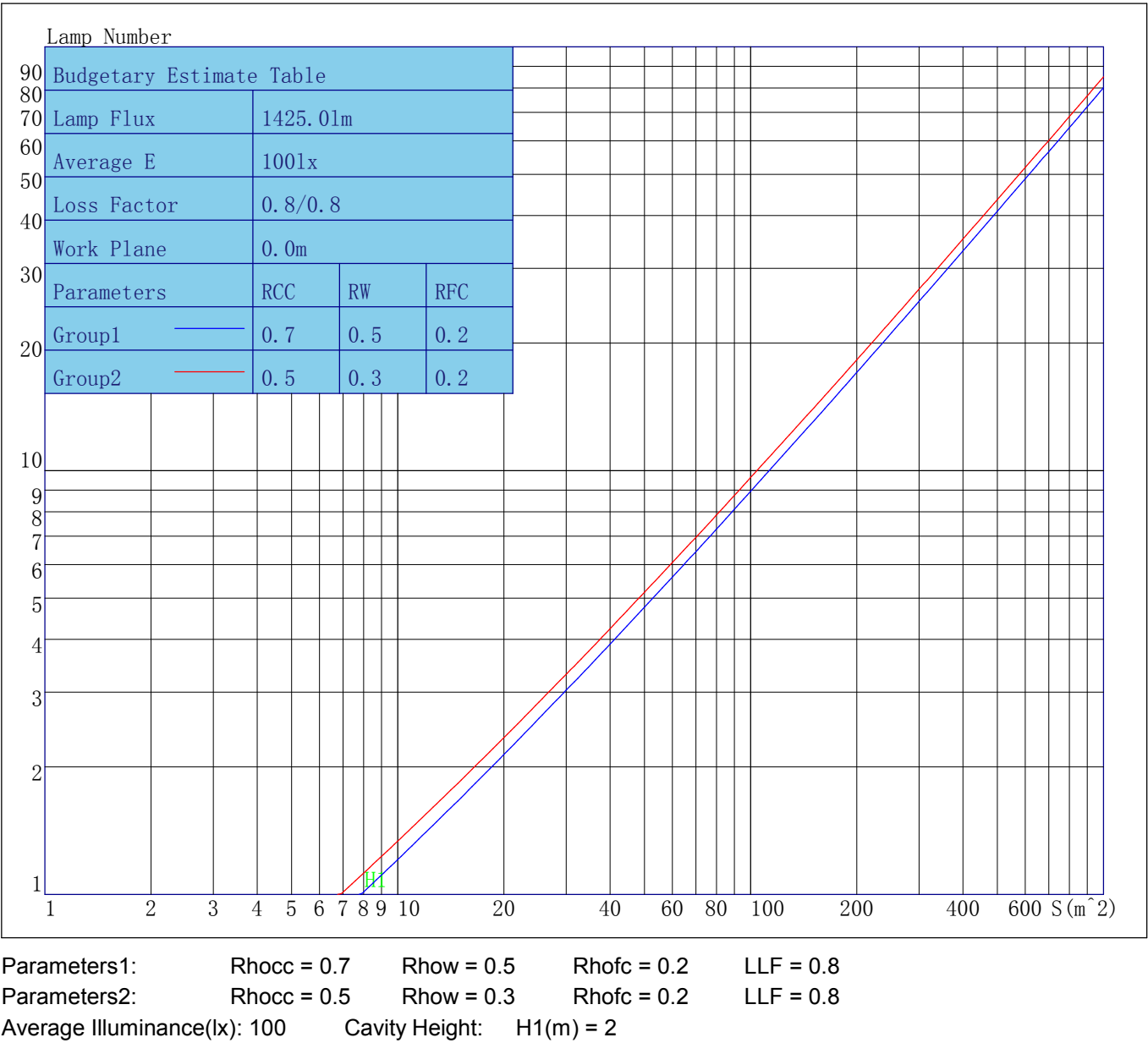
Luminance Limiting Curve



Luminous Size: Length(m)=0.060 Width(m)=0.060 Height(m)=0.250 Area(m^2)=0.018600
Luminous Type: Without Luminous Side
Luminous Curves: C0-C180 Color: C90-C270 Color:

Indoor Budgetary Estimate Table

| | | |
|--|-----------------------|-----------------------------|
| Lum. Name:TR04-20-XX-01 2700K RA90 60D | Lum. Catelog: | Test ID:QIU MEI |
| Lamp Name: | Lamp Catelog:LED | Test Lab:Quality Department |
| Manufacture:Shenzhen Norming Lighting Co., Ltd | Test Machine:GON-2000 | Test Date:2019/09/05 |



Indoor Coefficient of Utilization Table

| | | |
|--|-----------------------|-----------------------------|
| Lum. Name:TR04-20-XX-01 2700K RA90 60D | Lum. Catelog: | Test ID:QIU MEI |
| Lamp Name: | Lamp Catelog:LED | Test Lab:Quality Department |
| Manufacture:Shenzhen Norming Lighting Co., Ltd | Test Machine:GON-2000 | Test Date:2019/09/05 |

| Coefficients of Utilization - Zonal Cavity Method | | | | | | | | | | | | | | | | | | |
|---|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|
| Coef. | Effective Floor Cavity Reflectance RFC=0.20 | | | | | | | | | | | | | | | | | |
| RhoCC (%) | 80 | | | | 70 | | | | 50 | | | 30 | | | 10 | | | 0 |
| RhoW (%) | 70 | 50 | 30 | 10 | 70 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 0 |
| RCR | Coefficient of Utilization(%) | | | | | | | | | | | | | | | | | |
| 0 | 118 | 118 | 118 | 118 | 115 | 115 | 115 | 115 | 110 | 110 | 110 | 104 | 104 | 104 | 100 | 100 | 100 | 97 |
| 1 | 112 | 109 | 106 | 104 | 109 | 106 | 104 | 102 | 102 | 100 | 98 | 98 | 96 | 95 | 94 | 93 | 91 | 89 |
| 2 | 106 | 100 | 96 | 92 | 103 | 98 | 94 | 91 | 95 | 91 | 89 | 91 | 89 | 86 | 88 | 86 | 84 | 82 |
| 3 | 100 | 93 | 88 | 83 | 98 | 91 | 87 | 83 | 88 | 84 | 81 | 86 | 82 | 79 | 83 | 80 | 78 | 76 |
| 4 | 95 | 87 | 81 | 76 | 93 | 85 | 80 | 76 | 83 | 78 | 74 | 80 | 76 | 73 | 78 | 75 | 72 | 70 |
| 5 | 90 | 81 | 75 | 70 | 88 | 80 | 74 | 70 | 78 | 73 | 69 | 76 | 71 | 68 | 74 | 70 | 67 | 65 |
| 6 | 85 | 76 | 69 | 65 | 83 | 75 | 69 | 65 | 73 | 68 | 64 | 71 | 67 | 63 | 70 | 66 | 63 | 61 |
| 7 | 81 | 71 | 65 | 60 | 79 | 70 | 64 | 60 | 69 | 64 | 60 | 67 | 63 | 59 | 66 | 62 | 59 | 57 |
| 8 | 77 | 67 | 61 | 57 | 75 | 66 | 60 | 56 | 65 | 60 | 56 | 64 | 59 | 55 | 63 | 58 | 55 | 54 |
| 9 | 73 | 63 | 57 | 53 | 72 | 63 | 57 | 53 | 61 | 56 | 53 | 60 | 56 | 52 | 59 | 55 | 52 | 50 |
| 10 | 70 | 60 | 54 | 50 | 69 | 59 | 54 | 50 | 58 | 53 | 49 | 57 | 53 | 49 | 56 | 52 | 49 | 48 |

Unified Glare Rating Table

| | | |
|---|-----------------------|------------------------------|
| Lum. Name: TR04-20-XX-01 2700K RA90 60D | Lum. Catalog: | Test ID: QIU MEI |
| Lamp Name: | Lamp Catalog: LED | Test Lab: Quality Department |
| Manufacture: Shenzhen Norming Lighting Co., Ltd | Test Machine:GON-2000 | Test Date: 2019/09/05 |

Unified Glare Rating Table

| | | | | | | | | | | |
|---|-----------------|------|------|------|------|---------------|------|------|------|------|
| Ceiling RCC | 0.70 | 0.70 | 0.50 | 0.50 | 0.30 | 0.70 | 0.70 | 0.50 | 0.50 | 0.30 |
| Wall RW | 0.50 | 0.30 | 0.50 | 0.30 | 0.30 | 0.50 | 0.30 | 0.50 | 0.30 | 0.30 |
| Floor RFC | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| Room Size | Vewed crosswise | | | | | Vewed endwise | | | | |
| X=2H Y=2H | 16.5 | 17.5 | 16.9 | 17.9 | 18.3 | 16.6 | 17.7 | 17.1 | 18.0 | 18.4 |
| | 17.1 | 18.0 | 17.5 | 18.4 | 18.8 | 17.1 | 18.0 | 17.5 | 18.4 | 18.8 |
| | 17.4 | 18.3 | 17.9 | 18.7 | 19.1 | 17.3 | 18.2 | 17.8 | 18.6 | 19.0 |
| | 17.8 | 18.6 | 18.3 | 19.0 | 19.5 | 17.6 | 18.4 | 18.1 | 18.8 | 19.3 |
| | 18.0 | 18.7 | 18.5 | 19.2 | 19.7 | 17.7 | 18.5 | 18.2 | 18.9 | 19.4 |
| | 18.2 | 18.9 | 18.7 | 19.4 | 19.9 | 17.9 | 18.6 | 18.4 | 19.0 | 19.5 |
| X=4H Y=2H | 16.5 | 17.4 | 17.0 | 17.8 | 18.2 | 16.6 | 17.5 | 17.1 | 17.9 | 18.3 |
| | 17.3 | 18.0 | 17.8 | 18.5 | 19.0 | 17.3 | 18.0 | 17.7 | 18.4 | 18.9 |
| | 17.8 | 18.5 | 18.3 | 18.9 | 19.4 | 17.7 | 18.3 | 18.1 | 18.8 | 19.3 |
| | 18.4 | 18.9 | 18.9 | 19.4 | 20.0 | 18.1 | 18.6 | 18.6 | 19.1 | 19.7 |
| | 18.7 | 19.2 | 19.2 | 19.7 | 20.2 | 18.3 | 18.8 | 18.9 | 19.3 | 19.9 |
| | 19.0 | 19.5 | 19.6 | 20.0 | 20.5 | 18.6 | 19.0 | 19.1 | 19.6 | 20.1 |
| X=8H Y=4H | 18.0 | 18.5 | 18.5 | 19.0 | 19.5 | 17.8 | 18.3 | 18.3 | 18.8 | 19.3 |
| | 18.7 | 19.1 | 19.3 | 19.7 | 20.3 | 18.4 | 18.8 | 18.9 | 19.3 | 19.9 |
| | 19.1 | 19.5 | 19.7 | 20.1 | 20.6 | 18.7 | 19.1 | 19.3 | 19.7 | 20.2 |
| | 19.6 | 20.0 | 20.2 | 20.5 | 21.1 | 19.2 | 19.5 | 19.7 | 20.0 | 20.6 |
| X=12H Y=4H | 18.0 | 18.4 | 18.5 | 18.9 | 19.5 | 17.8 | 18.2 | 18.3 | 18.7 | 19.3 |
| | 18.8 | 19.1 | 19.4 | 19.7 | 20.3 | 18.4 | 18.8 | 19.0 | 19.3 | 19.9 |
| | 19.3 | 19.6 | 19.8 | 20.1 | 20.8 | 18.9 | 19.2 | 19.4 | 19.7 | 20.3 |
| Variations with the objerver position at spacings | | | | | | | | | | |
| S=1.0H | 0.2/-0.2 | | | | | 0.3/-0.3 | | | | |
| S=1.5H | 0.4/-0.4 | | | | | 0.5/-0.5 | | | | |
| S=2.0H | 0.5/-0.6 | | | | | 0.6/-0.6 | | | | |
| Reduced UGR Table: | | | | | | | | | | |
| Nordic Standard Table: | BK0 | | | | | BK0 | | | | |
| Correction Value | 2.2 | | | | | 1.9 | | | | |

o the CIE Pub.117, data has been corrected, refers to the lamp's lumens 8.2flm.

IES Indoor Report

Photometric Filename:TR04-20-XX-01 2700K RA90 60D.IES

Candela Tabulation

| V/H | C0.0 | C90.0 | C180.0 | C270.0 |
|--------|---------|---------|---------|---------|
| γ 0.0 | 1547.59 | 1547.59 | 1547.59 | 1547.59 |
| γ 1.0 | 1550.95 | 1548.81 | 1545.35 | 1537.85 |
| γ 2.0 | 1551.14 | 1550.72 | 1539.84 | 1530.34 |
| γ 3.0 | 1548.31 | 1549.33 | 1533.53 | 1520.44 |
| γ 4.0 | 1543.45 | 1546.18 | 1525.96 | 1508.95 |
| γ 5.0 | 1536.60 | 1541.10 | 1517.36 | 1495.61 |
| γ 6.0 | 1528.37 | 1535.55 | 1507.93 | 1482.11 |
| γ 7.0 | 1518.86 | 1529.63 | 1498.42 | 1467.77 |
| γ 8.0 | 1507.89 | 1522.32 | 1487.58 | 1452.10 |
| γ 9.0 | 1496.34 | 1513.38 | 1475.02 | 1434.77 |
| γ 10.0 | 1485.30 | 1503.27 | 1460.11 | 1416.12 |
| γ 11.0 | 1473.63 | 1493.00 | 1443.64 | 1394.95 |
| γ 12.0 | 1461.34 | 1481.56 | 1424.50 | 1371.74 |
| γ 13.0 | 1447.85 | 1468.93 | 1402.40 | 1345.09 |
| γ 14.0 | 1432.48 | 1455.36 | 1377.63 | 1316.55 |
| γ 15.0 | 1415.65 | 1439.82 | 1349.08 | 1286.14 |
| γ 16.0 | 1395.56 | 1421.59 | 1317.86 | 1253.35 |
| γ 17.0 | 1372.22 | 1400.97 | 1284.15 | 1218.23 |
| γ 18.0 | 1345.76 | 1377.98 | 1246.64 | 1181.68 |
| γ 19.0 | 1315.84 | 1352.47 | 1205.08 | 1142.67 |
| γ 20.0 | 1283.84 | 1323.63 | 1159.49 | 1100.74 |
| γ 21.0 | 1249.26 | 1289.55 | 1109.23 | 1054.99 |
| γ 22.0 | 1211.91 | 1250.55 | 1054.53 | 1006.37 |
| γ 23.0 | 1169.18 | 1206.80 | 994.60 | 953.15 |
| γ 24.0 | 1122.22 | 1156.24 | 933.94 | 894.95 |
| γ 25.0 | 1069.16 | 1101.94 | 869.05 | 831.63 |
| γ 26.0 | 1013.49 | 1043.99 | 805.07 | 767.56 |
| γ 27.0 | 951.79 | 982.56 | 745.16 | 704.52 |
| γ 28.0 | 888.98 | 922.29 | 689.65 | 646.15 |
| γ 29.0 | 822.84 | 864.58 | 638.27 | 592.18 |
| γ 30.0 | 757.20 | 808.32 | 589.28 | 542.03 |
| γ 31.0 | 696.70 | 752.85 | 533.18 | 495.32 |
| γ 32.0 | 643.14 | 697.63 | 461.39 | 450.46 |
| γ 33.0 | 592.90 | 643.40 | 389.28 | 401.05 |
| γ 34.0 | 545.98 | 572.38 | 322.05 | 336.02 |
| γ 35.0 | 495.31 | 489.56 | 267.46 | 278.46 |
| γ 36.0 | 424.39 | 414.23 | 222.29 | 230.04 |
| γ 37.0 | 359.35 | 348.03 | 190.34 | 194.38 |
| γ 38.0 | 299.84 | 296.09 | 165.66 | 168.52 |
| γ 39.0 | 250.24 | 254.73 | 144.98 | 148.20 |
| γ 40.0 | 214.41 | 223.57 | 128.34 | 131.68 |
| γ 41.0 | 186.84 | 199.16 | 113.23 | 117.40 |
| γ 42.0 | 164.50 | 177.78 | 99.64 | 105.48 |
| γ 43.0 | 145.71 | 158.61 | 87.86 | 95.12 |
| γ 44.0 | 129.54 | 141.10 | 76.44 | 85.58 |
| γ 45.0 | 115.58 | 124.42 | 67.03 | 77.07 |
| γ 46.0 | 103.13 | 109.99 | 58.29 | 68.82 |

Candela Tabulation - (Cont.)

| V/H | C0.0 | C90.0 | C180.0 | C270.0 |
|--------|-------|-------|--------|--------|
| γ 47.0 | 92.30 | 96.33 | 52.34 | 61.69 |
| γ 48.0 | 82.41 | 84.08 | 48.71 | 55.65 |
| γ 49.0 | 72.73 | 73.57 | 46.45 | 52.01 |
| γ 50.0 | 64.94 | 65.79 | 44.52 | 49.55 |
| γ 51.0 | 58.60 | 60.13 | 43.14 | 47.72 |
| γ 52.0 | 54.86 | 56.15 | 41.80 | 46.17 |
| γ 53.0 | 52.07 | 52.08 | 40.67 | 44.78 |
| γ 54.0 | 49.83 | 49.10 | 39.73 | 43.67 |
| γ 55.0 | 47.93 | 46.29 | 38.88 | 42.64 |
| γ 56.0 | 46.28 | 43.97 | 38.14 | 41.75 |
| γ 57.0 | 44.91 | 42.08 | 37.42 | 40.94 |
| γ 58.0 | 43.70 | 40.40 | 36.63 | 40.20 |
| γ 59.0 | 42.45 | 39.10 | 35.87 | 39.41 |
| γ 60.0 | 41.30 | 37.89 | 35.08 | 38.61 |
| γ 61.0 | 40.17 | 36.74 | 34.24 | 37.73 |
| γ 62.0 | 39.04 | 35.64 | 33.30 | 36.82 |
| γ 63.0 | 37.93 | 34.51 | 32.16 | 35.77 |
| γ 64.0 | 36.81 | 33.40 | 30.97 | 34.54 |
| γ 65.0 | 35.68 | 32.20 | 29.79 | 33.26 |
| γ 66.0 | 34.38 | 30.90 | 28.57 | 32.00 |
| γ 67.0 | 32.98 | 29.56 | 27.35 | 30.71 |
| γ 68.0 | 31.58 | 28.25 | 26.12 | 29.41 |
| γ 69.0 | 30.23 | 26.93 | 24.90 | 28.10 |
| γ 70.0 | 28.87 | 25.64 | 23.67 | 26.80 |
| γ 71.0 | 27.56 | 24.37 | 22.45 | 25.49 |
| γ 72.0 | 26.24 | 23.12 | 21.25 | 24.19 |
| γ 73.0 | 24.94 | 21.91 | 20.07 | 22.90 |
| γ 74.0 | 23.67 | 20.72 | 18.91 | 21.64 |
| γ 75.0 | 22.43 | 19.59 | 17.76 | 20.41 |
| γ 76.0 | 21.22 | 18.47 | 16.64 | 19.19 |
| γ 77.0 | 20.06 | 17.38 | 15.53 | 17.99 |
| γ 78.0 | 18.90 | 16.33 | 14.45 | 16.81 |
| γ 79.0 | 17.77 | 15.29 | 13.40 | 15.65 |
| γ 80.0 | 16.67 | 14.29 | 12.40 | 14.52 |
| γ 81.0 | 15.60 | 13.33 | 11.41 | 13.42 |
| γ 82.0 | 14.55 | 12.40 | 10.45 | 12.35 |
| γ 83.0 | 13.53 | 11.49 | 9.53 | 11.32 |
| γ 84.0 | 12.54 | 10.60 | 8.65 | 10.30 |
| γ 85.0 | 11.57 | 9.75 | 7.81 | 9.31 |
| γ 86.0 | 10.63 | 8.91 | 7.01 | 8.36 |
| γ 87.0 | 9.71 | 8.11 | 6.25 | 7.46 |
| γ 88.0 | 8.83 | 7.36 | 5.73 | 6.63 |
| γ 89.0 | 7.98 | 6.64 | 5.60 | 6.27 |
| γ 90.0 | 7.16 | 5.97 | 5.49 | 6.11 |
| γ 91.0 | 6.43 | 5.64 | 5.36 | 5.97 |
| γ 92.0 | 6.21 | 5.51 | 5.26 | 5.84 |
| γ 93.0 | 6.06 | 5.39 | 5.16 | 5.71 |

Candela Tabulation - (Cont.)

| V/H | C0.0 | C90.0 | C180.0 | C270.0 |
|---------|------|-------|--------|--------|
| γ 94.0 | 5.92 | 5.28 | 5.07 | 5.58 |
| γ 95.0 | 5.78 | 5.18 | 4.97 | 5.47 |
| γ 96.0 | 5.65 | 5.07 | 4.89 | 5.38 |
| γ 97.0 | 5.53 | 4.97 | 4.82 | 5.28 |
| γ 98.0 | 5.41 | 4.88 | 4.74 | 5.20 |
| γ 99.0 | 5.29 | 4.79 | 4.67 | 5.12 |
| γ 100.0 | 5.20 | 4.71 | 4.61 | 5.03 |
| γ 101.0 | 5.11 | 4.63 | 4.56 | 4.97 |
| γ 102.0 | 5.00 | 4.56 | 4.51 | 4.90 |
| γ 103.0 | 4.92 | 4.49 | 4.47 | 4.85 |
| γ 104.0 | 4.83 | 4.42 | 4.43 | 4.79 |
| γ 105.0 | 4.76 | 4.36 | 4.40 | 4.75 |
| γ 106.0 | 4.69 | 4.30 | 4.38 | 4.71 |
| γ 107.0 | 4.63 | 4.26 | 4.36 | 4.68 |
| γ 108.0 | 4.57 | 4.22 | 4.35 | 4.67 |
| γ 109.0 | 4.53 | 4.17 | 4.36 | 4.66 |
| γ 110.0 | 4.48 | 4.15 | 4.36 | 4.66 |
| γ 111.0 | 4.44 | 4.12 | 4.38 | 4.66 |
| γ 112.0 | 4.41 | 4.10 | 4.39 | 4.69 |
| γ 113.0 | 4.40 | 4.09 | 4.43 | 4.70 |
| γ 114.0 | 4.39 | 4.09 | 4.46 | 4.73 |
| γ 115.0 | 4.39 | 4.11 | 4.51 | 4.76 |
| γ 116.0 | 4.40 | 4.12 | 4.56 | 4.81 |
| γ 117.0 | 4.41 | 4.14 | 4.62 | 4.87 |
| γ 118.0 | 4.44 | 4.18 | 4.69 | 4.94 |
| γ 119.0 | 4.46 | 4.23 | 4.77 | 5.01 |
| γ 120.0 | 4.51 | 4.26 | 4.85 | 5.09 |
| γ 121.0 | 4.56 | 4.33 | 4.94 | 5.18 |
| γ 122.0 | 4.62 | 4.39 | 5.03 | 5.27 |
| γ 123.0 | 4.68 | 4.47 | 5.14 | 5.38 |
| γ 124.0 | 4.76 | 4.55 | 5.26 | 5.48 |
| γ 125.0 | 4.84 | 4.63 | 5.37 | 5.59 |
| γ 126.0 | 4.94 | 4.72 | 5.50 | 5.72 |
| γ 127.0 | 5.04 | 4.82 | 5.63 | 5.84 |
| γ 128.0 | 5.14 | 4.93 | 5.77 | 5.98 |
| γ 129.0 | 5.26 | 5.05 | 5.91 | 6.11 |
| γ 130.0 | 5.39 | 5.17 | 6.05 | 6.26 |
| γ 131.0 | 5.51 | 5.30 | 6.21 | 6.40 |
| γ 132.0 | 5.64 | 5.43 | 6.36 | 6.55 |
| γ 133.0 | 5.77 | 5.57 | 6.52 | 6.69 |
| γ 134.0 | 5.92 | 5.71 | 6.68 | 6.84 |
| γ 135.0 | 6.07 | 5.85 | 6.83 | 7.01 |
| γ 136.0 | 6.21 | 6.01 | 7.00 | 7.15 |
| γ 137.0 | 6.37 | 6.15 | 7.17 | 7.32 |
| γ 138.0 | 6.52 | 6.31 | 7.33 | 7.47 |
| γ 139.0 | 6.68 | 6.47 | 7.49 | 7.63 |
| γ 140.0 | 6.84 | 6.62 | 7.67 | 7.80 |

Candela Tabulation - (Cont.)

| V/H | C0.0 | C90.0 | C180.0 | C270.0 |
|---------|-------|-------|--------|--------|
| γ 141.0 | 7.00 | 6.79 | 7.83 | 7.96 |
| γ 142.0 | 7.16 | 6.95 | 8.01 | 8.12 |
| γ 143.0 | 7.33 | 7.13 | 8.15 | 8.27 |
| γ 144.0 | 7.50 | 7.29 | 8.32 | 8.42 |
| γ 145.0 | 7.67 | 7.46 | 8.49 | 8.57 |
| γ 146.0 | 7.84 | 7.62 | 8.64 | 8.72 |
| γ 147.0 | 8.00 | 7.78 | 8.79 | 8.87 |
| γ 148.0 | 8.16 | 7.96 | 8.95 | 9.01 |
| γ 149.0 | 8.32 | 8.12 | 9.09 | 9.14 |
| γ 150.0 | 8.47 | 8.27 | 9.24 | 9.27 |
| γ 151.0 | 8.62 | 8.43 | 9.37 | 9.40 |
| γ 152.0 | 8.76 | 8.58 | 9.49 | 9.52 |
| γ 153.0 | 8.92 | 8.74 | 9.62 | 9.62 |
| γ 154.0 | 9.05 | 8.88 | 9.73 | 9.74 |
| γ 155.0 | 9.18 | 9.02 | 9.85 | 9.84 |
| γ 156.0 | 9.32 | 9.17 | 9.98 | 9.95 |
| γ 157.0 | 9.44 | 9.30 | 10.09 | 10.05 |
| γ 158.0 | 9.56 | 9.43 | 10.19 | 10.16 |
| γ 159.0 | 9.68 | 9.55 | 10.30 | 10.26 |
| γ 160.0 | 9.80 | 9.68 | 10.41 | 10.35 |
| γ 161.0 | 9.90 | 9.81 | 10.51 | 10.44 |
| γ 162.0 | 10.03 | 9.93 | 10.61 | 10.54 |
| γ 163.0 | 10.14 | 10.05 | 10.70 | 10.64 |
| γ 164.0 | 10.25 | 10.16 | 10.80 | 10.73 |
| γ 165.0 | 10.35 | 10.27 | 10.89 | 10.82 |
| γ 166.0 | 10.46 | 10.38 | 10.99 | 10.91 |
| γ 167.0 | 10.57 | 10.49 | 11.06 | 11.01 |
| γ 168.0 | 10.67 | 10.59 | 11.14 | 11.08 |
| γ 169.0 | 10.78 | 10.69 | 11.22 | 11.16 |
| γ 170.0 | 10.88 | 10.79 | 11.29 | 11.22 |
| γ 171.0 | 10.98 | 10.89 | 11.36 | 11.29 |
| γ 172.0 | 11.07 | 10.98 | 11.42 | 11.36 |
| γ 173.0 | 11.15 | 11.07 | 11.47 | 11.41 |
| γ 174.0 | 11.24 | 11.15 | 11.52 | 11.44 |
| γ 175.0 | 11.31 | 11.23 | 11.55 | 11.50 |
| γ 176.0 | 11.38 | 11.30 | 11.58 | 11.53 |
| γ 177.0 | 11.42 | 11.36 | 11.59 | 11.55 |
| γ 178.0 | 11.48 | 11.41 | 11.60 | 11.57 |
| γ 179.0 | 11.53 | 11.46 | 11.59 | 11.56 |
| γ 180.0 | 11.55 | 11.55 | 11.55 | 11.55 |