

Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



Scaled data based on original data using  
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: CORELITE

Report Number: P937678

Luminaire Tested: SQ4-FB-100U-100D-B2750-1D-UNV-STD-W-12-3000K

Issue Date: 12/17/2024

**Test Information**

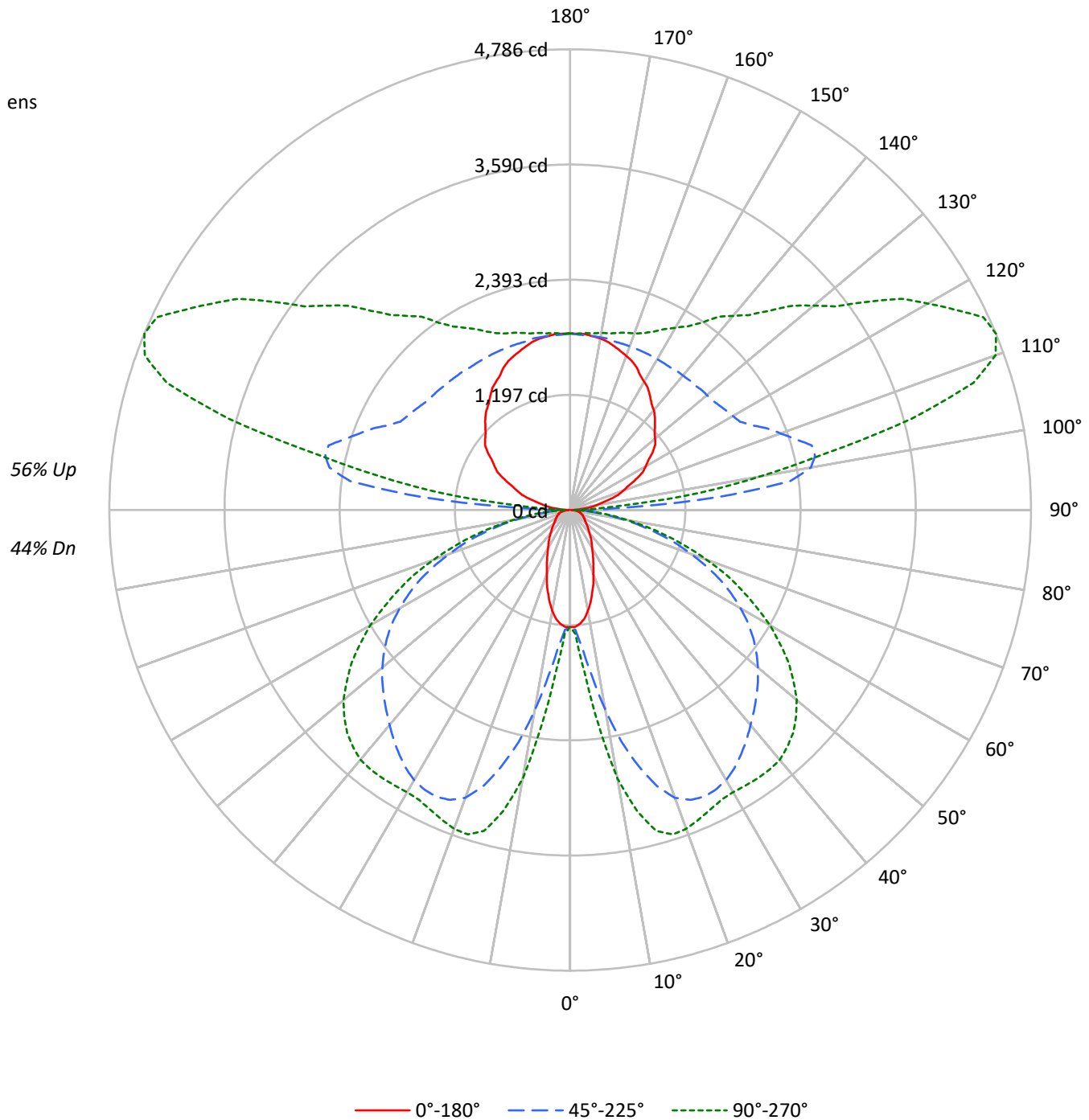
Test Method: LM-79-2019  
Report Number: P937678  
REPORT IS A COMBINATION OF REPORTS P933559 AND P933786  
Test Lab: INNOVATION CENTER  
Issue Date: 12/17/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ4-FB-100U-100D-B2750-1D-UNV-STD-W-12-3000K  
Description: CORELITE SQ4 SUSPENDED INDIRECT LED LUMINAIRE WITH Batwing Frosted Continuous Roll L  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 21293.7 lumens  
Efficiency: N/A  
Efficacy: 122.4 lumens/watt  
Spacing Criteria (0/90/45): 0.71 / 2.69 / 2.33  
Luminous Opening: Rectangular w/ Sides (W: 0.29' x L: 12' x H: 0.1')  
CIE Type: General Diffuse  
  
Input Watts (W): 174  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT

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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	106	106	106	106	97	97	97	97	80	80	80	65	65	65	51	51	51	44
1	96	91	87	84	88	84	80	77	69	67	65	56	55	53	44	43	42	36
2	87	79	73	68	79	73	67	63	60	56	53	49	46	43	38	36	34	30
3	79	69	62	56	72	63	57	52	53	48	44	43	39	36	33	31	29	24
4	72	61	53	46	65	56	49	43	46	41	37	38	34	30	29	27	24	20
5	66	54	46	39	60	49	42	37	41	36	31	33	29	26	26	23	21	17
6	60	48	40	34	55	44	37	31	37	31	27	30	26	22	24	20	18	15
7	56	43	35	29	51	40	32	27	33	27	23	27	23	19	21	18	16	13
8	51	39	31	26	47	36	29	24	30	24	20	25	20	17	19	16	14	11
9	48	35	28	23	44	33	26	21	27	22	18	22	18	15	18	15	12	10
10	44	32	25	20	41	30	23	19	25	20	16	21	16	14	16	13	11	9

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	3759	3759	3759
5°	3674	4346	5053
10°	3334	6337	8377
15°	2834	8281	10116
20°	2308	9599	10309
25°	1927	10047	10100
30°	1625	10113	10081
35°	1438	9948	10341
40°	1254	9732	10611
45°	1136	9575	10652
50°	1043	9435	10476
55°	1000	9228	10012
60°	1024	8827	9279
65°	1068	8214	8271
70°	1141	7169	6987
75°	1268	5850	5453
80°	1395	4063	3674
85°	1264	2159	1881

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 10652 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	157.2	0.7
10°-20°	696.8	3.3
20°-30°	1218.8	5.7
30°-40°	1569.0	7.4
40°-50°	1752.5	8.2
50°-60°	1678.5	7.9
60°-70°	1330.2	6.2
70°-80°	782.2	3.7
80°-90°	224.3	1.1
90°-100°	893.6	4.2
100°-110°	2349.4	11.0
110°-120°	2436.0	11.4
120°-130°	1954.0	9.2
130°-140°	1533.2	7.2
140°-150°	1176.8	5.5
150°-160°	847.5	4.0
160°-170°	518.5	2.4
170°-180°	175.2	0.8
0°-30°	2072.8	9.7
0°-40°	3641.8	17.1
0°-60°	7072.8	33.2
0°-90°	9409.5	44.2
90°-120°	5679.0	26.7
90°-150°	10343.0	48.6
90°-180°	11884.0	55.8
0°-180°	21293.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1215	1215	1215	1215	1215	
5°	1184	1270	1430	1618	1677	109
15°	887	1638	2759	3345	3451	247
25°	567	1856	3287	3431	3435	261
35°	383	1774	3095	3271	3400	239
45°	262	1415	2736	3134	3275	203
55°	188	899	2321	2697	2771	171
65°	148	477	1723	1938	1966	147
75°	109	293	946	1040	1044	115
85°	39	90	234	258	262	41
90°	12	34	94	47	47	13
95°	118	463	1539	794	540	131
105°	423	641	2597	3943	3679	449
115°	752	913	2081	4150	4737	742
125°	1046	1173	1892	3198	3772	929
135°	1246	1372	1833	2581	2927	964
145°	1446	1538	1810	2202	2375	906
155°	1634	1680	1810	1987	2045	751
165°	1763	1786	1810	1881	1905	498
175°	1833	1833	1822	1846	1846	174
180°	1833	1833	1833	1833	1833	



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**CANDELA DISTRIBUTION (FULL):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	1215.4	1215.4	1215.4	1215.4	1215.4	1215.4	1215.4	1215.4	1215.4	1215.4	1215.4
2.5°	1215.4	1215.4	1223.2	1227.2	1235.0	1238.9	1246.7	1254.5	1278.0	1281.9	1289.7
5°	1184.2	1199.8	1250.6	1270.2	1324.9	1399.1	1430.4	1481.2	1586.7	1617.9	1637.5
7.5°	1137.3	1172.5	1297.5	1328.7	1465.5	1660.9	1743.1	1852.4	2020.5	2102.5	2169.0
10°	1063.0	1137.3	1360.0	1434.2	1657.1	1954.1	2106.5	2258.9	2512.9	2626.2	2669.2
12.5°	981.0	1102.1	1426.4	1528.1	1848.6	2282.3	2466.0	2634.1	2923.3	3075.7	3099.1
15°	887.1	1051.3	1489.0	1637.5	2051.8	2555.9	2759.1	2966.3	3236.0	3345.3	3372.7
17.5°	805.1	1012.2	1547.6	1703.9	2208.0	2802.1	3009.3	3181.2	3400.0	3474.3	3493.9
20°	703.4	949.7	1586.7	1789.9	2372.2	2981.9	3181.2	3314.0	3462.5	3509.5	3517.3
22.5°	629.2	883.3	1610.1	1821.1	2481.7	3091.3	3259.3	3364.9	3466.5	3482.2	3486.0
25°	566.7	809.0	1606.2	1856.3	2575.4	3157.8	3286.7	3364.9	3423.5	3431.3	3431.3
27.5°	508.1	726.9	1590.6	1864.1	2645.8	3173.3	3275.0	3329.7	3357.0	3372.7	3372.7
30°	457.2	648.8	1551.5	1848.6	2677.1	3157.8	3239.8	3267.2	3294.5	3318.0	3329.7
32.5°	418.2	574.4	1492.9	1817.3	2680.9	3118.7	3177.3	3193.0	3232.0	3286.7	3306.3
35°	383.0	500.2	1426.4	1774.3	2657.5	3056.1	3095.3	3110.8	3189.0	3271.1	3298.5
37.5°	347.9	445.6	1340.5	1700.1	2622.4	2981.9	3009.3	3036.6	3157.8	3255.5	3286.7
40°	312.7	398.6	1238.9	1617.9	2567.6	2892.0	2915.4	2958.4	3118.7	3232.0	3263.3
42.5°	285.2	359.6	1129.5	1531.9	2497.2	2790.4	2825.6	2888.1	3071.8	3193.0	3228.1
45°	261.9	320.4	1012.2	1414.7	2407.4	2684.9	2735.7	2821.6	3017.1	3134.3	3165.6
47.5°	238.4	293.1	891.0	1293.6	2309.7	2579.4	2645.8	2743.4	2942.8	3056.1	3083.5
50°	218.9	265.7	769.9	1164.7	2204.2	2466.0	2544.2	2645.8	2849.0	2954.5	2989.7
52.5°	203.2	242.3	656.6	1035.7	2083.0	2348.8	2438.7	2544.2	2735.7	2837.3	2860.8
55°	187.6	222.7	558.9	898.8	1958.0	2223.7	2321.4	2423.0	2610.6	2696.6	2712.2
57.5°	179.7	207.2	476.8	769.9	1825.1	2083.0	2192.5	2286.2	2462.1	2528.5	2544.2
60°	168.0	195.4	414.2	660.4	1680.4	1950.1	2044.0	2137.7	2286.2	2341.0	2352.7
62.5°	156.3	187.6	367.4	554.9	1531.9	1793.8	1887.6	1973.6	2098.7	2137.7	2153.3
65°	148.5	179.7	332.2	476.8	1379.6	1629.7	1723.4	1797.8	1899.3	1938.4	1946.3
67.5°	140.7	172.0	304.9	410.4	1227.2	1465.5	1535.9	1606.2	1684.4	1723.4	1727.4
70°	129.0	164.2	281.4	363.4	1070.8	1278.0	1336.6	1410.9	1473.4	1492.9	1504.6
72.5°	121.2	152.4	265.7	328.2	910.6	1098.2	1152.9	1195.9	1250.6	1270.2	1270.2
75°	109.4	136.8	250.1	293.1	746.4	898.8	945.8	988.8	1031.8	1039.5	1027.8
77.5°	97.7	121.2	214.9	246.2	582.3	711.3	750.3	773.8	809.0	816.8	820.7
80°	82.0	105.5	168.0	191.5	422.1	523.7	551.1	570.6	601.9	601.9	609.6
82.5°	62.5	82.0	121.2	136.8	285.2	359.6	383.0	394.7	414.2	414.2	414.2
85°	39.0	50.8	78.2	89.9	172.0	218.9	234.5	238.4	254.0	257.9	257.9
87.5°	19.5	27.3	50.8	54.7	89.9	113.3	113.3	121.2	121.2	117.2	113.3
90°	12.3	22.2	31.9	34.4	54.1	80.4	93.5	83.1	62.3	46.7	46.7
92.5°	49.2	132.8	216.5	237.4	333.9	462.3	526.6	461.5	331.4	233.8	224.5
95°	118.1	271.2	424.4	462.6	821.4	1299.9	1539.1	1373.5	1042.1	793.5	765.3
97.5°	204.2	339.3	474.4	508.2	1106.5	1904.3	2303.2	2198.5	1989.1	1832.0	1778.4
100°	270.7	393.1	515.6	546.2	1210.2	2095.5	2538.3	2546.0	2561.2	2572.7	2508.9
102.5°	327.3	441.5	555.8	584.4	1257.8	2155.8	2604.7	2738.1	3004.9	3205.1	3150.4
105°	423.3	520.0	616.8	641.0	1293.1	2162.6	2597.3	2896.5	3494.7	3943.3	3913.9
107.5°	521.7	611.9	702.1	724.7	1299.6	2066.3	2449.6	2866.9	3701.3	4327.2	4334.3
110°	588.1	669.6	751.0	771.4	1289.8	1981.0	2326.6	2793.0	3725.9	4425.6	4456.2



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
112.5°	653.3	731.0	808.6	828.0	1290.3	1906.5	2214.7	2692.1	3646.8	4362.9	4409.9
115°	751.7	823.4	895.0	912.9	1302.1	1821.0	2080.6	2540.4	3460.2	4150.0	4215.2
117.5°	848.9	914.0	979.1	995.4	1326.4	1767.6	1988.3	2403.3	3233.4	3856.0	3928.2
120°	905.5	966.8	1028.1	1043.4	1346.1	1749.7	1951.4	2330.6	3089.0	3657.9	3728.2
122.5°	961.0	1022.8	1084.5	1100.0	1374.4	1740.2	1923.1	2264.5	2947.5	3459.8	3529.1
125°	1045.9	1102.2	1158.5	1172.6	1412.4	1732.4	1892.3	2182.4	2762.6	3197.7	3261.5
127.5°	1114.7	1171.6	1228.5	1242.7	1450.6	1727.9	1866.5	2115.6	2613.7	2987.3	3041.1
130°	1151.6	1212.9	1274.1	1289.4	1478.5	1730.6	1856.6	2078.4	2521.9	2854.5	2904.3
132.5°	1189.8	1251.0	1312.3	1327.6	1501.0	1732.3	1848.0	2046.4	2443.5	2741.3	2785.8
135°	1246.4	1302.1	1357.9	1371.8	1525.6	1730.7	1833.3	1999.5	2331.9	2581.2	2619.7
137.5°	1304.2	1359.4	1414.6	1428.4	1562.5	1741.4	1830.8	1971.3	2252.4	2463.2	2494.7
140°	1352.2	1403.1	1453.9	1466.6	1585.1	1743.1	1822.1	1943.5	2186.4	2368.5	2397.9
142.5°	1389.1	1436.1	1483.1	1494.9	1603.9	1749.4	1822.1	1928.8	2142.1	2302.0	2327.3
145°	1445.7	1486.7	1527.7	1538.0	1628.6	1749.5	1809.9	1897.1	2071.5	2202.3	2221.5
147.5°	1502.3	1542.2	1582.1	1592.1	1664.7	1761.5	1809.9	1878.5	2015.8	2118.7	2134.6
150°	1539.1	1575.2	1611.3	1620.4	1683.6	1767.8	1809.9	1867.9	1983.7	2070.7	2083.5
152.5°	1577.3	1604.6	1632.0	1638.8	1695.8	1771.8	1809.9	1859.4	1958.3	2032.5	2042.2
155°	1633.9	1654.1	1674.4	1679.5	1722.9	1780.9	1809.9	1849.2	1927.9	1987.0	1993.4
157.5°	1675.7	1695.4	1715.1	1720.1	1750.1	1790.0	1809.9	1840.5	1901.7	1947.6	1952.2
160°	1704.0	1719.4	1734.7	1738.5	1762.3	1794.0	1809.9	1836.1	1888.6	1927.9	1930.5
162.5°	1732.3	1743.7	1755.3	1758.1	1775.4	1798.4	1809.9	1832.0	1876.3	1909.5	1912.0
165°	1763.1	1773.4	1783.9	1786.4	1794.2	1804.7	1809.9	1825.8	1857.4	1881.2	1883.8
167.5°	1791.4	1796.3	1801.2	1802.5	1809.0	1817.8	1822.1	1832.6	1853.4	1869.0	1870.0
170°	1809.9	1814.8	1819.8	1820.9	1821.3	1821.8	1822.1	1832.6	1853.4	1869.0	1869.0
172.5°	1819.7	1820.7	1821.8	1822.1	1822.1	1822.1	1822.1	1830.3	1846.8	1859.1	1858.1
175°	1833.3	1833.3	1833.3	1833.3	1829.5	1824.6	1822.1	1827.4	1837.7	1845.5	1845.5
177.5°	1833.3	1833.3	1833.3	1833.3	1830.4	1826.6	1824.6	1828.7	1836.9	1843.0	1841.9
180°	1833.3	1833.3	1833.3	1833.3	1833.3	1833.3	1833.3	1833.3	1833.3	1833.3	1833.3



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**CANDELA DISTRIBUTION (continued):**

	80°	90°
0°	1215.4	1215.4
2.5°	1297.5	1289.7
5°	1668.8	1676.6
7.5°	2247.2	2243.2
10°	2794.3	2829.4
12.5°	3193.0	3200.8
15°	3435.2	3450.9
17.5°	3529.0	3532.9
20°	3532.9	3525.1
22.5°	3489.9	3482.2
25°	3439.2	3435.2
27.5°	3392.2	3396.2
30°	3372.7	3384.4
32.5°	3372.7	3392.2
35°	3380.5	3400.0
37.5°	3376.6	3400.0
40°	3361.0	3388.3
42.5°	3318.0	3337.5
45°	3251.5	3275.0
47.5°	3165.6	3181.2
50°	3056.1	3071.8
52.5°	2919.3	2923.3
55°	2755.2	2770.9
57.5°	2579.4	2583.2
60°	2384.0	2395.7
62.5°	2176.8	2176.8
65°	1958.0	1965.8
67.5°	1731.3	1750.8
70°	1500.7	1504.6
72.5°	1274.0	1274.0
75°	1039.5	1043.5
77.5°	816.8	816.8
80°	605.8	609.6
82.5°	418.2	426.0
85°	261.9	261.9
87.5°	121.2	109.4
90°	46.7	46.7
92.5°	187.2	150.1
95°	652.7	540.1
97.5°	1564.1	1349.7
100°	2253.5	1998.1
102.5°	2931.7	2713.0
105°	3796.3	3678.8
107.5°	4362.8	4391.2
110°	4578.7	4701.2





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**CANDELA DISTRIBUTION (continued):**

	80°	90°
112.5°	4598.0	4786.1
115°	4476.0	4736.8
117.5°	4217.5	4506.8
120°	4009.2	4290.3
122.5°	3806.3	4083.5
125°	3516.9	3772.2
127.5°	3256.7	3472.1
130°	3103.2	3302.3
132.5°	2964.1	3142.4
135°	2773.3	2927.0
137.5°	2620.4	2746.2
140°	2515.5	2633.0
142.5°	2428.4	2529.6
145°	2298.1	2374.6
147.5°	2198.0	2261.4
150°	2135.0	2186.4
152.5°	2081.1	2119.9
155°	2019.1	2044.9
157.5°	1970.2	1988.3
160°	1940.9	1951.4
162.5°	1921.8	1931.7
165°	1894.2	1904.6
167.5°	1874.4	1878.7
170°	1869.0	1869.0
172.5°	1854.3	1850.4
175°	1845.5	1845.5
177.5°	1837.6	1833.3
180°	1833.3	1833.3



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**CIE UGR TABLE:**

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	5.06	5.90	6.05	6.91	8.26	18.25	19.09	19.25	20.11	21.46
	3H	5.76	6.52	6.77	7.54	8.91	20.09	20.85	21.10	21.87	23.24
	4H	6.06	6.78	7.08	7.80	9.18	20.74	21.46	21.76	22.48	23.86
	6H	6.31	6.97	7.34	8.00	9.39	21.17	21.84	22.21	22.87	24.26
	8H	6.37	7.01	7.41	8.05	9.44	21.30	21.93	22.33	22.98	24.36
	12H	6.39	6.99	7.43	8.03	9.44	21.37	21.97	22.41	23.01	24.42
4H	2H	12.28	13.00	13.30	14.02	15.40	18.52	19.24	19.55	20.27	21.64
	3H	13.84	14.44	14.88	15.50	16.89	20.57	21.17	21.61	22.22	23.62
	4H	13.94	14.49	14.98	15.53	16.95	21.34	21.89	22.38	22.94	24.35
	6H	13.95	14.42	15.00	15.49	16.90	21.88	22.36	22.93	23.43	24.83
	8H	13.92	14.37	14.98	15.43	16.85	22.05	22.49	23.10	23.55	24.98
	12H	13.88	14.28	14.95	15.36	16.79	22.14	22.54	23.21	23.62	25.05
8H	4H	15.38	15.83	16.44	16.89	18.31	21.40	21.84	22.45	22.90	24.33
	6H	15.62	15.99	16.70	17.10	18.52	22.03	22.40	23.11	23.50	24.92
	8H	15.64	15.97	16.73	17.05	18.49	22.25	22.58	23.34	23.66	25.10
	12H	15.61	15.89	16.70	16.98	18.46	22.40	22.68	23.49	23.77	25.25
12H	4H	15.53	15.93	16.60	17.01	18.44	21.35	21.75	22.42	22.83	24.26
	6H	15.88	16.21	16.97	17.30	18.74	22.01	22.34	23.10	23.42	24.86
	8H	15.95	16.24	17.04	17.32	18.80	22.24	22.53	23.34	23.61	25.09