

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: P937653

Luminaire Tested: SQ4-FB-100U-100D-93050-1D-UNV-STD-W-12-3000K

Issue Date: 12/17/2024

**Test Information**

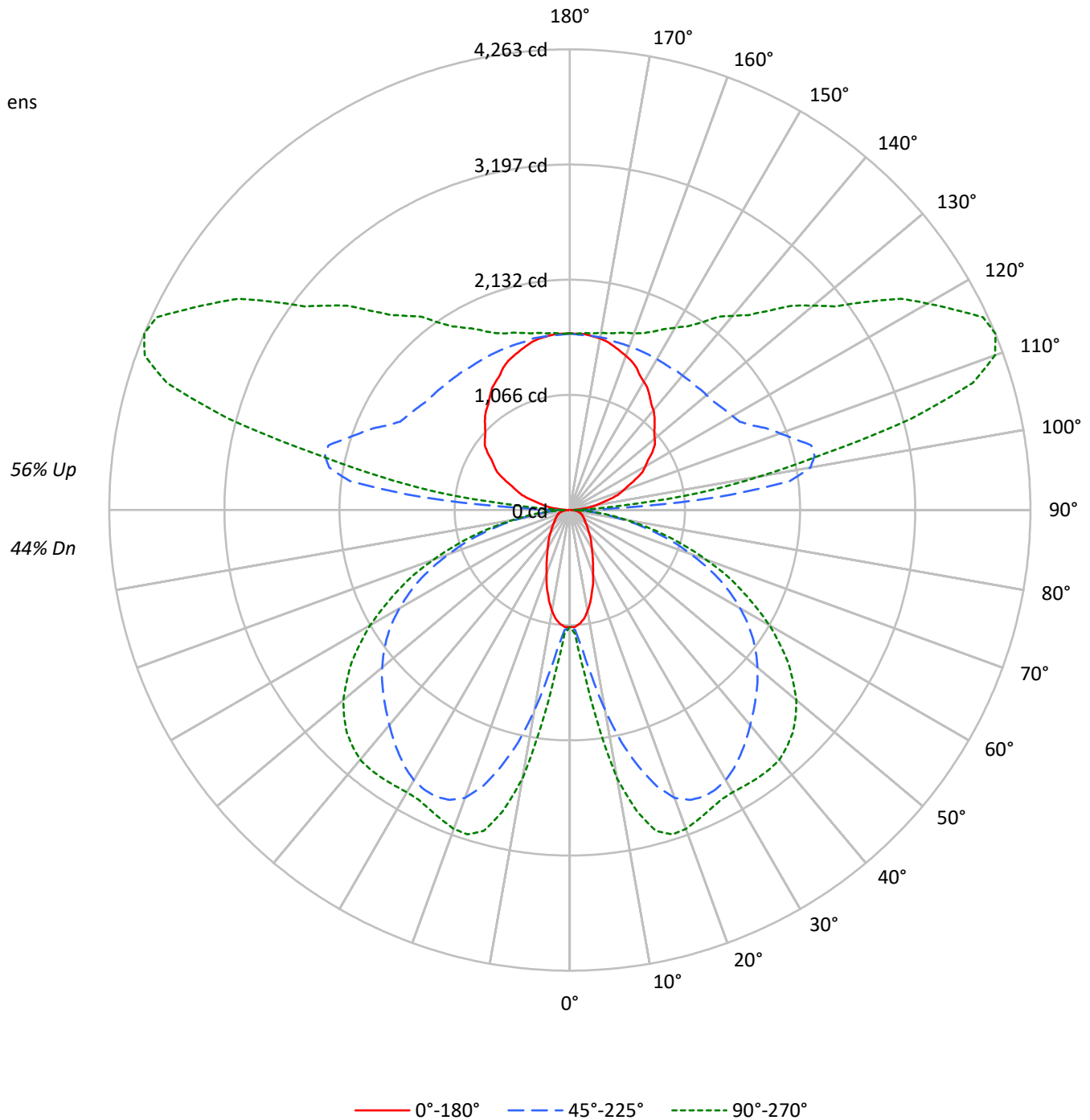
Test Method: LM-79-2019  
Report Number: P937653  
REPORT IS A COMBINATION OF REPORTS P933559 AND P933786  
Test Lab: INNOVATION CENTER  
Issue Date: 12/17/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ4-FB-100U-100D-93050-1D-UNV-STD-W-12-3000K  
Description: CORELITE SQ4 SUSPENDED INDIRECT LED LUMINAIRE WITH Batwing Frosted Continuous Roll L  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 18967.8 lumens  
Efficiency: N/A  
Efficacy: 109.0 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

TEST NUMBER: P937653  
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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°	3349	3349	3349
5°	3273	3872	4501
10°	2970	5645	7462
15°	2525	7376	9011
20°	2056	8551	9183
25°	1716	8950	8997
30°	1448	9008	8980
35°	1281	8862	9212
40°	1117	8669	9452
45°	1012	8529	9489
50°	929	8404	9332
55°	891	8220	8918
60°	913	7862	8265
65°	951	7317	7368
70°	1016	6386	6224
75°	1130	5212	4857
80°	1243	3619	3273
85°	1128	1923	1676

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 9489 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	140.0	0.7
10°-20°	620.7	3.3
20°-30°	1085.7	5.7
30°-40°	1397.6	7.4
40°-50°	1561.1	8.2
50°-60°	1495.1	7.9
60°-70°	1184.9	6.2
70°-80°	696.8	3.7
80°-90°	199.8	1.1
90°-100°	796.0	4.2
100°-110°	2092.7	11.0
110°-120°	2170.0	11.4
120°-130°	1740.6	9.2
130°-140°	1365.7	7.2
140°-150°	1048.2	5.5
150°-160°	754.9	4.0
160°-170°	461.9	2.4
170°-180°	156.1	0.8
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0°-30°	1846.4	9.7
0°-40°	3244.0	17.1
0°-60°	6300.2	33.2
0°-90°	8381.7	44.2
90°-120°	5058.7	26.7
90°-150°	9213.2	48.6
90°-180°	10586.0	55.8
0°-180°	18967.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1083	1083	1083	1083	1083	
5°	1055	1131	1274	1441	1494	97
15°	790	1459	2458	2980	3074	220
25°	505	1654	2928	3056	3060	233
35°	341	1580	2757	2914	3029	213
45°	233	1260	2437	2792	2917	180
55°	167	801	2068	2402	2468	152
65°	132	425	1535	1727	1751	131
75°	98	261	842	926	930	102
85°	35	80	209	230	233	37
90°	11	31	83	42	42	11
95°	105	412	1371	707	481	117
105°	377	571	2314	3513	3277	400
115°	670	813	1853	3697	4219	661
125°	932	1044	1686	2848	3360	827
135°	1110	1222	1633	2299	2607	859
145°	1288	1370	1612	1962	2115	807
155°	1455	1496	1612	1770	1822	669
165°	1570	1591	1612	1676	1696	443
175°	1633	1633	1623	1644	1644	155
180°	1633	1633	1633	1633	1633	



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CATALOG NUMBER: SQ4-FB-100U-100D-93050-1D-UNV-STD-W-12-3000K

**CANDELA DISTRIBUTION (FULL):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	1082.7	1082.7	1082.7	1082.7	1082.7	1082.7	1082.7	1082.7	1082.7	1082.7	1082.7
2.5°	1082.7	1082.7	1089.6	1093.1	1100.1	1103.6	1110.5	1117.5	1138.4	1141.9	1148.8
5°	1054.8	1068.7	1114.0	1131.4	1180.2	1246.3	1274.2	1319.4	1413.4	1441.2	1458.6
7.5°	1013.0	1044.4	1155.8	1183.6	1305.4	1479.5	1552.7	1650.1	1799.8	1872.9	1932.1
10°	946.9	1013.0	1211.4	1277.6	1476.1	1740.6	1876.4	2012.2	2238.4	2339.4	2377.6
12.5°	873.8	981.7	1270.6	1361.2	1646.6	2033.0	2196.6	2346.4	2604.0	2739.8	2760.6
15°	790.2	936.4	1326.3	1458.6	1827.7	2276.7	2457.7	2642.3	2882.5	2979.9	3004.3
17.5°	717.1	901.7	1378.6	1517.8	1966.9	2496.0	2680.6	2833.8	3028.6	3094.8	3112.3
20°	626.6	846.0	1413.4	1594.4	2113.1	2656.2	2833.8	2952.1	3084.3	3126.1	3133.1
22.5°	560.4	786.8	1434.3	1622.2	2210.6	2753.6	2903.3	2997.4	3087.8	3101.8	3105.2
25°	504.8	720.6	1430.8	1653.6	2294.1	2812.8	2927.7	2997.4	3049.5	3056.5	3056.5
27.5°	452.6	647.5	1416.9	1660.5	2356.8	2826.7	2917.3	2966.0	2990.4	3004.3	3004.3
30°	407.3	577.9	1382.0	1646.6	2384.7	2812.8	2885.9	2910.3	2934.7	2955.6	2966.0
32.5°	372.5	511.7	1329.8	1618.8	2388.1	2778.1	2830.2	2844.2	2879.0	2927.7	2945.1
35°	341.1	445.6	1270.6	1580.5	2367.2	2722.3	2757.2	2771.0	2840.7	2913.8	2938.2
37.5°	309.9	396.9	1194.1	1514.4	2335.9	2656.2	2680.6	2704.9	2812.8	2899.9	2927.7
40°	278.5	355.1	1103.6	1441.2	2287.2	2576.1	2597.0	2635.3	2778.1	2879.0	2906.8
42.5°	254.1	320.3	1006.1	1364.6	2224.5	2485.6	2516.9	2572.6	2736.3	2844.2	2875.5
45°	233.3	285.4	901.7	1260.2	2144.5	2391.6	2436.8	2513.4	2687.5	2791.9	2819.8
47.5°	212.4	261.1	793.7	1152.3	2057.4	2297.6	2356.8	2443.8	2621.4	2722.3	2746.7
50°	195.0	236.7	685.8	1037.4	1963.4	2196.6	2266.3	2356.8	2537.9	2631.8	2663.2
52.5°	181.0	215.8	584.9	922.6	1855.5	2092.2	2172.3	2266.3	2436.8	2527.4	2548.3
55°	167.1	198.4	497.8	800.7	1744.1	1980.8	2067.9	2158.3	2325.5	2402.1	2415.9
57.5°	160.1	184.5	424.7	685.8	1625.7	1855.5	1953.0	2036.5	2193.2	2252.3	2266.3
60°	149.7	174.1	369.0	588.3	1496.9	1737.1	1820.7	1904.2	2036.5	2085.3	2095.7
62.5°	139.2	167.1	327.3	494.3	1364.6	1597.9	1681.4	1758.0	1869.5	1904.2	1918.1
65°	132.3	160.1	295.9	424.7	1228.9	1451.7	1535.2	1601.4	1691.9	1726.7	1733.7
67.5°	125.3	153.2	271.6	365.5	1093.1	1305.4	1368.1	1430.8	1500.4	1535.2	1538.7
70°	114.9	146.2	250.7	323.7	953.8	1138.4	1190.6	1256.8	1312.4	1329.8	1340.3
72.5°	107.9	135.8	236.7	292.4	811.1	978.3	1027.0	1065.3	1114.0	1131.4	1131.4
75°	97.5	121.8	222.8	261.1	664.9	800.7	842.5	880.8	919.1	926.0	915.5
77.5°	87.0	107.9	191.5	219.3	518.7	633.6	668.4	689.3	720.6	727.6	731.1
80°	73.1	94.0	149.7	170.6	376.0	466.5	490.9	508.3	536.1	536.1	543.1
82.5°	55.7	73.1	107.9	121.8	254.1	320.3	341.1	351.6	369.0	369.0	369.0
85°	34.8	45.2	69.6	80.1	153.2	195.0	208.9	212.4	226.3	229.8	229.8
87.5°	17.4	24.3	45.2	48.7	80.1	100.9	100.9	107.9	107.9	104.4	100.9
90°	11.0	19.8	28.5	30.7	48.2	71.6	83.3	74.0	55.5	41.6	41.6
92.5°	43.8	118.3	192.9	211.5	297.4	411.8	469.1	411.1	295.2	208.2	200.0
95°	105.2	241.6	378.0	412.1	731.7	1158.0	1371.0	1223.5	928.3	706.9	681.7
97.5°	181.9	302.2	422.6	452.7	985.6	1696.3	2051.6	1958.3	1771.8	1631.9	1584.2
100°	241.1	350.2	459.3	486.6	1078.0	1866.7	2261.0	2267.9	2281.5	2291.7	2234.8
102.5°	291.5	393.3	495.1	520.6	1120.4	1920.3	2320.2	2439.0	2676.7	2855.0	2806.3
105°	377.1	463.2	549.5	571.0	1151.9	1926.4	2313.6	2580.1	3113.0	3512.6	3486.4
107.5°	464.7	545.1	625.4	645.6	1157.7	1840.6	2182.1	2553.7	3297.1	3854.5	3860.8
110°	523.9	596.5	669.0	687.2	1148.9	1764.6	2072.4	2488.0	3318.9	3942.2	3969.5



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
112.5°	582.0	651.2	720.3	737.6	1149.3	1698.3	1972.8	2398.0	3248.5	3886.3	3928.2
115°	669.6	733.5	797.2	813.2	1159.9	1622.1	1853.3	2262.9	3082.2	3696.7	3754.7
117.5°	756.2	814.2	872.2	886.6	1181.5	1574.5	1771.1	2140.8	2880.2	3434.8	3499.2
120°	806.6	861.2	915.8	929.4	1199.1	1558.5	1738.2	2076.0	2751.6	3258.3	3320.9
122.5°	856.0	911.1	966.0	979.8	1224.3	1550.1	1713.0	2017.2	2625.6	3081.9	3143.6
125°	931.6	981.8	1031.9	1044.5	1258.2	1543.2	1685.6	1944.0	2460.8	2848.4	2905.2
127.5°	992.9	1043.6	1094.3	1106.9	1292.2	1539.1	1662.6	1884.5	2328.2	2661.0	2708.9
130°	1025.9	1080.4	1134.9	1148.6	1317.0	1541.6	1653.8	1851.4	2246.4	2542.7	2587.0
132.5°	1059.8	1114.4	1168.9	1182.5	1337.0	1543.1	1646.1	1822.9	2176.6	2441.9	2481.6
135°	1110.3	1159.9	1209.6	1222.0	1359.0	1541.7	1633.0	1781.1	2077.2	2299.3	2333.6
137.5°	1161.7	1210.9	1260.1	1272.4	1391.8	1551.2	1630.8	1756.0	2006.4	2194.2	2222.2
140°	1204.5	1249.8	1295.1	1306.4	1412.0	1552.7	1623.1	1731.2	1947.5	2109.8	2135.9
142.5°	1237.4	1279.2	1321.1	1331.6	1428.7	1558.3	1623.1	1718.1	1908.1	2050.6	2073.1
145°	1287.8	1324.3	1360.8	1370.0	1450.7	1558.4	1612.2	1689.9	1845.2	1961.8	1978.8
147.5°	1338.2	1373.8	1409.3	1418.2	1482.8	1569.1	1612.2	1673.3	1795.6	1887.3	1901.4
150°	1371.0	1403.2	1435.3	1443.4	1499.7	1574.7	1612.2	1663.9	1767.1	1844.5	1855.9
152.5°	1405.0	1429.3	1453.8	1459.8	1510.6	1578.3	1612.2	1656.3	1744.4	1810.5	1819.1
155°	1455.4	1473.4	1491.5	1496.0	1534.7	1586.4	1612.2	1647.3	1717.3	1770.0	1775.7
157.5°	1492.7	1510.2	1527.8	1532.2	1558.9	1594.5	1612.2	1639.4	1694.0	1734.9	1738.9
160°	1517.9	1531.6	1545.2	1548.6	1569.8	1598.1	1612.2	1635.6	1682.3	1717.3	1719.6
162.5°	1543.1	1553.3	1563.6	1566.1	1581.5	1601.9	1612.2	1631.9	1671.3	1700.9	1703.1
165°	1570.5	1579.7	1589.0	1591.3	1598.2	1607.6	1612.2	1626.3	1654.5	1675.7	1678.0
167.5°	1595.7	1600.1	1604.5	1605.6	1611.4	1619.2	1623.1	1632.4	1650.9	1664.8	1665.8
170°	1612.2	1616.6	1621.0	1622.0	1622.4	1622.8	1623.1	1632.4	1650.9	1664.8	1664.8
172.5°	1620.9	1621.9	1622.8	1623.1	1623.1	1623.1	1623.1	1630.4	1645.1	1656.0	1655.2
175°	1633.0	1633.0	1633.0	1633.0	1629.7	1625.3	1623.1	1627.8	1637.0	1643.9	1643.9
177.5°	1633.0	1633.0	1633.0	1633.0	1630.5	1627.1	1625.3	1629.0	1636.3	1641.7	1640.8
180°	1633.0	1633.0	1633.0	1633.0	1633.0	1633.0	1633.0	1633.0	1633.0	1633.0	1633.0



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**CANDELA DISTRIBUTION (continued):**

	80°	90°
0°	1082.7	1082.7
2.5°	1155.8	1148.8
5°	1486.5	1493.5
7.5°	2001.7	1998.2
10°	2489.1	2520.4
12.5°	2844.2	2851.1
15°	3060.0	3074.0
17.5°	3143.5	3147.0
20°	3147.0	3140.1
22.5°	3108.7	3101.8
25°	3063.5	3060.0
27.5°	3021.7	3025.2
30°	3004.3	3014.8
32.5°	3004.3	3021.7
35°	3011.3	3028.6
37.5°	3007.7	3028.6
40°	2993.9	3018.2
42.5°	2955.6	2973.0
45°	2896.4	2917.3
47.5°	2819.8	2833.8
50°	2722.3	2736.3
52.5°	2600.5	2604.0
55°	2454.2	2468.2
57.5°	2297.6	2301.1
60°	2123.6	2134.0
62.5°	1939.0	1939.0
65°	1744.1	1751.1
67.5°	1542.2	1559.6
70°	1336.8	1340.3
72.5°	1134.9	1134.9
75°	926.0	929.5
77.5°	727.6	727.6
80°	539.6	543.1
82.5°	372.5	379.4
85°	233.3	233.3
87.5°	107.9	97.5
90°	41.6	41.6
92.5°	166.8	133.7
95°	581.4	481.1
97.5°	1393.2	1202.3
100°	2007.4	1779.9
102.5°	2611.5	2416.6
105°	3381.6	3276.9
107.5°	3886.2	3911.5
110°	4078.6	4187.7





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**CANDELA DISTRIBUTION (continued):**

	80°	90°
112.5°	4095.8	4263.4
115°	3987.1	4219.4
117.5°	3756.8	4014.5
120°	3571.3	3821.7
122.5°	3390.5	3637.5
125°	3132.7	3360.2
127.5°	2900.9	3092.8
130°	2764.3	2941.6
132.5°	2640.3	2799.1
135°	2470.4	2607.3
137.5°	2334.2	2446.2
140°	2240.7	2345.4
142.5°	2163.2	2253.3
145°	2047.1	2115.2
147.5°	1957.9	2014.4
150°	1901.8	1947.5
152.5°	1853.7	1888.3
155°	1798.6	1821.5
157.5°	1755.0	1771.1
160°	1728.9	1738.2
162.5°	1711.9	1720.7
165°	1687.3	1696.5
167.5°	1669.7	1673.5
170°	1664.8	1664.8
172.5°	1651.7	1648.3
175°	1643.9	1643.9
177.5°	1636.9	1633.0
180°	1633.0	1633.0



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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	4.65	5.50	5.65	6.51	7.86	17.85	18.69	18.84	19.70	21.05
	3H	5.36	6.12	6.37	7.14	8.51	19.69	20.45	20.70	21.47	22.84
	4H	5.66	6.37	6.68	7.40	8.78	20.34	21.06	21.36	22.08	23.46
	6H	5.90	6.57	6.94	7.60	8.99	20.77	21.43	21.80	22.47	23.85
	8H	5.97	6.60	7.01	7.65	9.04	20.89	21.53	21.93	22.57	23.96
	12H	5.99	6.59	7.03	7.63	9.04	20.96	21.57	22.01	22.61	24.02
4H	2H	11.88	12.59	12.90	13.62	15.00	18.12	18.84	19.15	19.86	21.24
	3H	13.44	14.04	14.48	15.10	16.49	20.17	20.77	21.20	21.82	23.21
	4H	13.53	14.09	14.58	15.13	16.54	20.94	21.49	21.98	22.53	23.95
	6H	13.54	14.02	14.60	15.09	16.50	21.48	21.96	22.53	23.02	24.43
	8H	13.52	13.97	14.58	15.03	16.45	21.64	22.09	22.70	23.15	24.57
	12H	13.48	13.88	14.55	14.95	16.38	21.74	22.14	22.81	23.22	24.65
8H	4H	14.98	15.43	16.04	16.49	17.91	21.00	21.44	22.05	22.50	23.93
	6H	15.22	15.59	16.30	16.69	18.12	21.63	22.00	22.71	23.10	24.52
	8H	15.24	15.56	16.33	16.65	18.09	21.85	22.17	22.94	23.26	24.70
	12H	15.21	15.49	16.30	16.58	18.06	22.00	22.28	23.09	23.37	24.85
12H	4H	15.13	15.53	16.20	16.60	18.03	20.95	21.35	22.02	22.43	23.86
	6H	15.48	15.81	16.57	16.89	18.33	21.61	21.94	22.70	23.02	24.46
	8H	15.55	15.84	16.64	16.92	18.40	21.84	22.13	22.93	23.21	24.69