

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: P937620

Luminaire Tested: SQ4-FB-100U-100D-840-1D-UNV-STD-W-8

Issue Date: 12/17/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P937620  
REPORT IS A COMBINATION OF REPORTS P933583 AND P933786  
Test Lab: INNOVATION CENTER  
Issue Date: 12/17/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ4-FB-100U-100D-840-1D-UNV-STD-W-8  
Description: CORELITE SQ4 SUSPENDED INDIRECT LED LUMINAIRE WITH Batwing Frosted Continuous Roll L  
Light Source: -  
Ballast/Driver: -

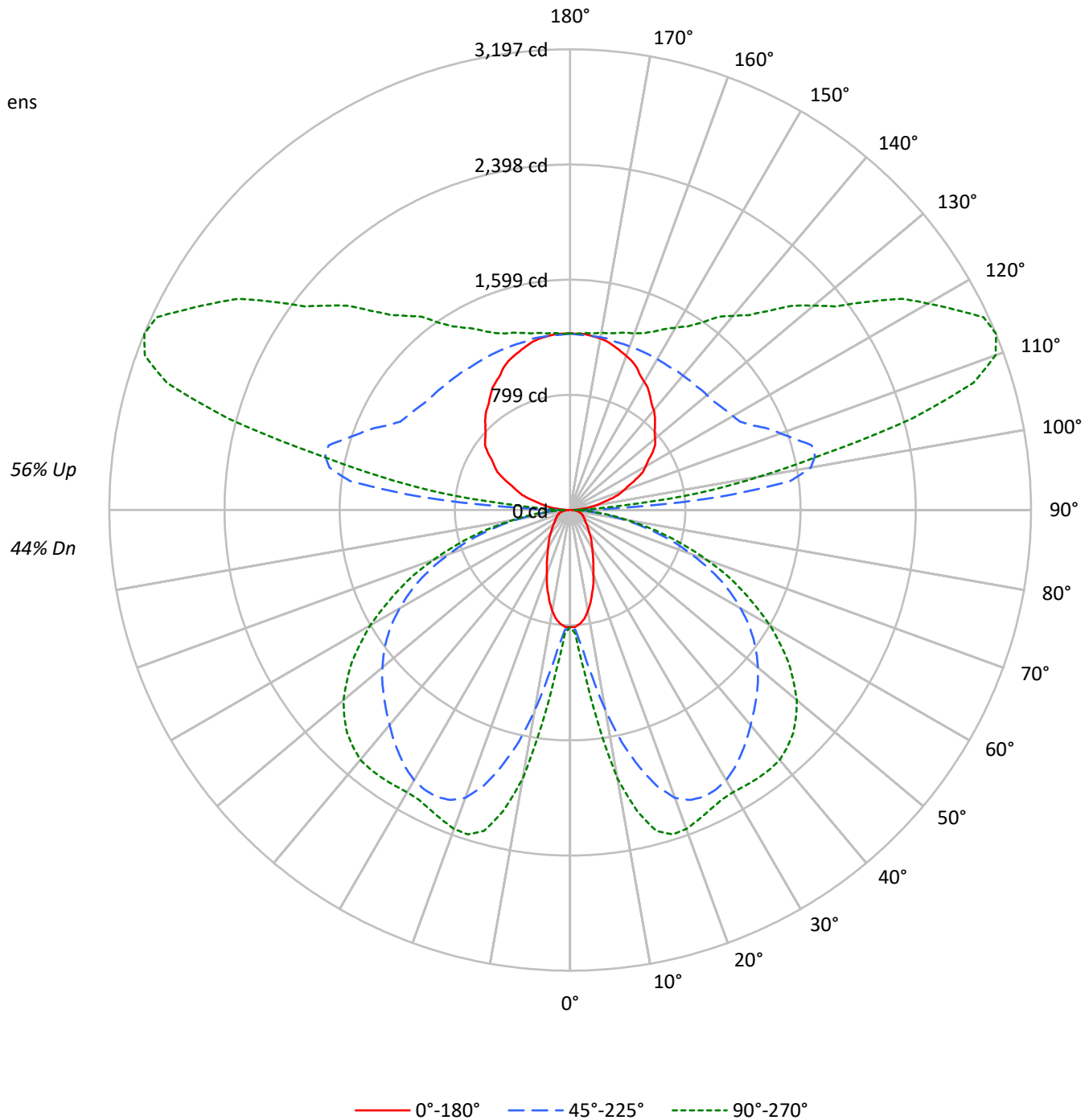
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 14225.2 lumens  
Efficiency: N/A  
Efficacy: 122.6 lumens/watt  
Spacing Criteria (0/90/45): 0.71 / 2.69 / 2.33  
Luminous Opening: Rectangular w/ Sides (W: 0.29' x L: 8' x H: 0.1')  
CIE Type: General Diffuse

Input Watts (W): 116  
Input Voltage (V): NR  
Input Current (Ain): 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: P937620  
CATALOG NUMBER: SQ4-FB-100U-100D-840-1D-UNV-STD-W-8

### Luminous Intensity Polar Plot





TEST NUMBER: P937620

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

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

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

	0°	45°	90°
0°	3767	3767	3767
5°	3680	4354	5064
10°	3339	6347	8395
15°	2837	8292	10137
20°	2310	9610	10331
25°	1927	10056	10121
30°	1625	10120	10102
35°	1437	9952	10363
40°	1252	9733	10634
45°	1134	9573	10675
50°	1040	9430	10498
55°	996	9219	10033
60°	1019	8814	9299
65°	1061	8198	8289
70°	1131	7150	7002
75°	1252	5829	5464
80°	1367	4042	3683
85°	1216	2145	1885

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 10675 cd/sqm



TEST NUMBER: P937620

CATALOG NUMBER: SQ4-FB-100U-100D-840-1D-UNV-STD-W-8

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	105.0	0.7
10°-20°	465.5	3.3
20°-30°	814.3	5.7
30°-40°	1048.2	7.4
40°-50°	1170.8	8.2
50°-60°	1121.4	7.9
60°-70°	888.7	6.2
70°-80°	522.6	3.7
80°-90°	149.8	1.1
90°-100°	597.0	4.2
100°-110°	1569.4	11.0
110°-120°	1627.3	11.4
120°-130°	1305.3	9.2
130°-140°	1024.2	7.2
140°-150°	786.1	5.5
150°-160°	566.1	4.0
160°-170°	346.4	2.4
170°-180°	117.0	0.8
0°-30°	1384.8	9.7
0°-40°	2433.1	17.1
0°-60°	4725.3	33.2
0°-90°	6286.4	44.2
90°-120°	3793.7	26.7
90°-150°	6909.3	48.6
90°-180°	7939.0	55.8
0°-180°	14225.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	812	812	812	812	812	
5°	791	849	956	1081	1120	73
15°	593	1094	1843	2235	2306	165
25°	379	1240	2196	2292	2295	174
35°	256	1185	2068	2185	2272	160
45°	175	945	1828	2094	2188	135
55°	125	600	1551	1802	1851	114
65°	99	318	1151	1295	1313	98
75°	73	196	632	695	697	77
85°	26	60	157	172	175	28
90°	8	23	62	31	31	9
95°	79	309	1028	530	361	88
105°	283	428	1735	2634	2458	300
115°	502	610	1390	2772	3164	496
125°	699	783	1264	2136	2520	620
135°	833	916	1225	1724	1955	644
145°	966	1027	1209	1471	1586	605
155°	1091	1122	1209	1327	1366	502
165°	1178	1193	1209	1257	1272	332
175°	1225	1225	1217	1233	1233	116
180°	1225	1225	1225	1225	1225	



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CATALOG NUMBER: SQ4-FB-100U-100D-840-1D-UNV-STD-W-8

**CANDELA DISTRIBUTION (FULL):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	812.0	812.0	812.0	812.0	812.0	812.0	812.0	812.0	812.0	812.0	812.0
2.5°	812.0	812.0	817.3	819.8	825.1	827.6	832.9	838.1	853.8	856.4	861.6
5°	791.1	801.6	835.6	848.6	885.1	934.7	955.6	989.6	1060.0	1081.0	1094.0
7.5°	759.8	783.3	866.9	887.7	979.1	1109.6	1164.5	1237.6	1349.9	1404.7	1449.1
10°	710.2	759.8	908.7	958.3	1107.1	1305.4	1407.3	1509.2	1678.8	1754.6	1783.2
12.5°	655.3	736.3	953.0	1020.9	1235.0	1524.8	1647.5	1759.8	1953.0	2054.8	2070.5
15°	592.7	702.4	994.8	1094.0	1370.8	1707.6	1843.3	1981.7	2161.8	2235.0	2253.2
17.5°	537.9	676.3	1033.9	1138.4	1475.2	1872.1	2010.5	2125.3	2271.5	2321.1	2334.2
20°	470.0	634.5	1060.0	1195.8	1584.9	1992.2	2125.3	2214.1	2313.3	2344.6	2349.9
22.5°	420.4	590.0	1075.7	1216.7	1658.0	2065.3	2177.6	2248.0	2316.0	2326.3	2329.0
25°	378.6	540.4	1073.1	1240.2	1720.6	2109.7	2195.8	2248.0	2287.2	2292.5	2292.5
27.5°	339.4	485.6	1062.7	1245.5	1767.6	2120.1	2188.0	2224.6	2242.9	2253.2	2253.2
30°	305.5	433.4	1036.5	1235.0	1788.5	2109.7	2164.5	2182.8	2201.1	2216.7	2224.6
32.5°	279.4	383.8	997.4	1214.1	1791.1	2083.6	2122.7	2133.2	2159.3	2195.8	2208.9
35°	255.9	334.2	953.0	1185.4	1775.4	2041.8	2067.9	2078.4	2130.5	2185.4	2203.6
37.5°	232.4	297.7	895.5	1135.8	1751.9	1992.2	2010.5	2028.8	2109.7	2174.9	2195.8
40°	208.9	266.4	827.6	1081.0	1715.4	1932.1	1947.7	1976.5	2083.6	2159.3	2180.1
42.5°	190.6	240.2	754.5	1023.5	1668.4	1864.3	1887.8	1929.5	2052.2	2133.2	2156.7
45°	175.0	214.1	676.3	945.1	1608.4	1793.7	1827.7	1885.1	2015.6	2094.0	2114.9
47.5°	159.3	195.8	595.3	864.2	1543.1	1723.3	1767.6	1832.9	1966.0	2041.8	2060.1
50°	146.2	177.5	514.4	778.0	1472.6	1647.5	1699.8	1767.6	1903.4	1973.9	1997.3
52.5°	135.8	161.8	438.7	691.9	1391.6	1569.1	1629.2	1699.8	1827.7	1895.6	1911.2
55°	125.3	148.8	373.4	600.5	1308.1	1485.7	1550.9	1618.8	1744.1	1801.5	1812.0
57.5°	120.1	138.4	318.5	514.4	1219.3	1391.6	1464.7	1527.4	1644.9	1689.3	1699.8
60°	112.2	130.5	276.7	441.2	1122.8	1302.9	1365.5	1428.2	1527.4	1564.0	1571.8
62.5°	104.4	125.3	245.4	370.8	1023.5	1198.4	1261.1	1318.6	1402.1	1428.2	1438.6
65°	99.2	120.1	221.9	318.5	921.7	1088.8	1151.4	1201.0	1268.9	1295.1	1300.3
67.5°	94.0	114.9	203.6	274.2	819.8	979.1	1026.1	1073.1	1125.3	1151.4	1154.1
70°	86.2	109.7	188.0	242.9	715.4	853.8	893.0	942.6	984.3	997.4	1005.2
72.5°	80.9	101.9	177.5	219.3	608.3	733.7	770.2	799.0	835.6	848.6	848.6
75°	73.1	91.4	167.1	195.8	498.7	600.5	631.8	660.6	689.3	694.6	686.7
77.5°	65.3	80.9	143.6	164.5	389.1	475.2	501.3	516.9	540.4	545.7	548.3
80°	54.8	70.5	112.2	127.9	282.0	349.9	368.1	381.2	402.1	402.1	407.4
82.5°	41.8	54.8	80.9	91.4	190.6	240.2	255.9	263.7	276.7	276.7	276.7
85°	26.1	34.0	52.3	60.1	114.9	146.2	156.7	159.3	169.7	172.3	172.3
87.5°	13.0	18.3	34.0	36.6	60.1	75.7	75.7	80.9	80.9	78.3	75.7
90°	8.2	14.8	21.3	23.0	36.2	53.6	62.4	55.5	41.6	31.2	31.2
92.5°	32.9	88.8	144.7	158.7	223.0	308.8	351.7	308.3	221.4	156.2	150.0
95°	78.9	181.2	283.5	309.0	548.7	868.4	1028.2	917.6	696.1	530.2	511.4
97.5°	136.4	226.6	317.0	339.5	739.2	1272.1	1538.6	1468.7	1328.8	1223.8	1188.1
100°	180.8	262.6	344.5	365.0	808.5	1399.9	1695.6	1700.7	1710.9	1718.6	1675.9
102.5°	218.6	294.9	371.3	390.4	840.2	1440.0	1740.0	1829.1	2007.4	2141.1	2104.5
105°	282.8	347.4	412.0	428.2	863.8	1444.7	1735.0	1934.8	2334.4	2634.2	2614.5
107.5°	348.5	408.7	469.0	484.1	868.3	1380.3	1636.4	1915.1	2472.6	2890.6	2895.3
110°	392.8	447.3	501.7	515.3	861.6	1323.3	1554.2	1865.8	2489.0	2956.4	2976.8



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CATALOG NUMBER: SQ4-FB-100U-100D-840-1D-UNV-STD-W-8

**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
112.5°	436.4	488.3	540.2	553.2	861.9	1273.6	1479.4	1798.4	2436.1	2914.5	2945.9
115°	502.2	550.0	597.9	609.9	869.8	1216.5	1389.8	1697.1	2311.5	2772.3	2815.9
117.5°	567.1	610.6	654.1	664.9	886.0	1180.8	1328.2	1605.4	2160.0	2575.8	2624.1
120°	605.0	645.9	686.8	696.9	899.2	1168.8	1303.6	1556.9	2063.5	2443.5	2490.5
122.5°	641.9	683.2	724.5	734.8	918.0	1162.4	1284.6	1512.7	1969.0	2311.2	2357.6
125°	698.6	736.3	773.9	783.3	943.5	1157.2	1264.0	1457.9	1845.5	2136.2	2178.8
127.5°	744.7	782.6	820.6	830.1	969.0	1154.3	1246.9	1413.2	1746.0	1995.6	2031.5
130°	769.3	810.2	851.1	861.3	987.6	1156.1	1240.2	1388.3	1684.6	1906.8	1940.0
132.5°	794.7	835.7	876.6	886.8	1002.7	1157.2	1234.5	1367.1	1632.3	1831.2	1860.9
135°	832.6	869.8	907.2	916.5	1019.2	1156.2	1224.6	1335.7	1557.8	1724.4	1750.0
137.5°	871.2	908.1	945.0	954.2	1043.8	1163.3	1222.9	1316.8	1504.6	1645.4	1666.5
140°	903.2	937.2	971.2	979.7	1058.8	1164.5	1217.2	1298.3	1460.6	1582.2	1601.8
142.5°	927.9	959.3	990.8	998.6	1071.5	1168.6	1217.2	1288.5	1430.9	1537.8	1554.7
145°	965.8	993.1	1020.6	1027.4	1088.0	1168.7	1209.0	1267.3	1383.8	1471.2	1484.0
147.5°	1003.5	1030.2	1056.9	1063.6	1112.1	1176.7	1209.0	1254.9	1346.5	1415.3	1425.9
150°	1028.2	1052.3	1076.4	1082.5	1124.6	1180.9	1209.0	1247.7	1325.2	1383.3	1391.9
152.5°	1053.7	1072.0	1090.3	1094.8	1132.8	1183.6	1209.0	1242.1	1308.2	1357.8	1364.3
155°	1091.4	1105.0	1118.5	1121.9	1150.9	1189.7	1209.0	1235.3	1288.0	1327.4	1331.6
157.5°	1119.4	1132.5	1145.8	1149.0	1169.0	1195.7	1209.0	1229.5	1270.4	1301.1	1304.1
160°	1138.4	1148.6	1158.8	1161.4	1177.3	1198.4	1209.0	1226.6	1261.7	1288.0	1289.7
162.5°	1157.2	1165.0	1172.7	1174.5	1186.0	1201.3	1209.0	1223.8	1253.4	1275.6	1277.3
165°	1177.8	1184.7	1191.6	1193.4	1198.6	1205.6	1209.0	1219.6	1240.8	1256.7	1258.5
167.5°	1196.7	1199.9	1203.3	1204.1	1208.4	1214.3	1217.2	1224.1	1238.1	1248.4	1249.1
170°	1209.0	1212.3	1215.6	1216.4	1216.7	1217.0	1217.2	1224.1	1238.1	1248.4	1248.4
172.5°	1215.6	1216.3	1217.0	1217.2	1217.2	1217.2	1217.2	1222.7	1233.7	1241.9	1241.3
175°	1224.6	1224.6	1224.6	1224.6	1222.2	1218.9	1217.2	1220.7	1227.6	1232.8	1232.8
177.5°	1224.6	1224.6	1224.6	1224.6	1222.7	1220.2	1218.9	1221.7	1227.1	1231.2	1230.6
180°	1224.6	1224.6	1224.6	1224.6	1224.6	1224.6	1224.6	1224.6	1224.6	1224.6	1224.6



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**CANDELA DISTRIBUTION (continued):**

	80°	90°
0°	812.0	812.0
2.5°	866.9	861.6
5°	1114.9	1120.1
7.5°	1501.3	1498.7
10°	1866.8	1890.3
12.5°	2133.2	2138.4
15°	2295.0	2305.5
17.5°	2357.7	2360.3
20°	2360.3	2355.1
22.5°	2331.6	2326.3
25°	2297.7	2295.0
27.5°	2266.3	2268.9
30°	2253.2	2261.1
32.5°	2253.2	2266.3
35°	2258.5	2271.5
37.5°	2255.9	2271.5
40°	2245.4	2263.7
42.5°	2216.7	2229.7
45°	2172.3	2188.0
47.5°	2114.9	2125.3
50°	2041.8	2052.2
52.5°	1950.4	1953.0
55°	1840.7	1851.2
57.5°	1723.3	1725.8
60°	1592.7	1600.6
62.5°	1454.3	1454.3
65°	1308.1	1313.3
67.5°	1156.7	1169.7
70°	1002.6	1005.2
72.5°	851.2	851.2
75°	694.6	697.1
77.5°	545.7	545.7
80°	404.7	407.4
82.5°	279.4	284.6
85°	175.0	175.0
87.5°	80.9	73.1
90°	31.2	31.2
92.5°	125.2	100.3
95°	436.1	360.8
97.5°	1044.8	901.6
100°	1505.4	1334.8
102.5°	1958.4	1812.3
105°	2536.0	2457.5
107.5°	2914.4	2933.4
110°	3058.7	3140.5





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**CANDELA DISTRIBUTION (continued):**

	80°	90°
112.5°	3071.5	3197.2
115°	2990.1	3164.4
117.5°	2817.4	3010.6
120°	2678.3	2866.0
122.5°	2542.7	2727.9
125°	2349.4	2520.0
127.5°	2175.5	2319.4
130°	2073.0	2206.0
132.5°	1980.1	2099.1
135°	1852.7	1955.4
137.5°	1750.4	1834.5
140°	1680.3	1758.8
142.5°	1622.3	1689.9
145°	1535.2	1586.2
147.5°	1468.3	1510.7
150°	1426.2	1460.6
152.5°	1390.2	1416.1
155°	1348.8	1366.0
157.5°	1316.1	1328.2
160°	1296.7	1303.6
162.5°	1283.8	1290.4
165°	1265.4	1272.3
167.5°	1252.1	1255.1
170°	1248.4	1248.4
172.5°	1238.8	1236.2
175°	1232.8	1232.8
177.5°	1227.6	1224.6
180°	1224.6	1224.6



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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	6.06	6.92	8.27	18.24	19.08	19.24	20.10	21.44
	3H	5.76	6.52	6.77	7.54	8.91	20.08	20.83	21.08	21.86	23.23
	4H	6.06	6.78	7.08	7.81	9.18	20.72	21.44	21.74	22.47	23.84
	6H	6.31	6.97	7.34	8.00	9.39	21.15	21.81	22.18	22.84	24.23
	8H	6.38	7.01	7.41	8.06	9.44	21.27	21.90	22.31	22.95	24.33
	12H	6.39	7.00	7.44	8.04	9.45	21.34	21.94	22.38	22.98	24.39
4H	2H	12.27	12.99	13.30	14.02	15.39	18.51	19.23	19.54	20.26	21.63
	3H	13.84	14.44	14.87	15.49	16.88	20.55	21.16	21.59	22.21	23.60
	4H	13.93	14.48	14.98	15.53	16.94	21.32	21.87	22.36	22.92	24.33
	6H	13.94	14.42	15.00	15.49	16.89	21.86	22.33	22.91	23.40	24.81
	8H	13.92	14.36	14.97	15.42	16.85	22.02	22.46	23.07	23.53	24.95
	12H	13.87	14.28	14.95	15.35	16.78	22.11	22.52	23.19	23.59	25.02
8H	4H	15.38	15.82	16.43	16.88	18.31	21.38	21.82	22.43	22.89	24.31
	6H	15.62	15.99	16.70	17.09	18.51	22.01	22.38	23.09	23.48	24.90
	8H	15.63	15.96	16.72	17.05	18.49	22.23	22.55	23.31	23.64	25.08
	12H	15.60	15.89	16.69	16.97	18.45	22.37	22.66	23.46	23.74	25.22
12H	4H	15.52	15.92	16.59	17.00	18.43	21.33	21.73	22.40	22.81	24.24
	6H	15.88	16.20	16.96	17.29	18.73	21.99	22.31	23.08	23.40	24.84
	8H	15.94	16.23	17.03	17.31	18.79	22.22	22.50	23.31	23.59	25.07