

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: P938504

Luminaire Tested: SQ4-FB-150U-100D-B40-1D-UNV-STD-W-8

Issue Date: 12/17/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P938504  
REPORT IS A COMBINATION OF REPORTS P933647 AND P933786  
Test Lab: INNOVATION CENTER  
Issue Date: 12/17/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ4-FB-150U-100D-B40-1D-UNV-STD-W-8  
Description: CORELITE SQ4 SUSPENDED INDIRECT LED LUMINAIRE WITH Batwing Frosted Continuous Roll L  
Light Source: -  
Ballast/Driver: -

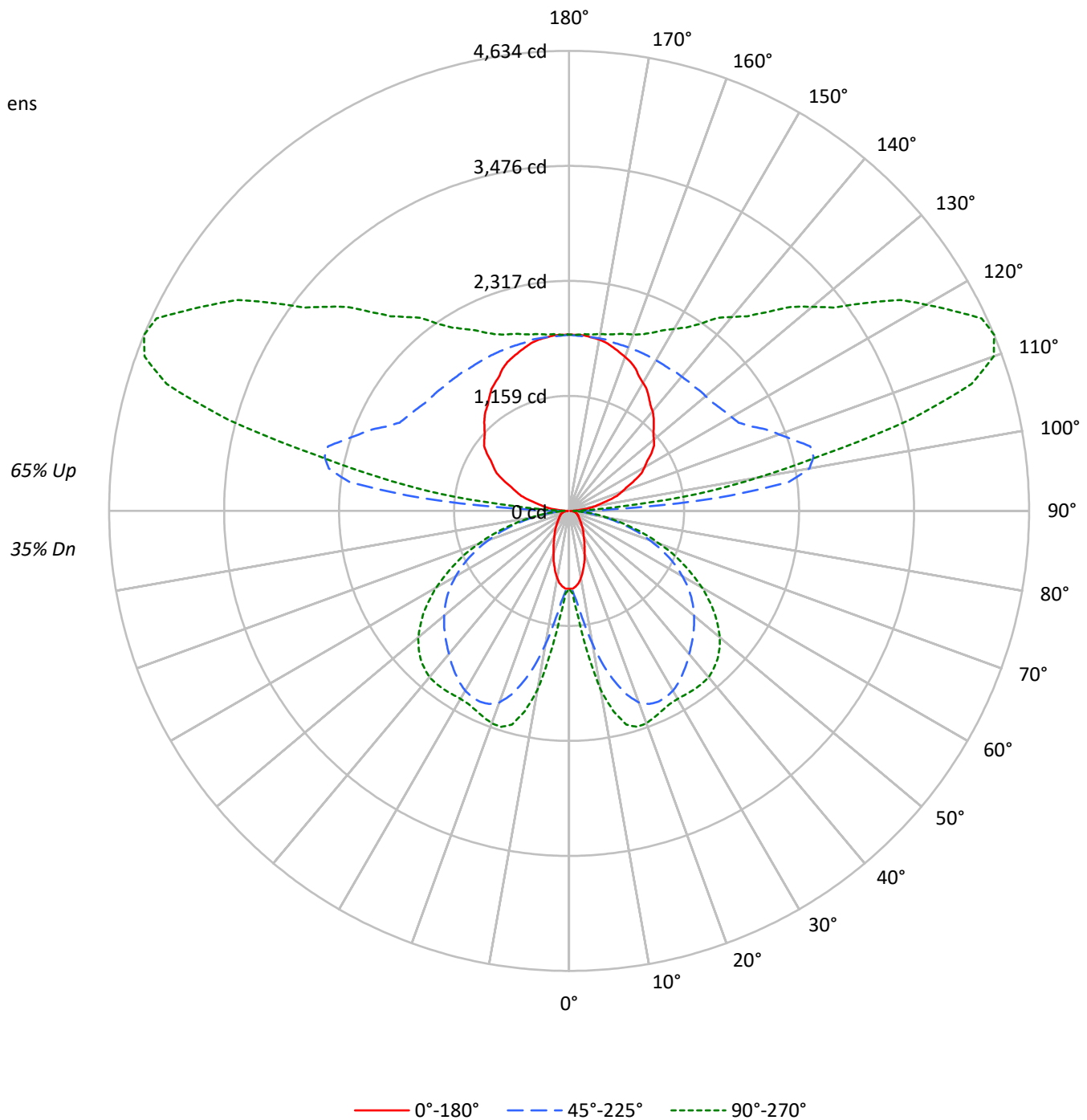
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 17585.4 lumens  
Efficiency: N/A  
Efficacy: 121.4 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: Semi-Indirect

Input Watts (W): 144.8  
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				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	103	103	103	103	93	93	93	93	75	75	75	58	58	58	42	42	42	42	42	42	35
1	94	90	86	82	85	81	78	75	65	63	60	50	49	47	36	35	35	36	35	35	28
2	85	78	72	66	77	70	65	61	56	53	49	43	41	39	32	30	29	32	30	29	23
3	77	68	61	55	69	61	55	50	49	45	41	38	35	32	28	26	24	28	26	24	19
4	71	60	52	46	63	54	47	42	43	38	34	34	30	27	24	22	20	24	22	20	16
5	64	53	45	39	58	48	41	36	39	33	29	30	26	23	22	19	17	22	19	17	14
6	59	47	39	33	53	43	36	30	34	29	25	27	23	20	19	17	15	19	17	15	12
7	54	42	34	29	49	38	31	26	31	26	22	24	20	17	18	15	13	18	15	13	10
8	50	38	30	25	45	35	28	23	28	23	19	22	18	15	16	13	11	16	13	11	9
9	47	35	27	22	42	31	25	20	26	20	17	20	16	14	15	12	10	15	12	10	8
10	43	31	24	20	39	29	22	18	23	18	15	18	15	12	13	11	9	13	11	9	7

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

	0°	45°	90°
0°	3642	3642	3642
5°	3558	4209	4895
10°	3227	6135	8115
15°	2743	8015	9799
20°	2233	9289	9986
25°	1863	9720	9783
30°	1571	9782	9765
35°	1389	9619	10017
40°	1210	9408	10278
45°	1096	9254	10319
50°	1005	9115	10147
55°	962	8911	9698
60°	985	8519	8988
65°	1025	7925	8012
70°	1092	6911	6768
75°	1211	5634	5282
80°	1322	3907	3559
85°	1174	2074	1822

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 10319 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	101.5	0.6
10°-20°	450.0	2.6
20°-30°	787.1	4.5
30°-40°	1013.2	5.8
40°-50°	1131.7	6.4
50°-60°	1083.9	6.2
60°-70°	859.0	4.9
70°-80°	505.1	2.9
80°-90°	147.1	0.8
90°-100°	865.2	4.9
100°-110°	2274.7	12.9
110°-120°	2358.7	13.4
120°-130°	1891.9	10.8
130°-140°	1484.5	8.4
140°-150°	1139.4	6.5
150°-160°	820.6	4.7
160°-170°	502.1	2.9
170°-180°	169.6	1.0
0°-30°	1338.6	7.6
0°-40°	2351.8	13.4
0°-60°	4567.4	26.0
0°-90°	6078.7	34.6
90°-120°	5498.6	31.3
90°-150°	10014.5	56.9
90°-180°	11507.0	65.4
0°-180°	17585.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	785	785	785	785	785	
5°	765	820	924	1045	1083	71
15°	573	1058	1782	2160	2228	159
25°	366	1199	2122	2216	2218	169
35°	247	1146	1999	2112	2196	154
45°	169	914	1767	2024	2115	131
55°	121	580	1499	1741	1789	110
65°	96	308	1113	1252	1270	95
75°	71	189	611	671	674	74
85°	25	58	152	167	169	27
90°	12	33	90	45	45	12
95°	114	448	1490	768	523	127
105°	410	621	2515	3818	3562	434
115°	728	884	2014	4018	4586	719
125°	1013	1135	1832	3096	3652	899
135°	1207	1328	1775	2499	2834	934
145°	1400	1489	1752	2132	2299	877
155°	1582	1626	1752	1924	1980	727
165°	1707	1730	1752	1822	1844	482
175°	1775	1775	1764	1787	1787	168
180°	1775	1775	1775	1775	1775	



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**CANDELA DISTRIBUTION (FULL):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	784.9	784.9	784.9	784.9	784.9	784.9	784.9	784.9	784.9	784.9	784.9
2.5°	784.9	784.9	790.0	792.5	797.5	800.0	805.1	810.1	825.3	827.8	832.9
5°	764.7	774.8	807.6	820.2	855.6	903.5	923.7	956.5	1024.6	1044.9	1057.5
7.5°	734.4	757.1	837.9	858.1	946.4	1072.6	1125.6	1196.2	1304.8	1357.8	1400.7
10°	686.5	734.4	878.3	926.3	1070.1	1261.8	1360.3	1458.8	1622.7	1696.0	1723.7
12.5°	633.5	711.7	921.2	986.8	1193.8	1473.9	1592.5	1701.0	1887.7	1986.2	2001.3
15°	572.9	678.9	961.6	1057.5	1325.0	1650.5	1781.7	1915.5	2089.6	2160.3	2178.0
17.5°	519.9	653.7	999.4	1100.4	1425.9	1809.5	1943.3	2054.3	2195.6	2243.6	2256.3
20°	454.3	613.3	1024.6	1155.8	1531.9	1925.7	2054.3	2140.2	2236.0	2266.3	2271.4
22.5°	406.4	570.3	1039.8	1176.1	1602.6	1996.3	2104.8	2172.9	2238.6	2248.6	2251.2
25°	366.0	522.4	1037.2	1198.8	1663.1	2039.2	2122.5	2172.9	2210.8	2215.9	2215.9
27.5°	328.0	469.4	1027.2	1203.9	1708.6	2049.3	2114.9	2150.3	2167.9	2178.0	2178.0
30°	295.3	419.0	1001.9	1193.8	1728.7	2039.2	2092.2	2109.9	2127.5	2142.6	2150.3
32.5°	270.1	371.0	964.1	1173.5	1731.3	2014.0	2051.8	2061.9	2087.2	2122.5	2135.1
35°	247.3	323.1	921.2	1145.8	1716.1	1973.6	1998.8	2008.9	2059.4	2112.4	2130.0
37.5°	224.6	287.7	865.6	1097.9	1693.4	1925.7	1943.3	1961.0	2039.2	2102.2	2122.5
40°	201.9	257.5	800.0	1044.9	1658.1	1867.6	1882.7	1910.5	2014.0	2087.2	2107.3
42.5°	184.2	232.2	729.3	989.3	1612.7	1802.0	1824.7	1865.0	1983.6	2061.9	2084.7
45°	169.1	206.9	653.7	913.6	1554.6	1733.8	1766.7	1822.1	1948.3	2024.0	2044.3
47.5°	153.9	189.3	575.4	835.3	1491.5	1665.7	1708.6	1771.7	1900.4	1973.6	1991.3
50°	141.3	171.6	497.2	752.1	1423.4	1592.5	1643.0	1708.6	1839.8	1908.0	1930.6
52.5°	131.2	156.4	424.0	668.8	1345.1	1516.7	1574.8	1643.0	1766.7	1832.3	1847.4
55°	121.1	143.8	360.9	580.4	1264.4	1436.0	1499.1	1564.8	1685.9	1741.3	1751.5
57.5°	116.1	133.8	307.9	497.2	1178.6	1345.1	1415.8	1476.4	1590.0	1632.9	1643.0
60°	108.5	126.2	267.5	426.5	1085.3	1259.4	1319.9	1380.5	1476.4	1511.8	1519.3
62.5°	100.9	121.1	237.2	358.4	989.3	1158.4	1219.0	1274.5	1355.2	1380.5	1390.6
65°	95.9	116.1	214.5	307.9	890.9	1052.4	1113.0	1160.9	1226.5	1251.8	1256.9
67.5°	90.8	111.1	196.8	265.0	792.5	946.4	991.9	1037.2	1087.7	1113.0	1115.5
70°	83.3	106.0	181.7	234.7	691.5	825.3	863.1	911.1	951.5	964.1	971.6
72.5°	78.2	98.5	171.6	212.0	588.0	709.2	744.5	772.3	807.6	820.2	820.2
75°	70.7	88.3	161.5	189.3	482.1	580.4	610.7	638.5	666.3	671.4	663.7
77.5°	63.1	78.2	138.8	159.0	376.1	459.4	484.6	499.7	522.4	527.4	530.0
80°	53.0	68.2	108.5	123.7	272.6	338.2	355.8	368.4	388.7	388.7	393.7
82.5°	40.4	53.0	78.2	88.3	184.2	232.2	247.3	254.9	267.5	267.5	267.5
85°	25.2	32.9	50.5	58.1	111.1	141.3	151.5	153.9	164.1	166.6	166.6
87.5°	12.6	17.7	32.9	35.3	58.1	73.2	73.2	78.2	78.2	75.7	73.2
90°	11.9	21.5	30.9	33.3	52.4	77.8	90.5	80.5	60.4	45.3	45.3
92.5°	47.7	128.6	209.7	230.0	323.3	447.7	509.9	446.8	320.9	226.3	217.4
95°	114.4	262.6	410.8	447.9	795.3	1258.6	1490.3	1329.8	1009.1	768.4	741.1
97.5°	197.8	328.5	459.4	492.0	1071.4	1843.9	2230.1	2128.7	1925.9	1773.8	1722.0
100°	262.1	380.7	499.3	529.0	1171.9	2029.0	2457.6	2465.0	2479.8	2490.9	2429.1
102.5°	316.9	427.6	538.1	565.8	1217.9	2087.2	2522.0	2651.2	2909.5	3103.3	3050.4
105°	409.8	503.5	597.3	620.7	1252.0	2093.8	2514.8	2804.5	3383.7	3818.1	3789.6
107.5°	505.1	592.5	679.8	701.6	1258.4	2000.7	2371.8	2775.8	3583.8	4189.8	4196.7
110°	569.5	648.3	727.2	746.9	1248.9	1918.1	2252.7	2704.4	3607.6	4285.1	4314.7



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
112.5°	632.6	707.8	782.9	801.7	1249.2	1845.9	2144.3	2606.5	3530.9	4224.3	4269.8
115°	727.9	797.2	866.6	883.9	1260.8	1763.2	2014.5	2459.7	3350.2	4018.2	4081.3
117.5°	822.0	885.0	948.0	963.8	1284.2	1711.5	1925.1	2327.0	3130.7	3733.5	3803.5
120°	876.8	936.1	995.4	1010.2	1303.3	1694.0	1889.4	2256.6	2991.0	3541.7	3609.7
122.5°	930.4	990.2	1050.0	1065.0	1330.7	1684.9	1862.0	2192.6	2853.9	3349.9	3417.0
125°	1012.6	1067.1	1121.6	1135.3	1367.6	1677.3	1832.2	2113.0	2674.8	3096.1	3157.9
127.5°	1079.3	1134.3	1189.5	1203.2	1404.5	1673.0	1807.1	2048.3	2530.7	2892.4	2944.6
130°	1115.1	1174.4	1233.7	1248.5	1431.5	1675.5	1797.6	2012.3	2441.7	2763.8	2812.0
132.5°	1152.0	1211.3	1270.6	1285.4	1453.4	1677.4	1789.3	1981.4	2365.8	2654.1	2697.3
135°	1206.7	1260.8	1314.8	1328.3	1477.2	1675.7	1775.0	1936.0	2257.9	2499.3	2536.5
137.5°	1262.8	1316.3	1369.7	1383.0	1512.9	1686.1	1772.7	1908.8	2180.8	2384.9	2415.4
140°	1309.2	1358.5	1407.7	1420.0	1534.8	1687.8	1764.3	1881.8	2116.9	2293.2	2321.7
142.5°	1344.9	1390.5	1436.0	1447.4	1553.0	1693.9	1764.3	1867.5	2074.0	2228.9	2253.3
145°	1399.7	1439.5	1479.2	1489.1	1576.9	1693.9	1752.3	1836.8	2005.7	2132.4	2150.9
147.5°	1454.6	1493.2	1531.9	1541.6	1611.8	1705.5	1752.3	1818.8	1951.6	2051.3	2066.7
150°	1490.3	1525.2	1560.2	1568.9	1630.0	1711.6	1752.3	1808.5	1920.7	2004.9	2017.3
152.5°	1527.2	1553.7	1580.2	1586.8	1642.0	1715.6	1752.3	1800.3	1896.1	1968.0	1977.3
155°	1582.1	1601.6	1621.2	1626.1	1668.2	1724.3	1752.3	1790.4	1866.7	1923.9	1930.2
157.5°	1622.5	1641.6	1660.6	1665.4	1694.4	1733.0	1752.3	1782.0	1841.3	1885.8	1890.2
160°	1650.0	1664.8	1679.6	1683.3	1706.3	1737.0	1752.3	1777.7	1828.6	1866.7	1869.2
162.5°	1677.4	1688.4	1699.6	1702.4	1719.0	1741.3	1752.3	1773.8	1816.7	1848.9	1851.3
165°	1707.1	1717.1	1727.2	1729.7	1737.2	1747.3	1752.3	1767.7	1798.5	1821.5	1824.0
167.5°	1734.5	1739.2	1744.0	1745.3	1751.6	1760.1	1764.3	1774.3	1794.4	1809.5	1810.6
170°	1752.3	1757.1	1761.9	1763.1	1763.5	1764.0	1764.3	1774.3	1794.4	1809.5	1809.5
172.5°	1761.9	1762.9	1764.0	1764.3	1764.3	1764.3	1764.3	1772.2	1788.0	1800.0	1799.0
175°	1775.0	1775.0	1775.0	1775.0	1771.4	1766.7	1764.3	1769.3	1779.4	1786.9	1786.9
177.5°	1775.0	1775.0	1775.0	1775.0	1772.2	1768.5	1766.7	1770.7	1778.6	1784.5	1783.5
180°	1775.0	1775.0	1775.0	1775.0	1775.0	1775.0	1775.0	1775.0	1775.0	1775.0	1775.0



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**CANDELA DISTRIBUTION (continued):**

	80°	90°
0°	784.9	784.9
2.5°	837.9	832.9
5°	1077.6	1082.7
7.5°	1451.1	1448.6
10°	1804.5	1827.2
12.5°	2061.9	2067.0
15°	2218.4	2228.5
17.5°	2278.9	2281.5
20°	2281.5	2276.4
22.5°	2253.7	2248.6
25°	2220.9	2218.4
27.5°	2190.6	2193.2
30°	2178.0	2185.6
32.5°	2178.0	2190.6
35°	2183.0	2195.6
37.5°	2180.6	2195.6
40°	2170.4	2188.1
42.5°	2142.6	2155.2
45°	2099.8	2114.9
47.5°	2044.3	2054.3
50°	1973.6	1983.6
52.5°	1885.3	1887.7
55°	1779.3	1789.4
57.5°	1665.7	1668.2
60°	1539.5	1547.1
62.5°	1405.8	1405.8
65°	1264.4	1269.5
67.5°	1118.0	1130.6
70°	969.1	971.6
72.5°	822.7	822.7
75°	671.4	673.8
77.5°	527.4	527.4
80°	391.2	393.7
82.5°	270.1	275.1
85°	169.1	169.1
87.5°	78.2	70.7
90°	45.3	45.3
92.5°	181.4	145.4
95°	632.0	523.0
97.5°	1514.3	1306.8
100°	2181.9	1934.6
102.5°	2838.5	2626.8
105°	3675.8	3562.0
107.5°	4224.2	4251.7
110°	4433.3	4551.9





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**CANDELA DISTRIBUTION (continued):**

	80°	90°
112.5°	4451.9	4634.0
115°	4333.9	4586.4
117.5°	4083.6	4363.7
120°	3881.9	4154.0
122.5°	3685.4	3953.9
125°	3405.2	3652.5
127.5°	3153.2	3361.8
130°	3004.7	3197.4
132.5°	2869.9	3042.5
135°	2685.3	2834.1
137.5°	2537.1	2658.9
140°	2435.5	2549.4
142.5°	2351.3	2449.3
145°	2225.1	2299.2
147.5°	2128.1	2189.5
150°	2067.2	2116.9
152.5°	2015.0	2052.6
155°	1955.1	1979.9
157.5°	1907.6	1925.1
160°	1879.3	1889.4
162.5°	1860.7	1870.3
165°	1834.1	1844.1
167.5°	1814.9	1819.1
170°	1809.5	1809.5
172.5°	1795.4	1791.7
175°	1786.9	1786.9
177.5°	1779.2	1775.0
180°	1775.0	1775.0



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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	3.89	4.65	4.96	5.73	7.20	17.07	17.83	18.14	18.91	20.38
	3H	4.59	5.27	5.67	6.36	7.85	18.90	19.58	19.98	20.67	22.16
	4H	4.88	5.53	5.97	6.62	8.11	19.54	20.19	20.63	21.28	22.77
	6H	5.12	5.72	6.23	6.81	8.32	19.96	20.56	21.07	21.65	23.16
	8H	5.19	5.76	6.30	6.87	8.37	20.08	20.65	21.19	21.76	23.26
	12H	5.20	5.74	6.31	6.85	8.37	20.15	20.69	21.26	21.79	23.32
4H	2H	11.09	11.74	12.19	12.83	14.33	17.33	17.98	18.43	19.07	20.56
	3H	12.65	13.19	13.76	14.31	15.82	19.36	19.91	20.47	21.02	22.53
	4H	12.74	13.24	13.85	14.34	15.87	20.13	20.63	21.24	21.73	23.26
	6H	12.74	13.17	13.86	14.30	15.82	20.66	21.09	21.78	22.22	23.74
	8H	12.72	13.12	13.84	14.24	15.78	20.82	21.22	21.94	22.34	23.88
	12H	12.67	13.03	13.81	14.17	15.71	20.91	21.27	22.05	22.40	23.95
8H	4H	14.18	14.58	15.29	15.70	17.24	20.18	20.58	21.30	21.70	23.24
	6H	14.41	14.74	15.55	15.91	17.44	20.80	21.13	21.94	22.30	23.83
	8H	14.43	14.72	15.58	15.86	17.42	21.02	21.31	22.17	22.45	24.01
	12H	14.39	14.65	15.54	15.79	17.38	21.16	21.42	22.31	22.56	24.15
12H	4H	14.31	14.68	15.45	15.81	17.35	20.13	20.49	21.26	21.62	23.17
	6H	14.67	14.96	15.82	16.10	17.66	20.79	21.08	21.93	22.22	23.77
	8H	14.73	14.99	15.89	16.13	17.72	21.01	21.27	22.16	22.40	24.00