

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: P938416

Luminaire Tested: SQ4-FB-150U-100D-835-1D-UNV-STD-W-8

Issue Date: 12/17/2024

**Test Information**

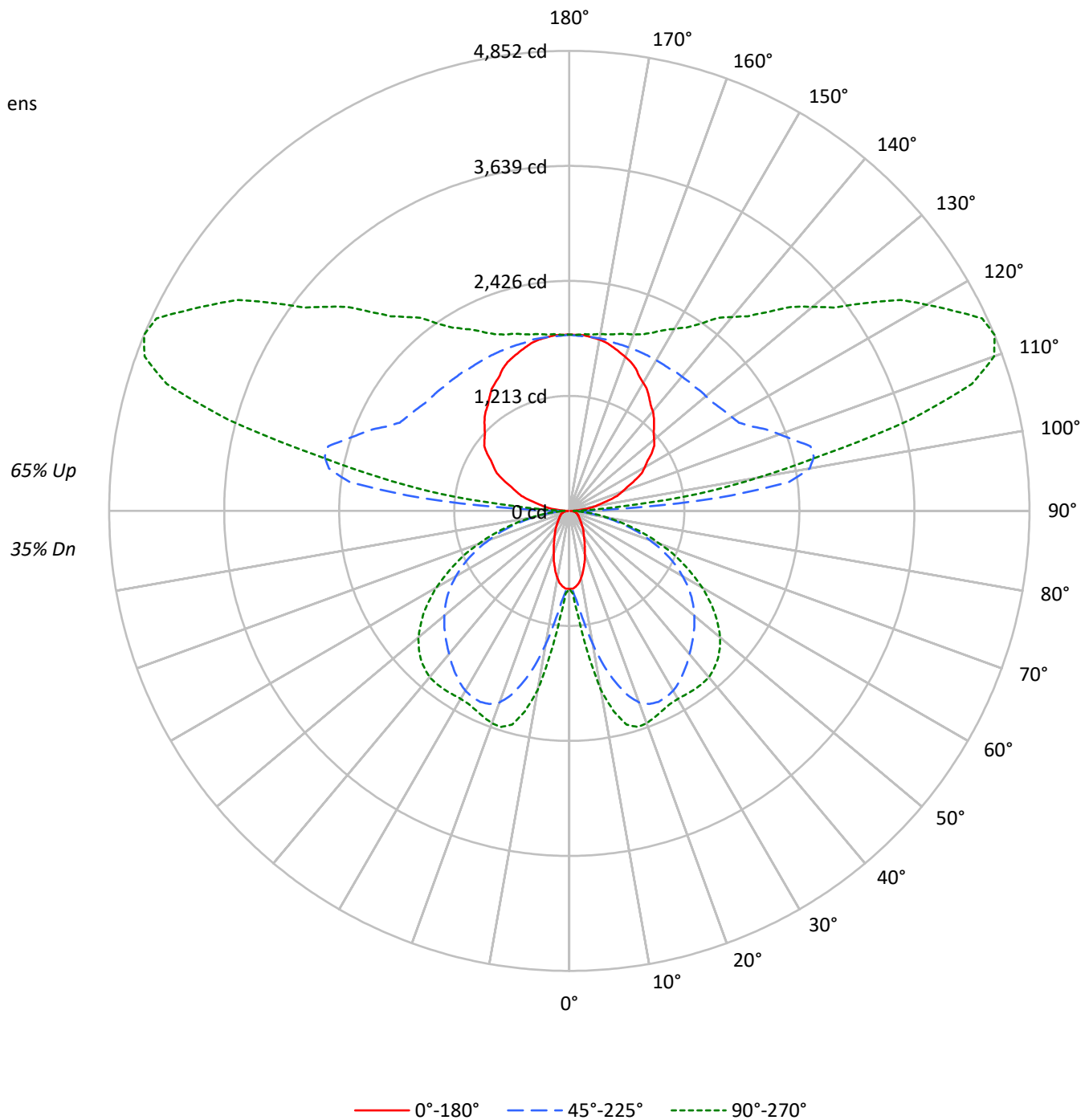
Test Method: LM-79-2019  
Report Number: P938416  
REPORT IS A COMBINATION OF REPORTS P933647 AND P933786  
Test Lab: INNOVATION CENTER  
Issue Date: 12/17/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ4-FB-150U-100D-835-1D-UNV-STD-W-8  
Description: CORELITE SQ4 SUSPENDED INDIRECT LED LUMINAIRE WITH Batwing Frosted Continuous Roll L  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 18414.0 lumens  
Efficiency: N/A  
Efficacy: 127.2 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 (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

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

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

	0°	45°	90°
0°	3813	3813	3813
5°	3725	4407	5125
10°	3379	6424	8497
15°	2872	8393	10260
20°	2338	9726	10457
25°	1950	10178	10244
30°	1645	10243	10225
35°	1454	10073	10489
40°	1267	9851	10763
45°	1148	9690	10805
50°	1053	9544	10626
55°	1008	9330	10155
60°	1032	8921	9411
65°	1073	8298	8390
70°	1144	7237	7087
75°	1267	5900	5531
80°	1385	4092	3727
85°	1230	2172	1908

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 10805 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	106.3	0.6
10°-20°	471.2	2.6
20°-30°	824.2	4.5
30°-40°	1061.0	5.8
40°-50°	1185.0	6.4
50°-60°	1135.0	6.2
60°-70°	899.5	4.9
70°-80°	528.9	2.9
80°-90°	154.0	0.8
90°-100°	906.0	4.9
100°-110°	2381.9	12.9
110°-120°	2469.8	13.4
120°-130°	1981.1	10.8
130°-140°	1554.4	8.4
140°-150°	1193.1	6.5
150°-160°	859.2	4.7
160°-170°	525.7	2.9
170°-180°	177.6	1.0
0°-30°	1401.7	7.6
0°-40°	2462.6	13.4
0°-60°	4782.7	26.0
0°-90°	6365.1	34.6
90°-120°	5757.7	31.3
90°-150°	10486.3	56.9
90°-180°	12049.0	65.4
0°-180°	18414.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	822	822	822	822	822	
5°	801	859	967	1094	1134	74
15°	600	1107	1866	2262	2334	167
25°	383	1255	2222	2320	2323	176
35°	259	1200	2093	2212	2299	162
45°	177	957	1850	2119	2215	137
55°	127	608	1570	1823	1874	116
65°	100	322	1165	1311	1329	100
75°	74	198	640	703	706	77
85°	26	61	159	174	177	28
90°	12	35	95	47	47	12
95°	120	469	1560	805	548	133
105°	429	650	2633	3998	3730	455
115°	762	926	2109	4208	4802	753
125°	1060	1189	1918	3242	3825	941
135°	1264	1391	1859	2617	2968	978
145°	1466	1559	1835	2233	2408	918
155°	1657	1703	1835	2015	2073	761
165°	1788	1811	1835	1907	1931	504
175°	1859	1859	1847	1871	1871	176
180°	1859	1859	1859	1859	1859	



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**CANDELA DISTRIBUTION (FULL):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	821.9	821.9	821.9	821.9	821.9	821.9	821.9	821.9	821.9	821.9	821.9
2.5°	821.9	821.9	827.2	829.8	835.1	837.7	843.0	848.3	864.2	866.8	872.1
5°	800.7	811.3	845.7	858.9	895.9	946.1	967.2	1001.6	1072.9	1094.1	1107.3
7.5°	769.0	792.8	877.4	898.5	991.0	1123.1	1178.6	1252.6	1366.3	1421.8	1466.7
10°	718.8	769.0	919.7	969.9	1120.5	1321.3	1424.4	1527.5	1699.2	1775.9	1804.9
12.5°	663.3	745.2	964.6	1033.3	1250.0	1543.3	1667.5	1781.2	1976.7	2079.8	2095.6
15°	599.9	710.9	1006.9	1107.3	1387.4	1728.3	1865.7	2005.8	2188.1	2262.1	2280.6
17.5°	544.4	684.5	1046.5	1152.2	1493.1	1894.8	2034.9	2151.1	2299.1	2349.3	2362.6
20°	475.7	642.2	1072.9	1210.3	1604.1	2016.4	2151.1	2241.0	2341.4	2373.1	2378.4
22.5°	425.5	597.2	1088.8	1231.5	1678.1	2090.4	2204.0	2275.3	2344.1	2354.6	2357.3
25°	383.2	547.0	1086.1	1255.3	1741.5	2135.3	2222.5	2275.3	2315.0	2320.3	2320.3
27.5°	343.5	491.5	1075.6	1260.6	1789.1	2145.9	2214.6	2251.6	2270.1	2280.6	2280.6
30°	309.2	438.7	1049.1	1250.0	1810.2	2135.3	2190.8	2209.3	2227.8	2243.6	2251.6
32.5°	282.8	388.5	1009.5	1228.8	1812.9	2108.9	2148.5	2159.1	2185.5	2222.5	2235.7
35°	259.0	338.3	964.6	1199.8	1797.0	2066.6	2093.0	2103.6	2156.4	2211.9	2230.4
37.5°	235.2	301.3	906.4	1149.6	1773.2	2016.4	2034.9	2053.4	2135.3	2201.3	2222.5
40°	211.4	269.6	837.7	1094.1	1736.2	1955.6	1971.4	2000.5	2108.9	2185.5	2206.6
42.5°	192.9	243.1	763.7	1035.9	1688.7	1886.9	1910.7	1952.9	2077.1	2159.1	2182.9
45°	177.1	216.7	684.5	956.6	1627.9	1815.5	1849.9	1908.0	2040.1	2119.4	2140.6
47.5°	161.2	198.2	602.5	874.7	1561.8	1744.2	1789.1	1855.2	1989.9	2066.6	2085.1
50°	148.0	179.7	520.6	787.5	1490.5	1667.5	1720.4	1789.1	1926.5	1997.9	2021.6
52.5°	137.4	163.8	444.0	700.3	1408.5	1588.2	1649.0	1720.4	1849.9	1918.6	1934.4
55°	126.8	150.6	377.9	607.8	1324.0	1503.7	1569.7	1638.5	1765.3	1823.4	1834.0
57.5°	121.6	140.1	322.4	520.6	1234.1	1408.5	1482.5	1546.0	1664.9	1709.8	1720.4
60°	113.6	132.1	280.1	446.6	1136.4	1318.7	1382.1	1445.5	1546.0	1583.0	1590.9
62.5°	105.7	126.8	248.4	375.3	1035.9	1213.0	1276.4	1334.6	1419.1	1445.5	1456.1
65°	100.4	121.6	224.6	322.4	932.9	1102.0	1165.4	1215.6	1284.3	1310.8	1316.1
67.5°	95.1	116.3	206.1	277.5	829.8	991.0	1038.6	1086.1	1139.0	1165.4	1168.1
70°	87.2	111.0	190.3	245.8	724.1	864.2	903.8	954.0	996.3	1009.5	1017.4
72.5°	81.9	103.1	179.7	222.0	615.7	742.6	779.6	808.7	845.7	858.9	858.9
75°	74.0	92.5	169.1	198.2	504.8	607.8	639.5	668.6	697.7	703.0	695.0
77.5°	66.1	81.9	145.3	166.5	393.8	481.0	507.4	523.2	547.0	552.3	555.0
80°	55.5	71.4	113.6	129.5	285.4	354.1	372.6	385.8	407.0	407.0	412.3
82.5°	42.3	55.5	81.9	92.5	192.9	243.1	259.0	266.9	280.1	280.1	280.1
85°	26.4	34.4	52.9	60.8	116.3	148.0	158.6	161.2	171.8	174.4	174.4
87.5°	13.2	18.5	34.4	37.0	60.8	76.6	76.6	81.9	81.9	79.3	76.6
90°	12.5	22.5	32.4	34.9	54.9	81.5	94.8	84.3	63.2	47.4	47.4
92.5°	49.9	134.7	219.6	240.8	338.5	468.8	533.9	467.9	336.0	237.0	227.6
95°	119.8	275.0	430.2	469.0	832.8	1317.9	1560.5	1392.5	1056.6	804.6	776.0
97.5°	207.1	344.0	481.0	515.2	1121.9	1930.8	2335.2	2229.0	2016.7	1857.4	1803.1
100°	274.4	398.6	522.8	553.9	1227.1	2124.6	2573.4	2581.2	2596.7	2608.3	2543.6
102.5°	331.8	447.7	563.5	592.5	1275.3	2185.6	2640.8	2776.1	3046.6	3249.5	3194.1
105°	429.1	527.2	625.4	649.9	1311.0	2192.5	2633.3	2936.6	3543.1	3998.0	3968.2
107.5°	528.9	620.4	711.8	734.7	1317.7	2095.0	2483.6	2906.6	3752.7	4387.2	4394.4
110°	596.3	678.9	761.5	782.1	1307.7	2008.5	2358.9	2831.8	3777.6	4487.0	4518.0



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
112.5°	662.4	741.1	819.8	839.5	1308.1	1932.9	2245.3	2729.3	3697.3	4423.3	4471.0
115°	762.2	834.8	907.4	925.6	1320.2	1846.3	2109.4	2575.6	3508.1	4207.5	4273.6
117.5°	860.7	926.7	992.7	1009.2	1344.7	1792.1	2015.8	2436.6	3278.2	3909.4	3982.7
120°	918.1	980.2	1042.3	1057.8	1364.7	1773.8	1978.4	2362.9	3131.9	3708.6	3779.8
122.5°	974.2	1036.9	1099.5	1115.2	1393.4	1764.3	1949.7	2295.9	2988.4	3507.7	3578.0
125°	1060.3	1117.4	1174.5	1188.8	1432.0	1756.3	1918.5	2212.6	2800.8	3242.0	3306.7
127.5°	1130.2	1187.8	1245.5	1259.9	1470.7	1751.8	1892.3	2144.8	2649.9	3028.7	3083.3
130°	1167.6	1229.7	1291.8	1307.3	1499.0	1754.5	1882.3	2107.1	2556.8	2894.0	2944.5
132.5°	1206.3	1268.4	1330.5	1346.0	1521.9	1756.4	1873.6	2074.8	2477.3	2779.2	2824.4
135°	1263.6	1320.2	1376.8	1390.9	1546.8	1754.7	1858.6	2027.2	2364.3	2617.1	2656.0
137.5°	1322.3	1378.3	1434.2	1448.2	1584.2	1765.5	1856.2	1998.7	2283.6	2497.3	2529.2
140°	1370.9	1422.5	1474.0	1486.9	1607.1	1767.3	1847.4	1970.5	2216.7	2401.3	2431.1
142.5°	1408.3	1456.0	1503.7	1515.6	1626.2	1773.7	1847.4	1955.5	2171.7	2333.9	2359.5
145°	1465.7	1507.3	1548.9	1559.3	1651.2	1773.7	1834.9	1923.3	2100.2	2232.9	2252.3
147.5°	1523.1	1563.6	1604.1	1614.2	1687.8	1785.9	1834.9	1904.5	2043.6	2148.0	2164.1
150°	1560.5	1597.1	1633.7	1642.8	1706.8	1792.2	1834.9	1893.7	2011.2	2099.4	2112.4
152.5°	1599.2	1626.9	1654.7	1661.6	1719.4	1796.4	1834.9	1885.1	1985.4	2060.7	2070.5
155°	1656.6	1677.1	1697.6	1702.7	1746.8	1805.5	1834.9	1874.8	1954.7	2014.6	2021.1
157.5°	1699.0	1719.0	1738.9	1743.9	1774.2	1814.7	1834.9	1866.0	1928.1	1974.7	1979.3
160°	1727.7	1743.2	1758.7	1762.6	1786.7	1818.8	1834.9	1861.5	1914.8	1954.7	1957.3
162.5°	1756.4	1768.0	1779.7	1782.6	1800.0	1823.3	1834.9	1857.4	1902.3	1936.0	1938.5
165°	1787.5	1798.0	1808.6	1811.2	1819.1	1829.6	1834.9	1851.0	1883.2	1907.3	1909.9
167.5°	1816.2	1821.2	1826.2	1827.5	1834.1	1843.0	1847.4	1857.9	1879.0	1894.8	1895.9
170°	1834.9	1839.9	1844.9	1846.2	1846.6	1847.1	1847.4	1857.9	1879.0	1894.8	1894.8
172.5°	1844.9	1846.0	1847.1	1847.4	1847.4	1847.4	1847.4	1855.7	1872.3	1884.8	1883.8
175°	1858.6	1858.6	1858.6	1858.6	1854.9	1849.9	1847.4	1852.7	1863.2	1871.1	1871.1
177.5°	1858.6	1858.6	1858.6	1858.6	1855.7	1851.8	1849.9	1854.1	1862.4	1868.6	1867.5
180°	1858.6	1858.6	1858.6	1858.6	1858.6	1858.6	1858.6	1858.6	1858.6	1858.6	1858.6



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**CANDELA DISTRIBUTION (continued):**

	80°	90°
0°	821.9	821.9
2.5°	877.4	872.1
5°	1128.4	1133.7
7.5°	1519.5	1516.9
10°	1889.5	1913.3
12.5°	2159.1	2164.4
15°	2322.9	2333.5
17.5°	2386.3	2389.0
20°	2389.0	2383.7
22.5°	2359.9	2354.6
25°	2325.6	2322.9
27.5°	2293.8	2296.5
30°	2280.6	2288.6
32.5°	2280.6	2293.8
35°	2285.9	2299.1
37.5°	2283.3	2299.1
40°	2272.7	2291.2
42.5°	2243.6	2256.8
45°	2198.7	2214.6
47.5°	2140.6	2151.1
50°	2066.6	2077.1
52.5°	1974.1	1976.7
55°	1863.1	1873.7
57.5°	1744.2	1746.8
60°	1612.0	1620.0
62.5°	1472.0	1472.0
65°	1324.0	1329.3
67.5°	1170.7	1183.9
70°	1014.8	1017.4
72.5°	861.5	861.5
75°	703.0	705.6
77.5°	552.3	552.3
80°	409.6	412.3
82.5°	282.8	288.1
85°	177.1	177.1
87.5°	81.9	74.0
90°	47.4	47.4
92.5°	189.9	152.2
95°	661.8	547.6
97.5°	1585.7	1368.4
100°	2284.7	2025.8
102.5°	2972.3	2750.6
105°	3849.0	3729.8
107.5°	4423.2	4452.0
110°	4642.2	4766.4





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**CANDELA DISTRIBUTION (continued):**

	80°	90°
112.5°	4661.7	4852.4
115°	4538.1	4802.5
117.5°	4276.0	4569.3
120°	4064.8	4349.7
122.5°	3859.1	4140.2
125°	3565.7	3824.6
127.5°	3301.8	3520.2
130°	3146.3	3348.1
132.5°	3005.1	3185.9
135°	2811.8	2967.6
137.5°	2656.7	2784.2
140°	2550.3	2669.5
142.5°	2462.1	2564.7
145°	2329.9	2407.5
147.5°	2228.4	2292.7
150°	2164.6	2216.7
152.5°	2109.9	2149.3
155°	2047.2	2073.2
157.5°	1997.5	2015.8
160°	1967.9	1978.4
162.5°	1948.4	1958.4
165°	1920.5	1931.0
167.5°	1900.4	1904.8
170°	1894.8	1894.8
172.5°	1880.0	1876.1
175°	1871.1	1871.1
177.5°	1863.0	1858.6
180°	1858.6	1858.6



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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	4.05	4.81	5.12	5.89	7.36	17.23	17.99	18.30	19.07	20.54
	3H	4.75	5.43	5.83	6.52	8.01	19.06	19.74	20.14	20.83	22.32
	4H	5.04	5.69	6.13	6.78	8.27	19.70	20.35	20.79	21.44	22.93
	6H	5.28	5.88	6.39	6.97	8.48	20.12	20.72	21.23	21.81	23.32
	8H	5.35	5.92	6.46	7.03	8.53	20.24	20.81	21.35	21.92	23.42
	12H	5.36	5.90	6.47	7.01	8.53	20.31	20.85	21.42	21.95	23.48
4H	2H	11.25	11.90	12.35	12.99	14.49	17.49	18.14	18.59	19.23	20.72
	3H	12.81	13.35	13.92	14.47	15.98	19.52	20.07	20.63	21.18	22.69
	4H	12.90	13.40	14.01	14.50	16.03	20.29	20.79	21.40	21.89	23.42
	6H	12.90	13.33	14.02	14.46	15.98	20.82	21.25	21.94	22.38	23.90
	8H	12.88	13.28	14.00	14.40	15.94	20.98	21.38	22.10	22.50	24.04
	12H	12.83	13.19	13.97	14.33	15.87	21.07	21.43	22.21	22.56	24.11
8H	4H	14.34	14.74	15.45	15.86	17.40	20.34	20.74	21.46	21.86	23.40
	6H	14.57	14.90	15.71	16.07	17.60	20.96	21.29	22.10	22.46	23.99
	8H	14.59	14.88	15.74	16.02	17.58	21.18	21.47	22.33	22.61	24.17
	12H	14.55	14.81	15.70	15.95	17.54	21.32	21.58	22.47	22.72	24.31
12H	4H	14.47	14.84	15.61	15.97	17.51	20.29	20.65	21.42	21.78	23.33
	6H	14.83	15.12	15.98	16.26	17.82	20.95	21.24	22.09	22.38	23.93
	8H	14.89	15.15	16.05	16.29	17.88	21.17	21.43	22.32	22.56	24.16