

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: P938217

Luminaire Tested: SQ4-FB-150U-050D-840-1D-UNV-STD-W-12

Issue Date: 12/17/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P938217  
REPORT IS A COMBINATION OF REPORTS P933621 AND P933786  
Test Lab: INNOVATION CENTER  
Issue Date: 12/17/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ4-FB-150U-050D-840-1D-UNV-STD-W-12  
Description: CORELITE SQ4 SUSPENDED INDIRECT LED LUMINAIRE WITH Batwing Frosted Continuous Roll L  
Light Source: -  
Ballast/Driver: -

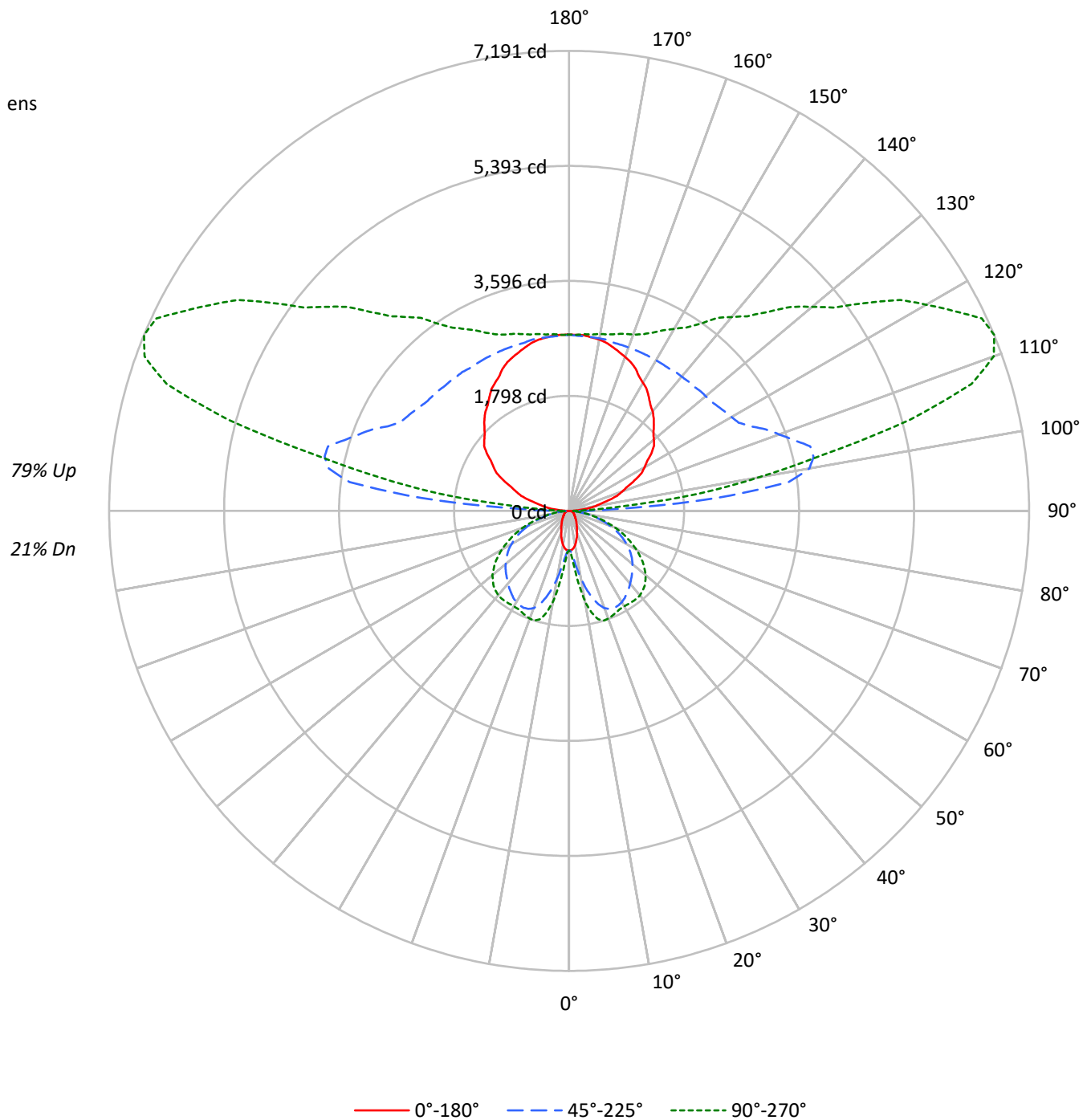
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 22649.9 lumens  
Efficiency: N/A  
Efficacy: 135.8 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: Semi-Indirect

Input Watts (W): 166.8  
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	100	100	100	100	89	89	89	89	67	67	67	48	48	48	30	30	30	30	30	30	21
1	91	87	83	80	80	77	74	71	58	56	54	41	40	39	26	25	24	26	25	24	17
2	83	75	70	65	73	67	62	58	51	48	45	36	34	32	22	21	20	22	21	20	14
3	75	66	59	53	66	59	53	48	45	40	37	32	29	27	20	18	17	20	18	17	12
4	69	58	50	45	60	52	45	40	39	35	31	28	25	23	17	16	14	17	16	14	10
5	63	51	44	38	55	46	39	34	35	30	27	25	22	19	15	14	12	15	14	12	8
6	57	46	38	32	51	41	34	29	31	26	23	22	19	17	14	12	11	14	12	11	7
7	53	41	33	28	47	37	30	25	28	23	20	20	17	14	12	11	9	12	11	9	6
8	49	37	30	24	43	33	27	22	25	21	17	18	15	13	11	9	8	11	9	8	5
9	45	34	26	21	40	30	24	19	23	18	15	16	13	11	10	9	7	10	9	7	5
10	42	31	24	19	37	27	21	17	21	17	14	15	12	10	10	8	6	10	8	6	4

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

	0°	45°	90°
0°	1912	1912	1912
5°	1869	2211	2570
10°	1696	3223	4261
15°	1442	4213	5146
20°	1174	4883	5244
25°	980	5111	5138
30°	827	5145	5128
35°	731	5060	5261
40°	638	4951	5398
45°	578	4871	5419
50°	530	4799	5329
55°	508	4694	5093
60°	521	4490	4720
65°	544	4179	4207
70°	580	3647	3554
75°	644	2976	2774
80°	711	2066	1869
85°	645	1098	957

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 90°  
 Luminance: 6867 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	80.0	0.4
10°-20°	354.5	1.6
20°-30°	620.0	2.7
30°-40°	798.1	3.5
40°-50°	891.5	3.9
50°-60°	853.8	3.8
60°-70°	676.7	3.0
70°-80°	397.9	1.8
80°-90°	121.1	0.5
90°-100°	1342.7	5.9
100°-110°	3530.0	15.6
110°-120°	3660.2	16.2
120°-130°	2936.0	13.0
130°-140°	2303.7	10.2
140°-150°	1768.2	7.8
150°-160°	1273.4	5.6
160°-170°	779.1	3.4
170°-180°	263.2	1.2
0°-30°	1054.4	4.7
0°-40°	1852.5	8.2
0°-60°	3597.8	15.9
0°-90°	4793.4	21.2
90°-120°	8532.9	37.7
90°-150°	15540.7	68.6
90°-180°	17856.0	78.8
0°-180°	22649.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	618	618	618	618	618	
5°	602	646	728	823	853	56
15°	451	833	1404	1702	1755	126
25°	288	944	1672	1746	1748	133
35°	195	902	1574	1664	1730	122
45°	133	720	1392	1594	1666	103
55°	95	457	1181	1372	1410	87
65°	76	243	877	986	1000	75
75°	56	149	481	529	531	58
85°	20	46	119	131	133	21
90°	18	52	140	70	70	17
95°	177	695	2313	1192	812	197
105°	636	963	3902	5925	5528	674
115°	1130	1372	3126	6236	7117	1116
125°	1571	1762	2843	4805	5668	1395
135°	1873	2061	2754	3878	4398	1449
145°	2172	2311	2719	3309	3568	1361
155°	2455	2524	2719	2986	3072	1128
165°	2649	2684	2719	2827	2862	748
175°	2754	2754	2738	2773	2773	261
180°	2754	2754	2754	2754	2754	



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**CANDELA DISTRIBUTION (FULL):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	618.3	618.3	618.3	618.3	618.3	618.3	618.3	618.3	618.3	618.3	618.3
2.5°	618.3	618.3	622.2	624.2	628.2	630.1	634.2	638.1	650.1	652.1	656.0
5°	602.4	610.3	636.2	646.1	673.9	711.7	727.6	753.4	807.1	823.0	833.0
7.5°	578.5	596.4	660.0	675.9	745.5	844.9	886.6	942.4	1027.8	1069.5	1103.3
10°	540.7	578.5	691.8	729.6	842.9	994.0	1071.5	1149.0	1278.3	1336.0	1357.8
12.5°	498.9	560.6	725.6	777.3	940.3	1161.0	1254.5	1339.9	1487.0	1564.6	1576.5
15°	451.3	534.8	757.4	833.0	1043.7	1300.1	1403.6	1508.9	1646.1	1701.7	1715.7
17.5°	409.5	514.8	787.2	866.8	1123.3	1425.4	1530.7	1618.2	1729.6	1767.3	1777.3
20°	357.9	483.1	807.1	910.5	1206.7	1516.9	1618.2	1685.8	1761.4	1785.2	1789.2
22.5°	320.1	449.2	819.1	926.4	1262.4	1572.5	1658.0	1711.7	1763.4	1771.3	1773.3
25°	288.3	411.5	817.1	944.3	1310.1	1606.3	1671.9	1711.7	1741.4	1745.5	1745.5
27.5°	258.5	369.8	809.1	948.3	1345.9	1614.3	1666.0	1693.7	1707.7	1715.7	1715.7
30°	232.6	330.0	789.2	940.3	1361.8	1606.3	1648.1	1662.0	1675.8	1687.8	1693.7
32.5°	212.7	292.3	759.4	924.4	1363.7	1586.4	1616.3	1624.2	1644.0	1671.9	1681.9
35°	194.8	254.5	725.6	902.5	1351.9	1554.6	1574.5	1582.5	1622.2	1664.0	1677.8
37.5°	177.0	226.6	681.9	864.8	1333.9	1516.9	1530.7	1544.6	1606.3	1656.0	1671.9
40°	159.1	202.7	630.1	823.0	1306.1	1471.1	1483.1	1504.9	1586.4	1644.0	1659.9
42.5°	145.1	182.9	574.5	779.3	1270.4	1419.5	1437.3	1469.2	1562.5	1624.2	1642.1
45°	133.2	163.0	514.8	719.7	1224.6	1365.7	1391.6	1435.4	1534.8	1594.3	1610.2
47.5°	121.2	149.1	453.3	658.0	1174.9	1312.1	1345.9	1395.6	1496.9	1554.6	1568.5
50°	111.3	135.2	391.6	592.4	1121.2	1254.5	1294.2	1345.9	1449.3	1502.9	1520.8
52.5°	103.3	123.3	333.9	526.8	1059.6	1194.8	1240.5	1294.2	1391.6	1443.3	1455.2
55°	95.4	113.3	284.2	457.2	996.0	1131.2	1180.9	1232.5	1328.0	1371.7	1379.6
57.5°	91.5	105.3	242.6	391.6	928.4	1059.6	1115.3	1163.0	1252.4	1286.3	1294.2
60°	85.5	99.4	210.7	336.0	854.8	992.1	1039.8	1087.4	1163.0	1190.8	1196.8
62.5°	79.5	95.4	186.8	282.3	779.3	912.5	960.2	1003.9	1067.5	1087.4	1095.4
65°	75.6	91.5	168.9	242.6	701.8	829.0	876.8	914.5	966.2	986.0	990.0
67.5°	71.5	87.4	155.0	208.8	624.2	745.5	781.3	817.1	856.8	876.8	878.7
70°	65.6	83.5	143.2	184.9	544.7	650.1	679.9	717.7	749.5	759.4	765.4
72.5°	61.7	77.6	135.2	167.0	463.2	558.6	586.5	608.3	636.2	646.1	646.1
75°	55.6	69.6	127.3	149.1	379.7	457.2	481.1	503.0	524.8	528.8	522.8
77.5°	49.7	61.7	109.4	125.3	296.2	361.8	381.7	393.6	411.5	415.5	417.4
80°	41.8	53.6	85.5	97.4	214.7	266.4	280.3	290.3	306.2	306.2	310.1
82.5°	31.8	41.8	61.7	69.6	145.1	182.9	194.8	200.8	210.7	210.7	210.7
85°	19.9	25.9	39.7	45.7	87.4	111.3	119.3	121.2	129.2	131.2	131.2
87.5°	10.0	13.9	25.9	27.9	45.7	57.7	57.7	61.7	61.7	59.7	57.7
90°	18.5	33.3	48.1	51.8	81.3	120.7	140.5	124.9	93.7	70.2	70.2
92.5°	73.9	199.6	325.3	356.8	501.6	694.7	791.2	693.4	497.9	351.2	337.3
95°	177.4	407.5	637.6	695.1	1234.3	1953.3	2312.7	2063.7	1565.9	1192.4	1150.1
97.5°	306.9	509.8	712.7	763.5	1662.6	2861.3	3460.7	3303.4	2988.7	2752.7	2672.1
100°	406.7	590.7	774.8	820.8	1818.5	3148.7	3813.8	3825.2	3848.3	3865.6	3769.6
102.5°	491.7	663.4	835.2	878.1	1889.9	3239.1	3913.7	4114.1	4515.1	4815.8	4733.6
105°	636.0	781.4	926.8	963.2	1943.0	3249.3	3902.5	4351.9	5250.8	5924.9	5880.8
107.5°	783.9	919.4	1055.0	1088.9	1952.8	3104.7	3680.7	4307.6	5561.4	6501.7	6512.4
110°	883.7	1006.1	1128.5	1159.1	1938.1	2976.5	3495.8	4196.7	5598.4	6649.6	6695.7



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
112.5°	981.7	1098.4	1215.0	1244.2	1938.7	2864.6	3327.6	4044.9	5479.4	6555.4	6626.0
115°	1129.6	1237.2	1344.9	1371.7	1956.5	2736.3	3126.1	3817.1	5199.1	6235.6	6333.6
117.5°	1275.6	1373.3	1471.1	1495.5	1992.8	2655.8	2987.4	3611.0	4858.3	5793.7	5902.4
120°	1360.6	1452.7	1544.6	1567.7	2022.4	2628.8	2932.0	3501.8	4641.3	5496.0	5601.7
122.5°	1443.8	1536.6	1629.5	1652.7	2065.0	2614.6	2889.5	3402.6	4428.8	5198.5	5302.6
125°	1571.4	1656.0	1740.7	1761.8	2122.3	2603.0	2843.3	3279.2	4150.9	4804.6	4900.6
127.5°	1674.9	1760.3	1845.8	1867.1	2179.5	2596.2	2804.4	3178.7	3927.2	4488.6	4569.5
130°	1730.4	1822.4	1914.3	1937.4	2221.4	2600.2	2789.6	3122.8	3789.2	4288.9	4363.7
132.5°	1787.7	1879.7	1971.7	1994.7	2255.3	2602.9	2776.7	3075.0	3671.5	4118.9	4185.9
135°	1872.7	1956.4	2040.3	2061.3	2292.4	2600.5	2754.5	3004.3	3503.8	3878.5	3936.2
137.5°	1959.6	2042.6	2125.6	2146.3	2347.8	2616.4	2750.8	2961.9	3384.3	3701.0	3748.3
140°	2031.7	2108.1	2184.6	2203.6	2381.7	2619.1	2737.8	2920.2	3285.1	3558.7	3602.8
142.5°	2087.2	2157.8	2228.4	2246.1	2410.0	2628.6	2737.8	2898.1	3218.5	3458.9	3496.9
145°	2172.2	2233.9	2295.4	2310.8	2447.0	2628.6	2719.4	2850.4	3112.5	3309.1	3337.9
147.5°	2257.2	2317.2	2377.1	2392.1	2501.2	2646.7	2719.4	2822.5	3028.7	3183.4	3207.2
150°	2312.7	2367.0	2421.2	2434.7	2529.6	2656.1	2719.4	2806.5	2980.7	3111.3	3130.6
152.5°	2370.0	2411.1	2452.1	2462.4	2548.1	2662.3	2719.4	2793.8	2942.5	3054.0	3068.6
155°	2455.1	2485.5	2515.8	2523.5	2588.8	2675.8	2719.4	2778.6	2896.9	2985.6	2995.3
157.5°	2517.9	2547.5	2577.0	2584.4	2629.4	2689.3	2719.4	2765.4	2857.4	2926.5	2933.3
160°	2560.4	2583.4	2606.4	2612.2	2647.9	2695.6	2719.4	2758.8	2837.6	2896.8	2900.8
162.5°	2602.9	2620.2	2637.4	2641.7	2667.6	2702.1	2719.4	2752.7	2819.3	2869.2	2872.8
165°	2649.1	2664.7	2680.3	2684.3	2696.0	2711.6	2719.4	2743.2	2790.8	2826.6	2830.5
167.5°	2691.7	2699.1	2706.4	2708.3	2718.2	2731.3	2737.8	2753.5	2784.7	2808.1	2809.8
170°	2719.4	2726.8	2734.2	2736.1	2736.7	2737.5	2737.8	2753.5	2784.7	2808.1	2808.1
172.5°	2734.2	2735.8	2737.5	2737.8	2737.8	2737.8	2737.8	2750.2	2774.9	2793.4	2791.9
175°	2754.5	2754.5	2754.5	2754.5	2749.0	2741.6	2737.8	2745.7	2761.3	2773.0	2773.0
177.5°	2754.5	2754.5	2754.5	2754.5	2750.2	2744.5	2741.6	2747.7	2760.1	2769.3	2767.6
180°	2754.5	2754.5	2754.5	2754.5	2754.5	2754.5	2754.5	2754.5	2754.5	2754.5	2754.5



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**CANDELA DISTRIBUTION (continued):**

	80°	90°
0°	618.3	618.3
2.5°	660.0	656.0
5°	848.9	852.8
7.5°	1143.1	1141.1
10°	1421.4	1439.3
12.5°	1624.2	1628.1
15°	1747.5	1755.4
17.5°	1795.2	1797.2
20°	1797.2	1793.2
22.5°	1775.2	1771.3
25°	1749.5	1747.5
27.5°	1725.5	1727.6
30°	1715.7	1721.6
32.5°	1715.7	1725.5
35°	1719.6	1729.6
37.5°	1717.6	1729.6
40°	1709.6	1723.6
42.5°	1687.8	1697.8
45°	1654.0	1666.0
47.5°	1610.2	1618.2
50°	1554.6	1562.5
52.5°	1485.1	1487.0
55°	1401.6	1409.5
57.5°	1312.1	1314.0
60°	1212.7	1218.6
62.5°	1107.4	1107.4
65°	996.0	1000.0
67.5°	880.7	890.6
70°	763.4	765.4
72.5°	648.1	648.1
75°	528.8	530.8
77.5°	415.5	415.5
80°	308.2	310.1
82.5°	212.7	216.7
85°	133.2	133.2
87.5°	61.7	55.6
90°	70.2	70.2
92.5°	281.4	225.6
95°	980.8	811.5
97.5°	2350.1	2028.0
100°	3386.0	3002.2
102.5°	4405.0	4076.3
105°	5704.2	5527.6
107.5°	6555.2	6597.9
110°	6879.7	7063.8





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**CANDELA DISTRIBUTION (continued):**

	80°	90°
112.5°	6908.7	7191.4
115°	6725.4	7117.4
117.5°	6337.0	6771.7
120°	6023.9	6446.3
122.5°	5719.2	6135.8
125°	5284.3	5668.1
127.5°	4893.3	5216.9
130°	4662.8	4961.8
132.5°	4453.6	4721.5
135°	4167.1	4398.0
137.5°	3937.3	4126.2
140°	3779.5	3956.1
142.5°	3648.9	3800.8
145°	3453.0	3568.0
147.5°	3302.6	3397.8
150°	3207.8	3285.1
152.5°	3126.9	3185.2
155°	3033.9	3072.5
157.5°	2960.3	2987.4
160°	2916.4	2932.0
162.5°	2887.6	2902.4
165°	2846.1	2861.7
167.5°	2816.3	2822.9
170°	2808.1	2808.1
172.5°	2786.2	2780.4
175°	2773.0	2773.0
177.5°	2761.1	2754.5
180°	2754.5	2754.5



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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	0.00	0.35	0.86	1.51	3.14	12.88	13.54	14.05	14.70	16.33
	3H	0.38	0.97	1.55	2.14	3.78	14.71	15.30	15.88	16.47	18.11
	4H	0.67	1.23	1.85	2.40	4.04	15.35	15.92	16.53	17.08	18.72
	6H	0.91	1.43	2.10	2.59	4.25	15.77	16.29	16.96	17.46	19.12
	8H	0.97	1.46	2.16	2.64	4.29	15.89	16.39	17.08	17.56	19.22
	12H	0.98	1.45	2.17	2.62	4.30	15.95	16.42	17.15	17.60	19.27
4H	2H	6.89	7.45	8.08	8.62	10.26	13.13	13.70	14.32	14.86	16.51
	3H	8.44	8.91	9.63	10.10	11.76	15.16	15.63	16.36	16.82	18.48
	4H	8.52	8.96	9.72	10.13	11.81	15.92	16.36	17.12	17.53	19.21
	6H	8.52	8.89	9.72	10.09	11.76	16.45	16.83	17.65	18.03	19.69
	8H	8.49	8.84	9.69	10.03	11.71	16.61	16.96	17.81	18.15	19.84
	12H	8.44	8.75	9.65	9.95	11.64	16.70	17.02	17.91	18.22	19.90
8H	4H	9.95	10.30	11.15	11.49	13.17	15.97	16.31	17.16	17.50	19.19
	6H	10.18	10.47	11.40	11.70	13.38	16.59	16.88	17.81	18.11	19.79
	8H	10.20	10.45	11.42	11.66	13.36	16.81	17.06	18.03	18.27	19.97
	12H	10.16	10.38	11.38	11.58	13.31	16.95	17.17	18.17	18.37	20.10
12H	4H	10.09	10.40	11.30	11.60	13.29	15.91	16.22	17.12	17.42	19.11
	6H	10.44	10.69	11.66	11.90	13.60	16.57	16.82	17.79	18.03	19.73
	8H	10.50	10.72	11.73	11.93	13.66	16.79	17.01	18.02	18.22	19.95