

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: P938309

Luminaire Tested: SQ4-FB-150U-075D-830-1D-UNV-STD-W-12

Issue Date: 12/17/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P938309  
REPORT IS A COMBINATION OF REPORTS P933622 AND P933786  
Test Lab: INNOVATION CENTER  
Issue Date: 12/17/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ4-FB-150U-075D-830-1D-UNV-STD-W-12  
Description: CORELITE SQ4 SUSPENDED INDIRECT LED LUMINAIRE WITH Batwing Frosted Continuous Roll L  
Light Source: -  
Ballast/Driver: -

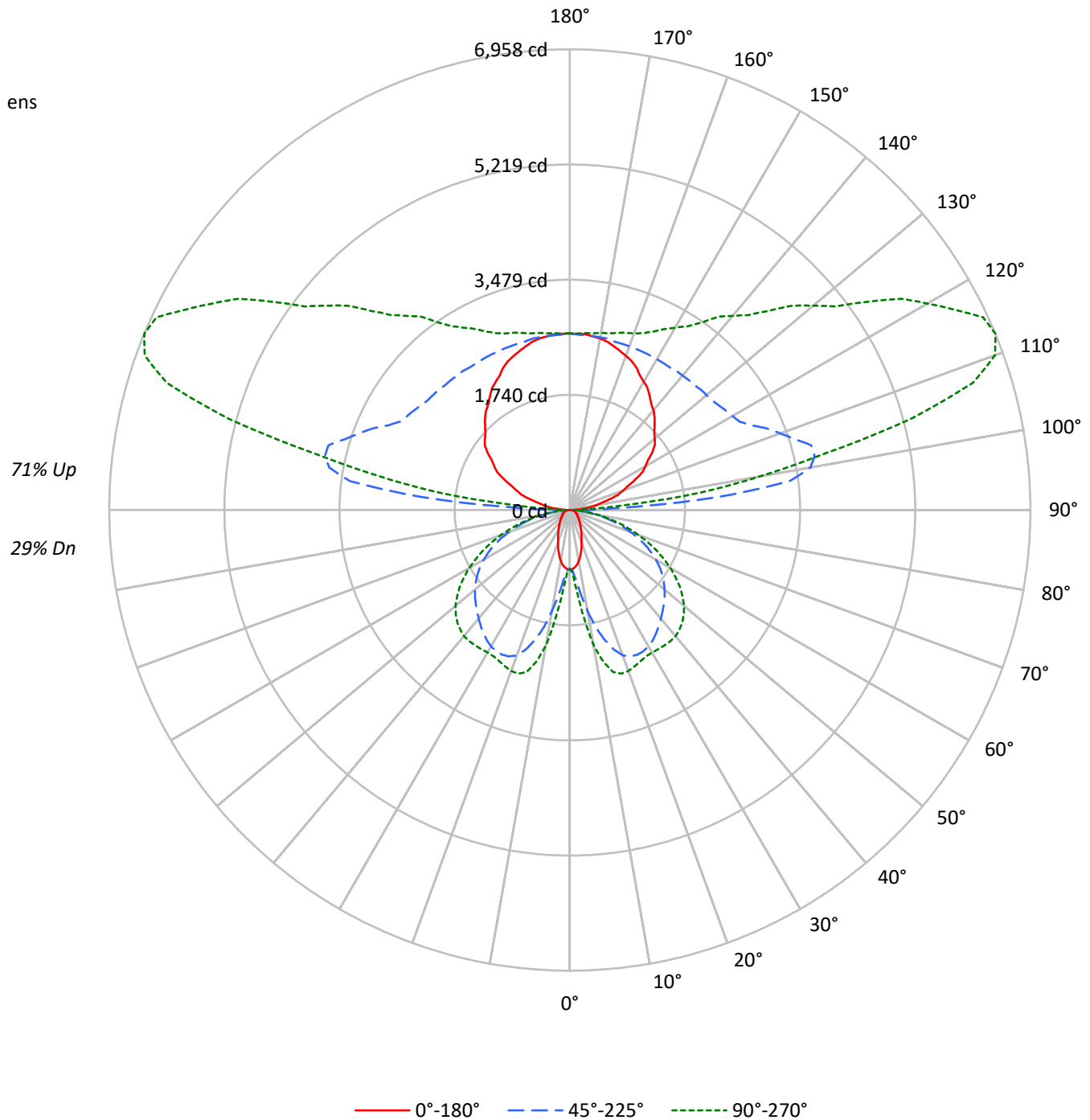
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 24188.7 lumens  
Efficiency: N/A  
Efficacy: 126.8 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): 190.8  
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	102	102	102	102	91	91	91	91	71	71	71	53	53	53	36	36	36	29			
1	93	88	84	81	83	79	76	73	62	60	58	46	45	43	32	31	30	23			
2	84	77	71	66	75	69	64	59	54	50	47	40	38	36	27	26	25	19			
3	76	67	60	54	68	60	54	49	47	43	39	35	32	30	24	22	21	16			
4	70	59	51	45	62	53	46	41	42	37	33	31	28	25	21	19	17	13			
5	64	52	44	38	57	47	40	35	37	32	28	28	24	21	19	17	15	11			
6	58	47	39	33	52	42	35	30	33	28	24	25	21	18	17	15	13	10			
7	54	42	34	28	48	38	31	26	30	25	21	22	19	16	15	13	11	8			
8	50	38	30	25	44	34	27	23	27	22	18	20	17	14	14	12	10	7			
9	46	34	27	22	41	31	24	20	24	20	16	18	15	12	13	10	9	6			
10	43	31	24	19	38	28	22	18	22	18	14	17	13	11	12	9	8	6			

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

	0°	45°	90°
0°	2759	2759	2759
5°	2696	3190	3709
10°	2447	4651	6148
15°	2080	6077	7424
20°	1694	7044	7566
25°	1414	7373	7412
30°	1193	7422	7398
35°	1055	7301	7590
40°	920	7142	7787
45°	834	7027	7818
50°	765	6924	7688
55°	734	6772	7348
60°	752	6478	6809
65°	784	6029	6070
70°	836	5261	5128
75°	931	4294	4002
80°	1024	2981	2696
85°	930	1585	1380

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 7818 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	115.4	0.5
10°-20°	511.4	2.1
20°-30°	894.5	3.7
30°-40°	1151.5	4.8
40°-50°	1286.1	5.3
50°-60°	1231.8	5.1
60°-70°	976.2	4.0
70°-80°	574.0	2.4
80°-90°	169.6	0.7
90°-100°	1299.2	5.4
100°-110°	3415.7	14.1
110°-120°	3541.7	14.6
120°-130°	2840.9	11.7
130°-140°	2229.1	9.2
140°-150°	1710.9	7.1
150°-160°	1232.1	5.1
160°-170°	753.9	3.1
170°-180°	254.7	1.1
0°-30°	1521.2	6.3
0°-40°	2672.7	11.0
0°-60°	5190.7	21.5
0°-90°	6910.6	28.6
90°-120°	8256.6	34.1
90°-150°	15037.4	62.2
90°-180°	17278.0	71.4
0°-180°	24188.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	892	892	892	892	892	
5°	869	932	1050	1187	1230	80
15°	651	1202	2025	2455	2532	181
25°	416	1362	2412	2518	2521	192
35°	281	1302	2272	2401	2495	176
45°	192	1038	2008	2300	2404	149
55°	138	660	1704	1979	2034	125
65°	109	350	1265	1423	1443	108
75°	80	215	694	763	766	84
85°	29	66	172	189	192	30
90°	18	50	136	68	68	17
95°	172	672	2238	1154	785	191
105°	615	932	3776	5733	5348	652
115°	1093	1327	3025	6034	6887	1080
125°	1520	1705	2751	4649	5484	1350
135°	1812	1994	2665	3753	4256	1402
145°	2102	2236	2631	3202	3452	1317
155°	2376	2442	2631	2889	2973	1092
165°	2563	2597	2631	2735	2769	723
175°	2665	2665	2649	2683	2683	253
180°	2665	2665	2665	2665	2665	



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**CANDELA DISTRIBUTION (FULL):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	891.9	891.9	891.9	891.9	891.9	891.9	891.9	891.9	891.9	891.9	891.9
2.5°	891.9	891.9	897.7	900.6	906.3	909.2	914.9	920.6	937.8	940.7	946.4
5°	869.0	880.5	917.8	932.1	972.3	1026.7	1049.7	1087.1	1164.5	1187.4	1201.8
7.5°	834.6	860.4	952.2	975.1	1075.5	1219.0	1279.2	1359.5	1482.9	1543.1	1591.8
10°	780.1	834.6	998.1	1052.6	1216.1	1434.1	1545.9	1657.8	1844.2	1927.4	1958.9
12.5°	719.9	808.8	1046.8	1121.5	1356.7	1675.0	1809.8	1933.1	2145.4	2257.2	2274.4
15°	651.0	771.5	1092.8	1201.8	1505.8	1875.8	2024.9	2176.9	2374.8	2455.1	2475.2
17.5°	590.8	742.8	1135.8	1250.5	1620.5	2056.5	2208.5	2334.6	2495.3	2549.7	2564.1
20°	516.2	696.9	1164.5	1313.6	1741.0	2188.4	2334.6	2432.2	2541.1	2575.6	2581.3
22.5°	461.7	648.2	1181.7	1336.6	1821.3	2268.7	2392.0	2469.4	2544.0	2555.5	2558.4
25°	415.9	593.7	1178.8	1362.4	1890.1	2317.4	2412.1	2469.4	2512.5	2518.2	2518.2
27.5°	372.8	533.4	1167.4	1368.1	1941.7	2328.9	2403.5	2443.6	2463.7	2475.2	2475.2
30°	335.6	476.1	1138.7	1356.7	1964.7	2317.4	2377.7	2397.7	2417.8	2435.0	2443.6
32.5°	306.9	421.6	1095.7	1333.7	1967.5	2288.8	2331.8	2343.3	2371.9	2412.1	2426.4
35°	281.1	367.1	1046.8	1302.2	1950.3	2242.9	2271.6	2283.0	2340.4	2400.6	2420.7
37.5°	255.3	327.0	983.7	1247.7	1924.5	2188.4	2208.5	2228.5	2317.4	2389.1	2412.1
40°	229.4	292.5	909.2	1187.4	1884.4	2122.4	2139.6	2171.2	2288.8	2371.9	2394.9
42.5°	209.4	263.9	828.9	1124.4	1832.7	2047.8	2073.7	2119.5	2254.3	2343.3	2369.1
45°	192.2	235.2	742.8	1038.2	1766.8	1970.4	2007.7	2070.8	2214.2	2300.2	2323.2
47.5°	174.9	215.1	653.9	949.3	1695.1	1893.0	1941.7	2013.4	2159.7	2242.9	2262.9
50°	160.6	195.0	565.0	854.7	1617.6	1809.8	1867.2	1941.7	2090.9	2168.3	2194.1
52.5°	149.1	177.8	481.8	760.0	1528.7	1723.8	1789.7	1867.2	2007.7	2082.3	2099.5
55°	137.7	163.5	410.1	659.6	1437.0	1632.0	1703.7	1778.3	1915.9	1979.0	1990.5
57.5°	131.9	152.0	349.9	565.0	1339.5	1528.7	1609.0	1677.9	1806.9	1855.7	1867.2
60°	123.3	143.4	304.0	484.7	1233.3	1431.2	1500.1	1568.9	1677.9	1718.0	1726.6
62.5°	114.7	137.7	269.6	407.3	1124.4	1316.5	1385.3	1448.4	1540.2	1568.9	1580.4
65°	109.0	131.9	243.8	349.9	1012.4	1196.1	1264.9	1319.4	1393.9	1422.6	1428.4
67.5°	103.2	126.2	223.7	301.1	900.6	1075.5	1127.2	1178.8	1236.2	1264.9	1267.8
70°	94.6	120.5	206.5	266.7	785.8	937.8	980.9	1035.3	1081.2	1095.7	1104.3
72.5°	88.9	111.9	195.0	240.9	668.2	805.9	846.1	877.6	917.8	932.1	932.1
75°	80.3	100.4	183.6	215.1	547.8	659.6	694.1	725.6	757.2	762.9	754.3
77.5°	71.7	88.9	157.7	180.7	427.3	522.0	550.7	567.9	593.7	599.4	602.3
80°	60.2	77.4	123.3	140.5	309.7	384.3	404.4	418.7	441.7	441.7	447.4
82.5°	45.9	60.2	88.9	100.4	209.4	263.9	281.1	289.7	304.0	304.0	304.0
85°	28.7	37.3	57.4	66.0	126.2	160.6	172.1	174.9	186.4	189.3	189.3
87.5°	14.3	20.1	37.3	40.2	66.0	83.2	83.2	88.9	88.9	86.0	83.2
90°	17.9	32.2	46.6	50.1	78.7	116.8	135.9	120.8	90.6	68.0	68.0
92.5°	71.5	193.1	314.8	345.2	485.4	672.2	765.6	670.9	481.7	339.9	326.4
95°	171.7	394.3	616.9	672.5	1194.3	1890.0	2237.8	1996.9	1515.2	1153.8	1112.9
97.5°	296.9	493.3	689.7	738.8	1608.8	2768.7	3348.6	3196.4	2891.9	2663.5	2585.6
100°	393.5	571.6	749.7	794.2	1759.6	3046.7	3690.3	3701.3	3723.6	3740.4	3647.5
102.5°	475.8	642.0	808.1	849.7	1828.7	3134.2	3786.9	3980.9	4368.8	4659.8	4580.3
105°	615.4	756.1	896.8	932.0	1880.1	3144.1	3776.1	4211.0	5080.8	5733.0	5690.3
107.5°	758.5	889.7	1020.8	1053.6	1889.5	3004.1	3561.5	4168.1	5381.2	6291.1	6301.5
110°	855.0	973.5	1091.9	1121.6	1875.3	2880.1	3382.6	4060.8	5417.1	6434.3	6478.8



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
112.5°	949.9	1062.8	1175.7	1203.9	1875.9	2771.8	3219.8	3913.9	5302.0	6343.1	6411.4
115°	1093.0	1197.1	1301.3	1327.3	1893.2	2647.6	3024.9	3693.5	5030.7	6033.6	6128.4
117.5°	1234.3	1328.8	1423.5	1447.1	1928.3	2569.8	2890.7	3494.1	4700.9	5606.1	5711.2
120°	1316.5	1405.6	1494.6	1516.9	1956.9	2543.6	2837.0	3388.4	4491.0	5318.0	5420.2
122.5°	1397.0	1486.9	1576.7	1599.2	1998.1	2530.0	2795.9	3292.4	4285.4	5030.1	5130.9
125°	1520.5	1602.4	1684.3	1704.7	2053.6	2518.7	2751.2	3173.0	4016.4	4649.0	4741.9
127.5°	1620.6	1703.3	1786.0	1806.6	2108.9	2512.1	2713.6	3075.7	3800.0	4343.2	4421.5
130°	1674.3	1763.3	1852.3	1874.6	2149.5	2516.0	2699.3	3021.6	3666.5	4150.0	4222.4
132.5°	1729.8	1818.8	1907.8	1930.1	2182.3	2518.6	2686.7	2975.4	3552.6	3985.5	4050.3
135°	1812.0	1893.1	1974.2	1994.5	2218.1	2516.3	2665.3	2907.0	3390.4	3752.9	3808.7
137.5°	1896.1	1976.4	2056.7	2076.8	2271.7	2531.7	2661.7	2866.0	3274.7	3581.2	3626.9
140°	1965.9	2039.8	2113.8	2132.3	2304.5	2534.3	2649.2	2825.6	3178.7	3443.4	3486.1
142.5°	2019.6	2087.9	2156.3	2173.4	2332.0	2543.4	2649.2	2804.2	3114.3	3346.9	3383.7
145°	2101.9	2161.5	2221.1	2236.0	2367.7	2543.4	2631.3	2758.1	3011.7	3201.9	3229.8
147.5°	2184.1	2242.1	2300.1	2314.7	2420.2	2560.9	2631.3	2731.1	2930.6	3080.3	3103.4
150°	2237.8	2290.3	2342.8	2355.9	2447.6	2570.1	2631.3	2715.6	2884.2	3010.5	3029.2
152.5°	2293.3	2333.0	2372.7	2382.6	2465.5	2576.0	2631.3	2703.3	2847.2	2955.1	2969.2
155°	2375.6	2405.0	2434.4	2441.7	2504.9	2589.1	2631.3	2688.6	2803.1	2888.9	2898.3
157.5°	2436.4	2465.0	2493.5	2500.7	2544.2	2602.2	2631.3	2675.8	2764.8	2831.7	2838.3
160°	2477.5	2499.7	2522.0	2527.6	2562.2	2608.3	2631.3	2669.4	2745.7	2803.0	2806.8
162.5°	2518.6	2535.3	2551.9	2556.2	2581.2	2614.6	2631.3	2663.5	2727.9	2776.2	2779.8
165°	2563.3	2578.4	2593.5	2597.4	2608.6	2623.7	2631.3	2654.3	2700.4	2735.0	2738.8
167.5°	2604.5	2611.7	2618.8	2620.6	2630.1	2642.9	2649.2	2664.3	2694.5	2717.1	2718.8
170°	2631.3	2638.5	2645.6	2647.5	2648.0	2648.8	2649.2	2664.3	2694.5	2717.1	2717.1
172.5°	2645.6	2647.2	2648.8	2649.2	2649.2	2649.2	2649.2	2661.1	2685.0	2702.9	2701.5
175°	2665.3	2665.3	2665.3	2665.3	2660.0	2652.8	2649.2	2656.7	2671.8	2683.2	2683.2
177.5°	2665.3	2665.3	2665.3	2665.3	2661.1	2655.6	2652.8	2658.7	2670.7	2679.6	2677.9
180°	2665.3	2665.3	2665.3	2665.3	2665.3	2665.3	2665.3	2665.3	2665.3	2665.3	2665.3



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**CANDELA DISTRIBUTION (continued):**

	80°	90°
0°	891.9	891.9
2.5°	952.2	946.4
5°	1224.7	1230.5
7.5°	1649.2	1646.3
10°	2050.7	2076.5
12.5°	2343.3	2349.0
15°	2521.1	2532.5
17.5°	2589.9	2592.8
20°	2592.8	2587.0
22.5°	2561.2	2555.5
25°	2523.9	2521.1
27.5°	2489.5	2492.4
30°	2475.2	2483.8
32.5°	2475.2	2489.5
35°	2480.9	2495.3
37.5°	2478.0	2495.3
40°	2466.6	2486.7
42.5°	2435.0	2449.4
45°	2386.3	2403.5
47.5°	2323.2	2334.6
50°	2242.9	2254.3
52.5°	2142.5	2145.4
55°	2022.0	2033.5
57.5°	1893.0	1895.8
60°	1749.6	1758.2
62.5°	1597.6	1597.6
65°	1437.0	1442.7
67.5°	1270.6	1285.0
70°	1101.4	1104.3
72.5°	935.0	935.0
75°	762.9	765.8
77.5°	599.4	599.4
80°	444.5	447.4
82.5°	306.9	312.6
85°	192.2	192.2
87.5°	88.9	80.3
90°	68.0	68.0
92.5°	272.3	218.3
95°	949.0	785.3
97.5°	2273.9	1962.3
100°	3276.3	2905.0
102.5°	4262.3	3944.3
105°	5519.5	5348.5
107.5°	6342.9	6384.2
110°	6656.9	6835.0





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**CANDELA DISTRIBUTION (continued):**

	80°	90°
112.5°	6684.9	6958.4
115°	6507.6	6886.8
117.5°	6131.8	6552.3
120°	5828.8	6237.5
122.5°	5534.0	5937.0
125°	5113.2	5484.5
127.5°	4734.8	5048.0
130°	4511.7	4801.1
132.5°	4309.4	4568.5
135°	4032.1	4255.5
137.5°	3809.8	3992.5
140°	3657.1	3828.0
142.5°	3530.7	3677.7
145°	3341.1	3452.4
147.5°	3195.6	3287.8
150°	3103.9	3178.7
152.5°	3025.6	3082.0
155°	2935.6	2973.0
157.5°	2864.5	2890.7
160°	2821.9	2837.0
162.5°	2794.1	2808.4
165°	2753.9	2769.1
167.5°	2725.1	2731.5
170°	2717.1	2717.1
172.5°	2695.9	2690.4
175°	2683.2	2683.2
177.5°	2671.6	2665.3
180°	2665.3	2665.3



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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	2.15	2.86	3.26	3.98	5.52	15.34	16.06	16.46	17.17	18.71
	3H	2.84	3.48	3.97	4.61	6.17	17.17	17.81	18.30	18.94	20.50
	4H	3.13	3.74	4.27	4.87	6.43	17.81	18.42	18.95	19.55	21.11
	6H	3.37	3.94	4.52	5.06	6.64	18.24	18.80	19.38	19.93	21.51
	8H	3.44	3.97	4.58	5.11	6.69	18.36	18.90	19.51	20.04	21.61
	12H	3.45	3.96	4.60	5.09	6.69	18.43	18.93	19.58	20.07	21.66
4H	2H	9.35	9.96	10.49	11.09	12.65	15.59	16.21	16.74	17.33	18.89
	3H	10.91	11.42	12.05	12.56	14.14	17.63	18.14	18.78	19.29	20.87
	4H	10.99	11.46	12.14	12.60	14.20	18.40	18.87	19.55	20.00	21.60
	6H	11.00	11.40	12.15	12.56	14.15	18.93	19.33	20.09	20.49	22.08
	8H	10.97	11.34	12.12	12.50	14.10	19.09	19.47	20.25	20.62	22.23
	12H	10.92	11.26	12.09	12.42	14.03	19.18	19.52	20.35	20.69	22.30
8H	4H	12.43	12.81	13.59	13.96	15.56	18.44	18.82	19.60	19.97	21.58
	6H	12.66	12.98	13.84	14.17	15.77	19.07	19.38	20.25	20.58	22.18
	8H	12.68	12.95	13.86	14.12	15.75	19.29	19.56	20.47	20.73	22.36
	12H	12.64	12.88	13.83	14.05	15.71	19.43	19.67	20.62	20.84	22.50
12H	4H	12.57	12.91	13.74	14.07	15.68	18.39	18.73	19.56	19.89	21.50
	6H	12.92	13.19	14.10	14.37	15.99	19.05	19.32	20.23	20.50	22.12
	8H	12.98	13.22	14.17	14.39	16.05	19.28	19.51	20.46	20.69	22.34