

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: P938301

Luminaire Tested: SQ4-FB-150U-050D-B40-1D-UNV-STD-W-12

Issue Date: 12/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P938301
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-B40-1D-UNV-STD-W-12
Description: CORELITE SQ4 SUSPENDED INDIRECT LED LUMINAIRE WITH Batwing Frosted Continuous Roll L
Light Source: -
Ballast/Driver: -

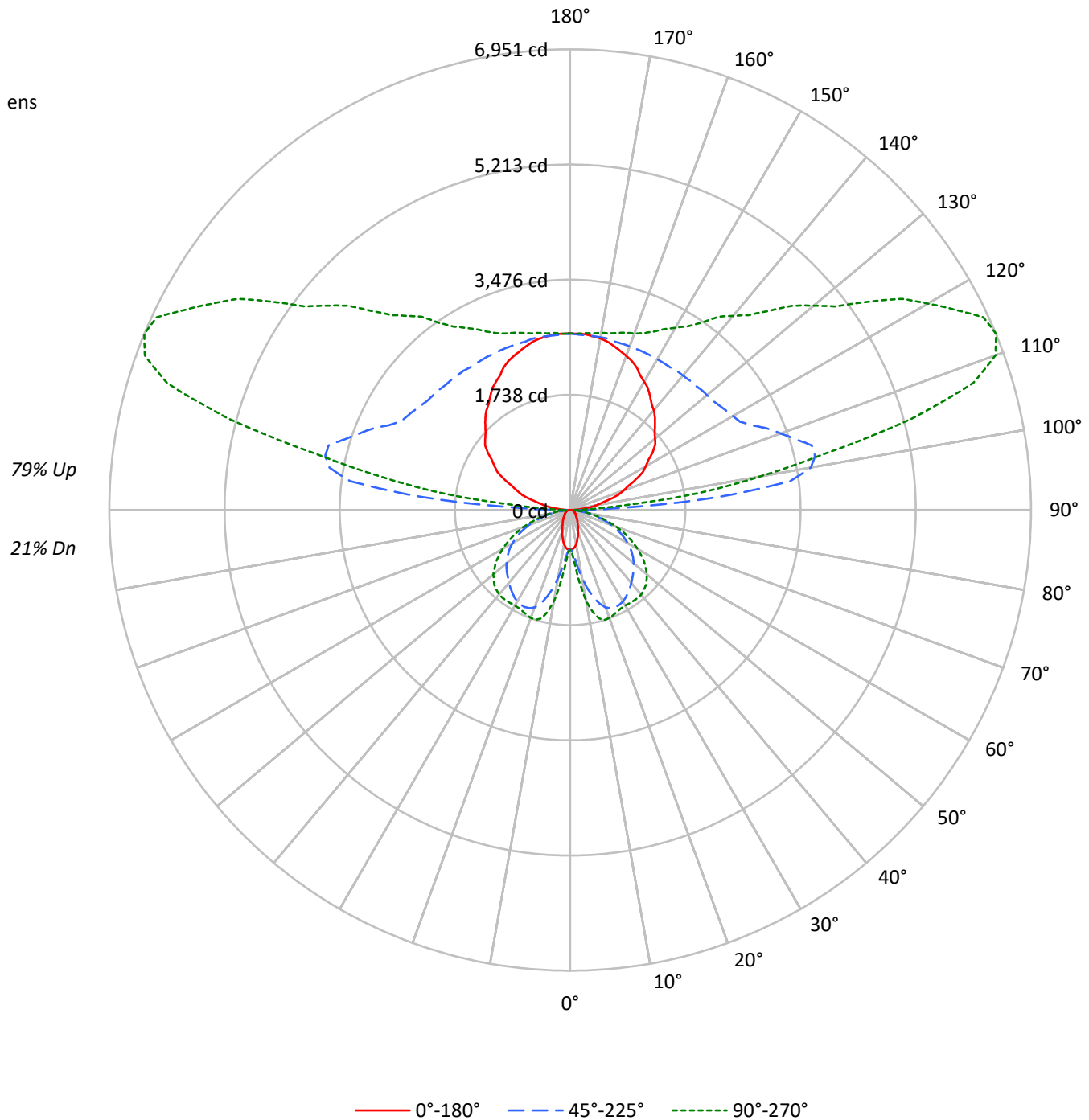
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 21893.4 lumens
Efficiency: N/A
Efficacy: 131.3 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_{in}): 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	24	24	24	17
2	83	75	70	65	73	67	62	58	51	48	45	36	34	32	22	21	20	20	20	20	14
3	75	66	59	53	66	59	53	48	45	40	37	32	29	27	20	18	17	17	17	17	12
4	69	58	50	45	60	52	45	40	39	35	31	28	25	23	17	16	14	14	14	14	10
5	63	51	44	38	55	46	39	34	35	30	27	25	22	19	15	14	12	12	12	12	8
6	57	46	38	32	51	41	34	29	31	26	23	22	19	17	14	12	11	11	11	11	7
7	53	41	33	28	47	37	30	25	28	23	20	20	17	14	12	11	9	9	9	9	6
8	49	37	30	24	43	33	27	22	25	21	17	18	15	13	11	9	8	8	8	8	5
9	45	34	26	21	40	30	24	19	23	18	15	16	13	11	10	9	7	7	7	7	5
10	42	31	24	19	37	27	21	17	21	17	14	15	12	10	10	8	6	6	6	6	4

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1848	1848	1848
5°	1807	2137	2485
10°	1639	3116	4119
15°	1394	4072	4974
20°	1135	4720	5069
25°	947	4940	4966
30°	799	4973	4957
35°	707	4891	5085
40°	617	4786	5217
45°	558	4708	5238
50°	513	4639	5151
55°	492	4537	4923
60°	504	4340	4562
65°	526	4039	4067
70°	561	3525	3436
75°	624	2876	2681
80°	687	1997	1807
85°	622	1062	924

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 90°
 Luminance: 6644 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	77.3	0.4
10°-20°	342.6	1.6
20°-30°	599.3	2.7
30°-40°	771.5	3.5
40°-50°	861.7	3.9
50°-60°	825.3	3.8
60°-70°	654.1	3.0
70°-80°	384.6	1.8
80°-90°	117.0	0.5
90°-100°	1297.8	5.9
100°-110°	3412.1	15.6
110°-120°	3538.0	16.2
120°-130°	2837.9	13.0
130°-140°	2226.7	10.2
140°-150°	1709.1	7.8
150°-160°	1230.8	5.6
160°-170°	753.1	3.4
170°-180°	254.4	1.2
0°-30°	1019.2	4.7
0°-40°	1790.7	8.2
0°-60°	3477.7	15.9
0°-90°	4633.3	21.2
90°-120°	8247.9	37.7
90°-150°	15021.7	68.6
90°-180°	17260.0	78.8
0°-180°	21893.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	598	598	598	598	598	
5°	582	624	703	796	824	54
15°	436	805	1357	1645	1697	121
25°	279	913	1616	1687	1689	128
35°	188	872	1522	1608	1672	118
45°	129	696	1345	1541	1610	100
55°	92	442	1141	1326	1362	84
65°	73	234	848	953	967	72
75°	54	144	465	511	513	56
85°	19	44	115	127	129	20
90°	18	50	136	68	68	16
95°	172	672	2236	1153	784	190
105°	615	931	3772	5727	5343	652
115°	1092	1326	3022	6027	6880	1078
125°	1519	1703	2748	4644	5479	1348
135°	1810	1992	2662	3749	4251	1401
145°	2100	2234	2628	3199	3449	1315
155°	2373	2439	2628	2886	2970	1090
165°	2561	2595	2628	2732	2766	723
175°	2662	2662	2646	2680	2680	253
180°	2662	2662	2662	2662	2662	



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CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	597.6	597.6	597.6	597.6	597.6	597.6	597.6	597.6	597.6	597.6	597.6
2.5°	597.6	597.6	601.5	603.4	607.2	609.1	613.0	616.8	628.4	630.3	634.1
5°	582.3	589.9	614.9	624.5	651.4	687.9	703.3	728.3	780.1	795.5	805.2
7.5°	559.2	576.4	637.9	653.3	720.6	816.7	857.0	910.9	993.5	1033.8	1066.4
10°	522.7	559.2	668.7	705.3	814.7	960.8	1035.7	1110.7	1235.6	1291.4	1312.5
12.5°	482.3	541.9	701.4	751.3	908.9	1122.2	1212.6	1295.2	1437.4	1512.3	1523.8
15°	436.2	516.9	732.1	805.2	1008.9	1256.7	1356.7	1458.5	1591.1	1644.9	1658.4
17.5°	395.8	497.7	760.9	837.8	1085.7	1377.8	1479.6	1564.2	1671.8	1708.3	1717.9
20°	345.9	467.0	780.1	880.1	1166.4	1466.2	1564.2	1629.5	1702.6	1725.6	1729.4
22.5°	309.4	434.2	791.7	895.5	1220.2	1520.0	1602.6	1654.5	1704.5	1712.1	1714.0
25°	278.7	397.8	789.8	912.8	1266.3	1552.6	1616.1	1654.5	1683.3	1687.2	1687.2
27.5°	249.8	357.5	782.0	916.6	1300.9	1560.4	1610.3	1637.2	1650.6	1658.4	1658.4
30°	224.8	319.0	762.9	908.9	1316.3	1552.6	1593.0	1606.5	1619.9	1631.4	1637.2
32.5°	205.6	282.5	734.0	893.5	1318.2	1533.4	1562.3	1569.9	1589.1	1616.1	1625.7
35°	188.3	246.0	701.4	872.4	1306.7	1502.7	1521.9	1529.6	1568.0	1608.4	1621.8
37.5°	171.0	219.1	659.1	835.9	1289.3	1466.2	1479.6	1493.0	1552.6	1600.7	1616.1
40°	153.8	196.0	609.1	795.5	1262.5	1422.0	1433.6	1454.7	1533.4	1589.1	1604.5
42.5°	140.3	176.8	555.3	753.3	1227.9	1372.0	1389.3	1420.1	1510.3	1569.9	1587.2
45°	128.7	157.6	497.7	695.6	1183.7	1320.1	1345.1	1387.4	1483.5	1541.1	1556.5
47.5°	117.2	144.1	438.2	636.0	1135.7	1268.2	1300.9	1348.9	1446.9	1502.7	1516.2
50°	107.6	130.6	378.6	572.6	1083.7	1212.6	1251.0	1300.9	1400.9	1452.7	1470.0
52.5°	99.9	119.2	322.8	509.2	1024.2	1154.9	1199.1	1251.0	1345.1	1395.1	1406.6
55°	92.3	109.5	274.8	442.0	962.7	1093.4	1141.4	1191.4	1283.6	1325.9	1333.6
57.5°	88.4	101.8	234.5	378.6	897.4	1024.2	1078.0	1124.1	1210.6	1243.3	1251.0
60°	82.6	96.1	203.7	324.8	826.3	958.9	1005.0	1051.1	1124.1	1151.1	1156.8
62.5°	76.9	92.3	180.6	272.8	753.3	882.0	928.2	970.4	1031.9	1051.1	1058.8
65°	73.1	88.4	163.3	234.5	678.3	801.3	847.5	883.9	933.9	953.1	956.9
67.5°	69.1	84.5	149.8	201.8	603.4	720.6	755.2	789.8	828.2	847.5	849.4
70°	63.4	80.7	138.4	178.7	526.5	628.4	657.2	693.7	724.5	734.0	739.8
72.5°	59.6	75.0	130.6	161.4	447.7	540.0	566.9	588.0	614.9	624.5	624.5
75°	53.8	67.2	123.0	144.1	367.0	442.0	465.0	486.2	507.3	511.1	505.4
77.5°	48.0	59.6	105.7	121.1	286.3	349.7	368.9	380.5	397.8	401.6	403.5
80°	40.4	51.9	82.6	94.2	207.5	257.5	270.9	280.6	296.0	296.0	299.8
82.5°	30.8	40.4	59.6	67.2	140.3	176.8	188.3	194.1	203.7	203.7	203.7
85°	19.2	25.0	38.4	44.2	84.5	107.6	115.3	117.2	124.9	126.8	126.8
87.5°	9.6	13.5	25.0	26.9	44.2	55.8	55.8	59.6	59.6	57.7	55.8
90°	17.9	32.2	46.5	50.0	78.6	116.7	135.8	120.7	90.5	67.9	67.9
92.5°	71.4	192.9	314.5	344.9	484.9	671.5	764.8	670.2	481.2	339.5	326.0
95°	171.5	393.8	616.3	671.8	1193.1	1888.0	2235.5	1994.8	1513.6	1152.6	1111.7
97.5°	296.6	492.8	688.9	738.0	1607.1	2765.8	3345.1	3193.0	2888.9	2660.7	2582.9
100°	393.1	571.0	748.9	793.4	1757.8	3043.5	3686.4	3697.5	3719.7	3736.4	3643.7
102.5°	475.3	641.3	807.3	848.8	1826.8	3130.9	3782.9	3976.7	4364.3	4655.0	4575.5
105°	614.7	755.3	895.9	931.0	1878.1	3140.8	3772.2	4206.6	5075.4	5727.0	5684.4
107.5°	757.7	888.7	1019.7	1052.5	1887.6	3001.0	3557.8	4163.7	5375.6	6284.6	6294.9
110°	854.2	972.5	1090.8	1120.4	1873.3	2877.1	3379.1	4056.6	5411.4	6427.5	6472.0



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
112.5°	948.9	1061.7	1174.5	1202.6	1873.9	2768.9	3216.4	3909.8	5296.4	6336.4	6404.7
115°	1091.9	1195.9	1299.9	1325.9	1891.2	2644.9	3021.7	3689.6	5025.4	6027.3	6122.0
117.5°	1233.0	1327.4	1422.0	1445.6	1926.2	2567.1	2887.6	3490.4	4696.0	5600.2	5705.3
120°	1315.1	1404.1	1493.0	1515.3	1954.9	2541.0	2834.1	3384.8	4486.3	5312.5	5414.6
122.5°	1395.5	1485.3	1575.1	1597.5	1996.0	2527.3	2793.0	3288.9	4280.9	5024.8	5125.5
125°	1518.9	1600.7	1682.5	1703.0	2051.4	2516.0	2748.3	3169.6	4012.2	4644.2	4736.9
127.5°	1618.9	1701.5	1784.1	1804.8	2106.7	2509.5	2710.8	3072.5	3796.0	4338.7	4416.9
130°	1672.6	1761.5	1850.4	1872.7	2147.2	2513.4	2696.4	3018.5	3662.6	4145.7	4217.9
132.5°	1728.0	1816.9	1905.8	1928.0	2180.0	2515.9	2683.9	2972.2	3548.9	3981.3	4046.0
135°	1810.1	1891.1	1972.2	1992.4	2215.8	2513.7	2662.5	2904.0	3386.8	3748.9	3804.7
137.5°	1894.1	1974.4	2054.6	2074.6	2269.4	2529.0	2658.9	2863.0	3271.3	3577.4	3623.1
140°	1963.9	2037.7	2111.6	2130.0	2302.1	2531.6	2646.4	2822.7	3175.4	3439.8	3482.5
142.5°	2017.4	2085.7	2154.0	2171.1	2329.5	2540.8	2646.4	2801.3	3111.0	3343.4	3380.1
145°	2099.7	2159.3	2218.8	2233.6	2365.2	2540.8	2628.5	2755.2	3008.5	3198.6	3226.4
147.5°	2181.8	2239.8	2297.7	2312.2	2417.7	2558.3	2628.5	2728.2	2927.6	3077.1	3100.1
150°	2235.5	2287.9	2340.3	2353.4	2445.1	2567.4	2628.5	2712.8	2881.1	3007.4	3026.0
152.5°	2290.9	2330.6	2370.2	2380.1	2462.9	2573.3	2628.5	2700.5	2844.2	2952.0	2966.1
155°	2373.1	2402.5	2431.8	2439.2	2502.3	2586.4	2628.5	2685.7	2800.2	2885.9	2895.3
157.5°	2433.8	2462.4	2490.9	2498.1	2541.5	2599.5	2628.5	2673.0	2762.0	2828.7	2835.3
160°	2474.9	2497.1	2519.4	2524.9	2559.5	2605.5	2628.5	2666.6	2742.9	2800.1	2803.9
162.5°	2515.9	2532.7	2549.3	2553.5	2578.5	2611.8	2628.5	2660.7	2725.1	2773.3	2776.9
165°	2560.6	2575.7	2590.8	2594.6	2605.9	2621.0	2628.5	2651.6	2697.6	2732.2	2736.0
167.5°	2601.8	2609.0	2616.0	2617.8	2627.4	2640.1	2646.4	2661.5	2691.7	2714.3	2715.9
170°	2628.5	2635.7	2642.9	2644.7	2645.3	2646.0	2646.4	2661.5	2691.7	2714.3	2714.3
172.5°	2642.9	2644.4	2646.0	2646.4	2646.4	2646.4	2646.4	2658.3	2682.2	2700.1	2698.6
175°	2662.5	2662.5	2662.5	2662.5	2657.2	2650.0	2646.4	2653.9	2669.0	2680.4	2680.4
177.5°	2662.5	2662.5	2662.5	2662.5	2658.3	2652.8	2650.0	2656.0	2667.9	2676.8	2675.1
180°	2662.5	2662.5	2662.5	2662.5	2662.5	2662.5	2662.5	2662.5	2662.5	2662.5	2662.5



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CANDELA DISTRIBUTION (continued):

	80°	90°
0°	597.6	597.6
2.5°	637.9	634.1
5°	820.5	824.4
7.5°	1104.9	1103.0
10°	1374.0	1391.2
12.5°	1569.9	1573.7
15°	1689.1	1696.7
17.5°	1735.2	1737.1
20°	1737.1	1733.3
22.5°	1715.9	1712.1
25°	1691.0	1689.1
27.5°	1667.9	1669.9
30°	1658.4	1664.1
32.5°	1658.4	1667.9
35°	1662.2	1671.8
37.5°	1660.3	1671.8
40°	1652.5	1666.0
42.5°	1631.4	1641.1
45°	1598.8	1610.3
47.5°	1556.5	1564.2
50°	1502.7	1510.3
52.5°	1435.5	1437.4
55°	1354.8	1362.4
57.5°	1268.2	1270.1
60°	1172.2	1177.9
62.5°	1070.4	1070.4
65°	962.7	966.6
67.5°	851.3	860.8
70°	737.9	739.8
72.5°	626.5	626.5
75°	511.1	513.0
77.5°	401.6	401.6
80°	297.9	299.8
82.5°	205.6	209.4
85°	128.7	128.7
87.5°	59.6	53.8
90°	67.9	67.9
92.5°	272.0	218.0
95°	948.0	784.4
97.5°	2271.6	1960.2
100°	3272.9	2902.0
102.5°	4257.9	3940.1
105°	5513.7	5342.9
107.5°	6336.2	6377.5
110°	6650.0	6827.9



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CANDELA DISTRIBUTION (continued):

	80°	90°
112.5°	6677.9	6951.2
115°	6500.8	6879.6
117.5°	6125.4	6545.5
120°	5822.7	6231.0
122.5°	5528.2	5930.8
125°	5107.8	5478.7
127.5°	4729.8	5042.7
130°	4507.0	4796.1
132.5°	4304.9	4563.8
135°	4027.9	4251.1
137.5°	3805.8	3988.4
140°	3653.3	3824.0
142.5°	3527.0	3673.9
145°	3337.6	3448.8
147.5°	3192.3	3284.3
150°	3100.7	3175.4
152.5°	3022.5	3078.8
155°	2932.5	2969.9
157.5°	2861.5	2887.6
160°	2819.0	2834.1
162.5°	2791.2	2805.5
165°	2751.1	2766.2
167.5°	2722.2	2728.6
170°	2714.3	2714.3
172.5°	2693.1	2687.6
175°	2680.4	2680.4
177.5°	2668.8	2662.5
180°	2662.5	2662.5



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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	0.24	0.74	1.39	3.02	12.76	13.43	13.93	14.58	16.21
	3H	0.26	0.86	1.43	2.02	3.66	14.59	15.19	15.76	16.35	17.99
	4H	0.55	1.12	1.73	2.28	3.93	15.23	15.80	16.41	16.96	18.61
	6H	0.79	1.31	1.98	2.47	4.13	15.65	16.18	16.84	17.34	19.00
	8H	0.85	1.35	2.04	2.53	4.18	15.77	16.27	16.96	17.45	19.10
	12H	0.86	1.33	2.06	2.50	4.18	15.84	16.31	17.03	17.48	19.15
4H	2H	6.77	7.34	7.96	8.50	10.15	13.01	13.58	14.20	14.74	16.39
	3H	8.32	8.79	9.51	9.98	11.64	15.04	15.52	16.24	16.70	18.36
	4H	8.40	8.84	9.60	10.01	11.69	15.80	16.24	17.00	17.42	19.09
	6H	8.40	8.77	9.60	9.97	11.64	16.34	16.71	17.54	17.91	19.57
	8H	8.37	8.72	9.57	9.91	11.59	16.50	16.84	17.69	18.03	19.72
	12H	8.32	8.64	9.53	9.83	11.52	16.58	16.90	17.80	18.10	19.79
8H	4H	9.83	10.18	11.03	11.37	13.06	15.85	16.20	17.05	17.38	19.07
	6H	10.07	10.35	11.28	11.59	13.27	16.47	16.76	17.69	17.99	19.67
	8H	10.08	10.33	11.30	11.54	13.24	16.69	16.94	17.91	18.15	19.85
	12H	10.04	10.26	11.27	11.47	13.20	16.83	17.05	18.06	18.25	19.99
12H	4H	9.97	10.29	11.18	11.48	13.17	15.79	16.11	17.00	17.31	18.99
	6H	10.32	10.57	11.55	11.78	13.48	16.45	16.70	17.67	17.91	19.61
	8H	10.38	10.60	11.61	11.81	13.54	16.67	16.89	17.90	18.10	19.83