

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: P938253

Luminaire Tested: SQ4-FB-150U-050D-93050-1D-UNV-STD-W-12-3000K

Issue Date: 12/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P938253
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-93050-1D-UNV-STD-W-12-3000K
Description: CORELITE SQ4 SUSPENDED INDIRECT LED LUMINAIRE WITH Batwing Frosted Continuous Roll L
Light Source: -
Ballast/Driver: -

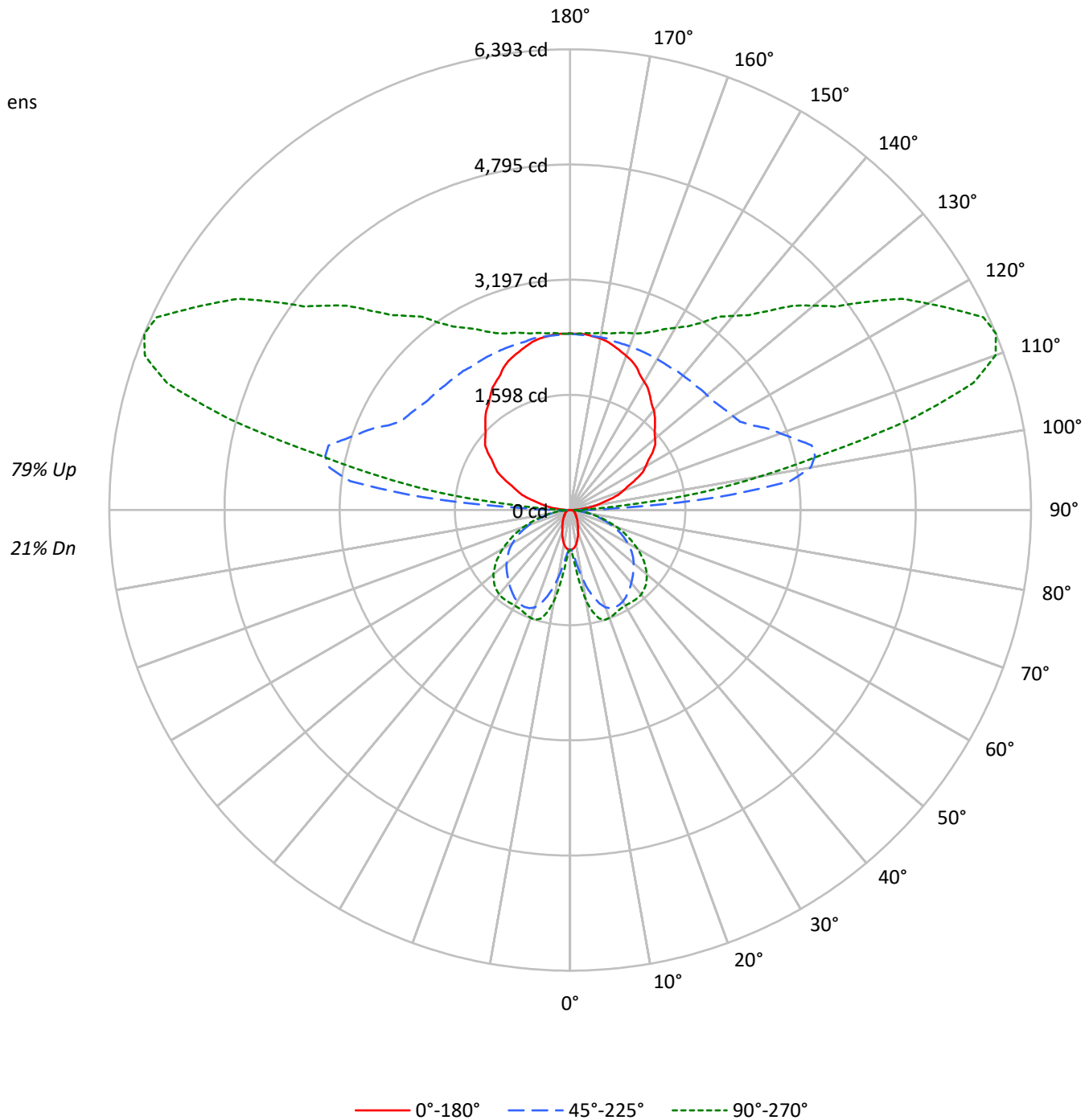
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 20135.0 lumens
Efficiency: N/A
Efficacy: 120.7 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 (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

TEST NUMBER: P938253
CATALOG NUMBER: SQ4-FB-150U-050D-93050-1D-UNV-STD-W-12-3000K

Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	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	0
RCR																		
0	100	100	100	100	89	89	89	89	67	67	67	48	48	48	30	30	30	21
1	91	87	83	80	80	77	74	71	58	56	54	41	40	39	26	25	24	17
2	83	75	70	65	73	67	62	58	51	48	45	36	34	32	22	21	20	14
3	75	66	59	53	66	59	53	48	45	40	37	32	29	27	20	18	17	12
4	69	58	50	45	60	52	45	40	39	35	31	28	25	23	17	16	14	10
5	63	51	44	38	55	46	39	34	35	30	27	25	22	19	15	14	12	8
6	57	46	38	32	51	41	34	29	31	26	23	22	19	17	14	12	11	7
7	53	41	33	28	47	37	30	25	28	23	20	20	17	14	12	11	9	6
8	49	37	30	24	43	33	27	22	25	21	17	18	15	13	11	9	8	5
9	45	34	26	21	40	30	24	19	23	18	15	16	13	11	10	9	7	5
10	42	31	24	19	37	27	21	17	21	17	14	15	12	10	10	8	6	4

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1700	1700	1700
5°	1661	1965	2285
10°	1508	2865	3788
15°	1282	3745	4574
20°	1044	4341	4662
25°	871	4543	4567
30°	735	4573	4558
35°	650	4499	4677
40°	567	4401	4798
45°	514	4330	4817
50°	472	4266	4737
55°	452	4173	4527
60°	463	3991	4196
65°	483	3715	3740
70°	515	3242	3160
75°	573	2645	2465
80°	633	1837	1662
85°	574	976	850

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 90°
 Luminance: 6087 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	71.1	0.4
10°-20°	315.1	1.6
20°-30°	551.2	2.7
30°-40°	709.5	3.5
40°-50°	792.5	3.9
50°-60°	759.0	3.8
60°-70°	601.5	3.0
70°-80°	353.7	1.8
80°-90°	107.6	0.5
90°-100°	1193.6	5.9
100°-110°	3138.1	15.6
110°-120°	3253.8	16.2
120°-130°	2610.0	13.0
130°-140°	2047.9	10.2
140°-150°	1571.8	7.8
150°-160°	1132.0	5.6
160°-170°	692.6	3.4
170°-180°	234.0	1.2
0°-30°	937.4	4.7
0°-40°	1646.9	8.2
0°-60°	3198.4	15.9
0°-90°	4261.2	21.2
90°-120°	7585.5	37.7
90°-150°	13815.2	68.6
90°-180°	15874.0	78.8
0°-180°	20135.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	550	550	550	550	550	
5°	536	574	647	732	758	49
15°	401	740	1248	1513	1560	112
25°	256	840	1486	1552	1554	118
35°	173	802	1400	1479	1538	108
45°	118	640	1237	1417	1481	92
55°	85	406	1050	1219	1253	77
65°	67	216	779	876	889	67
75°	49	132	428	470	472	52
85°	18	41	106	117	118	19
90°	16	46	125	62	62	15
95°	158	618	2056	1060	721	175
105°	565	856	3469	5267	4914	599
115°	1004	1219	2779	5543	6327	992
125°	1397	1566	2528	4271	5039	1240
135°	1665	1832	2449	3448	3910	1288
145°	1931	2054	2417	2942	3172	1210
155°	2182	2243	2417	2654	2731	1003
165°	2355	2386	2417	2513	2544	665
175°	2449	2449	2434	2465	2465	232
180°	2449	2449	2449	2449	2449	



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CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	549.6	549.6	549.6	549.6	549.6	549.6	549.6	549.6	549.6	549.6	549.6
2.5°	549.6	549.6	553.2	554.9	558.4	560.2	563.8	567.3	577.9	579.7	583.2
5°	535.5	542.5	565.5	574.3	599.1	632.6	646.8	669.8	717.5	731.6	740.5
7.5°	514.2	530.1	586.7	600.8	662.8	751.1	788.2	837.7	913.7	950.8	980.8
10°	480.7	514.2	615.0	648.6	749.3	883.7	952.5	1021.5	1136.3	1187.6	1207.0
12.5°	443.5	498.3	645.0	691.0	835.9	1032.1	1115.2	1191.2	1321.9	1390.9	1401.4
15°	401.2	475.4	673.3	740.5	927.8	1155.8	1247.7	1341.3	1463.3	1512.8	1525.2
17.5°	364.1	457.7	699.8	770.5	998.5	1267.1	1360.8	1438.6	1537.6	1571.1	1580.0
20°	318.1	429.5	717.5	809.4	1072.8	1348.5	1438.6	1498.6	1565.8	1587.0	1590.5
22.5°	284.6	399.4	728.1	823.6	1122.2	1397.9	1473.9	1521.7	1567.6	1574.6	1576.4
25°	256.3	365.8	726.4	839.5	1164.6	1427.9	1486.3	1521.7	1548.1	1551.7	1551.7
27.5°	229.8	328.7	719.2	843.0	1196.4	1435.1	1481.0	1505.7	1518.1	1525.2	1525.2
30°	206.8	293.4	701.6	835.9	1210.6	1427.9	1465.1	1477.5	1489.8	1500.4	1505.7
32.5°	189.1	259.8	675.1	821.7	1212.3	1410.3	1436.8	1443.8	1461.5	1486.3	1495.1
35°	173.2	226.3	645.0	802.3	1201.8	1382.0	1399.7	1406.8	1442.1	1479.2	1491.5
37.5°	157.3	201.5	606.2	768.8	1185.8	1348.5	1360.8	1373.1	1427.9	1472.1	1486.3
40°	141.4	180.2	560.2	731.6	1161.1	1307.8	1318.4	1337.8	1410.3	1461.5	1475.6
42.5°	129.0	162.6	510.7	692.8	1129.3	1261.9	1277.8	1306.0	1389.0	1443.8	1459.7
45°	118.4	144.9	457.7	639.8	1088.7	1214.1	1237.1	1276.0	1364.4	1417.3	1431.5
47.5°	107.8	132.5	403.0	584.9	1044.5	1166.4	1196.4	1240.6	1330.7	1382.0	1394.4
50°	99.0	120.2	348.2	526.6	996.7	1115.2	1150.5	1196.4	1288.4	1336.1	1352.0
52.5°	91.9	109.6	296.9	468.3	942.0	1062.1	1102.8	1150.5	1237.1	1283.0	1293.6
55°	84.8	100.7	252.7	406.5	885.4	1005.6	1049.7	1095.7	1180.5	1219.4	1226.5
57.5°	81.3	93.6	215.6	348.2	825.3	942.0	991.4	1033.8	1113.3	1143.5	1150.5
60°	76.0	88.4	187.3	298.7	759.9	881.9	924.3	966.7	1033.8	1058.6	1063.9
62.5°	70.7	84.8	166.1	250.9	692.8	811.2	853.6	892.4	949.0	966.7	973.8
65°	67.2	81.3	150.2	215.6	623.9	737.0	779.4	813.0	858.9	876.5	880.1
67.5°	63.6	77.7	137.8	185.6	554.9	662.8	694.6	726.4	761.7	779.4	781.2
70°	58.3	74.2	127.3	164.3	484.2	577.9	604.4	638.0	666.3	675.1	680.4
72.5°	54.8	68.9	120.2	148.4	411.7	496.6	521.4	540.8	565.5	574.3	574.3
75°	49.4	61.8	113.1	132.5	337.5	406.5	427.6	447.1	466.6	470.1	464.8
77.5°	44.2	54.8	97.2	111.4	263.3	321.6	339.3	349.9	365.8	369.3	371.1
80°	37.2	47.7	76.0	86.6	190.9	236.8	249.2	258.0	272.2	272.2	275.7
82.5°	28.3	37.2	54.8	61.8	129.0	162.6	173.2	178.5	187.3	187.3	187.3
85°	17.7	23.0	35.3	40.7	77.7	99.0	106.0	107.8	114.9	116.6	116.6
87.5°	8.9	12.4	23.0	24.8	40.7	51.3	51.3	54.8	54.8	53.0	51.3
90°	16.4	29.6	42.8	46.0	72.3	107.3	124.9	111.0	83.3	62.4	62.4
92.5°	65.7	177.4	289.2	317.2	445.9	617.5	703.3	616.4	442.6	312.2	299.9
95°	157.7	362.2	566.8	617.9	1097.3	1736.4	2055.9	1834.6	1392.0	1060.0	1022.4
97.5°	272.8	453.2	633.6	678.8	1478.0	2543.6	3076.4	2936.6	2656.9	2447.0	2375.5
100°	361.5	525.1	688.8	729.7	1616.6	2799.1	3390.3	3400.5	3421.0	3436.4	3351.1
102.5°	437.1	589.8	742.4	780.6	1680.1	2879.4	3479.1	3657.3	4013.7	4281.1	4208.0
105°	565.4	694.6	823.9	856.3	1727.3	2888.6	3469.2	3868.7	4667.8	5267.1	5227.8
107.5°	696.8	817.3	937.8	968.0	1736.0	2760.0	3272.0	3829.3	4943.9	5779.8	5789.3
110°	785.6	894.4	1003.2	1030.4	1722.9	2646.1	3107.7	3730.8	4976.8	5911.3	5952.2



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
112.5°	872.7	976.4	1080.1	1106.0	1723.4	2546.5	2958.1	3595.8	4871.1	5827.5	5890.3
115°	1004.2	1099.8	1195.5	1219.4	1739.3	2432.5	2779.0	3393.3	4621.8	5543.2	5630.3
117.5°	1134.0	1220.8	1307.8	1329.5	1771.5	2361.0	2655.7	3210.1	4318.9	5150.4	5247.1
120°	1209.5	1291.4	1373.1	1393.6	1797.9	2336.9	2606.4	3113.0	4126.0	4885.8	4979.7
122.5°	1283.5	1366.0	1448.6	1469.2	1835.7	2324.3	2568.7	3024.8	3937.1	4621.3	4713.8
125°	1396.9	1472.1	1547.4	1566.2	1886.7	2314.0	2527.6	2915.1	3690.0	4271.2	4356.5
127.5°	1488.9	1564.9	1640.8	1659.8	1937.5	2307.9	2493.1	2825.8	3491.2	3990.2	4062.1
130°	1538.3	1620.0	1701.8	1722.3	1974.8	2311.5	2479.9	2776.0	3368.5	3812.7	3879.2
132.5°	1589.2	1671.0	1752.7	1773.2	2004.9	2313.9	2468.4	2733.5	3263.9	3661.5	3721.1
135°	1664.7	1739.2	1813.8	1832.4	2037.8	2311.8	2448.7	2670.7	3114.8	3447.9	3499.2
137.5°	1742.0	1815.8	1889.6	1908.0	2087.1	2325.9	2445.4	2633.1	3008.5	3290.1	3332.1
140°	1806.1	1874.0	1942.0	1959.0	2117.2	2328.3	2433.9	2596.0	2920.4	3163.6	3202.8
142.5°	1855.4	1918.2	1981.0	1996.7	2142.4	2336.7	2433.9	2576.3	2861.2	3074.8	3108.7
145°	1931.0	1985.8	2040.6	2054.3	2175.3	2336.7	2417.4	2533.9	2766.9	2941.7	2967.3
147.5°	2006.6	2059.9	2113.2	2126.5	2223.5	2352.8	2417.4	2509.1	2692.4	2830.0	2851.1
150°	2055.9	2104.1	2152.4	2164.4	2248.7	2361.2	2417.4	2494.9	2649.7	2765.9	2783.0
152.5°	2106.9	2143.4	2179.9	2189.0	2265.1	2366.7	2417.4	2483.6	2615.8	2714.9	2727.9
155°	2182.5	2209.5	2236.5	2243.3	2301.3	2378.7	2417.4	2470.0	2575.3	2654.1	2662.7
157.5°	2238.4	2264.6	2290.9	2297.5	2337.4	2390.7	2417.4	2458.4	2540.1	2601.5	2607.6
160°	2276.1	2296.6	2317.0	2322.1	2353.9	2396.3	2417.4	2452.5	2522.6	2575.2	2578.7
162.5°	2313.9	2329.3	2344.5	2348.4	2371.4	2402.1	2417.4	2447.0	2506.2	2550.6	2553.8
165°	2355.0	2368.9	2382.7	2386.3	2396.6	2410.5	2417.4	2438.6	2480.9	2512.7	2516.2
167.5°	2392.8	2399.4	2405.9	2407.6	2416.4	2428.1	2433.9	2447.7	2475.5	2496.3	2497.8
170°	2417.4	2424.0	2430.6	2432.3	2432.8	2433.5	2433.9	2447.7	2475.5	2496.3	2496.3
172.5°	2430.6	2432.0	2433.5	2433.9	2433.9	2433.9	2433.9	2444.8	2466.8	2483.2	2481.9
175°	2448.7	2448.7	2448.7	2448.7	2443.8	2437.2	2433.9	2440.8	2454.7	2465.1	2465.1
177.5°	2448.7	2448.7	2448.7	2448.7	2444.8	2439.7	2437.2	2442.6	2453.6	2461.8	2460.3
180°	2448.7	2448.7	2448.7	2448.7	2448.7	2448.7	2448.7	2448.7	2448.7	2448.7	2448.7



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CANDELA DISTRIBUTION (continued):

	80°	90°
0°	549.6	549.6
2.5°	586.7	583.2
5°	754.6	758.1
7.5°	1016.2	1014.4
10°	1263.6	1279.5
12.5°	1443.8	1447.4
15°	1553.5	1560.5
17.5°	1595.9	1597.6
20°	1597.6	1594.1
22.5°	1578.1	1574.6
25°	1555.2	1553.5
27.5°	1534.0	1535.8
30°	1525.2	1530.4
32.5°	1525.2	1534.0
35°	1528.7	1537.6
37.5°	1526.9	1537.6
40°	1519.8	1532.2
42.5°	1500.4	1509.3
45°	1470.4	1481.0
47.5°	1431.5	1438.6
50°	1382.0	1389.0
52.5°	1320.2	1321.9
55°	1246.0	1253.0
57.5°	1166.4	1168.1
60°	1078.0	1083.3
62.5°	984.4	984.4
65°	885.4	888.9
67.5°	782.9	791.7
70°	678.7	680.4
72.5°	576.2	576.2
75°	470.1	471.8
77.5°	369.3	369.3
80°	273.9	275.7
82.5°	189.1	192.6
85°	118.4	118.4
87.5°	54.8	49.4
90°	62.4	62.4
92.5°	250.1	200.5
95°	871.9	721.4
97.5°	2089.1	1802.8
100°	3010.0	2668.9
102.5°	3915.9	3623.7
105°	5070.9	4913.8
107.5°	5827.4	5865.3
110°	6115.9	6279.5



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CANDELA DISTRIBUTION (continued):

	80°	90°
112.5°	6141.6	6392.9
115°	5978.7	6327.1
117.5°	5633.4	6019.8
120°	5355.1	5730.6
122.5°	5084.2	5454.5
125°	4697.6	5038.7
127.5°	4350.0	4637.7
130°	4145.1	4410.9
132.5°	3959.1	4197.2
135°	3704.4	3909.7
137.5°	3500.1	3668.0
140°	3359.9	3516.9
142.5°	3243.7	3378.8
145°	3069.6	3171.8
147.5°	2935.9	3020.6
150°	2851.7	2920.4
152.5°	2779.7	2831.6
155°	2697.0	2731.3
157.5°	2631.7	2655.7
160°	2592.6	2606.4
162.5°	2567.0	2580.2
165°	2530.1	2544.0
167.5°	2503.6	2509.5
170°	2496.3	2496.3
172.5°	2476.8	2471.7
175°	2465.1	2465.1
177.5°	2454.5	2448.7
180°	2448.7	2448.7



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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	0.00	0.45	1.10	2.73	12.47	13.14	13.64	14.29	15.92
	3H	0.00	0.56	1.14	1.73	3.37	14.30	14.90	15.47	16.06	17.70
	4H	0.26	0.82	1.44	1.98	3.63	14.94	15.51	16.12	16.67	18.32
	6H	0.50	1.02	1.69	2.18	3.84	15.36	15.89	16.55	17.05	18.71
	8H	0.56	1.05	1.75	2.23	3.88	15.48	15.98	16.67	17.16	18.81
	12H	0.57	1.04	1.76	2.21	3.89	15.54	16.02	16.74	17.19	18.86
4H	2H	6.48	7.04	7.67	8.21	9.85	12.72	13.29	13.91	14.45	16.10
	3H	8.03	8.50	9.22	9.69	11.35	14.75	15.23	15.95	16.41	18.07
	4H	8.11	8.55	9.31	9.72	11.40	15.51	15.95	16.71	17.12	18.80
	6H	8.11	8.48	9.31	9.68	11.35	16.05	16.42	17.25	17.62	19.28
	8H	8.08	8.43	9.28	9.62	11.30	16.20	16.55	17.40	17.74	19.43
	12H	8.03	8.34	9.24	9.54	11.23	16.29	16.61	17.51	17.81	19.50
8H	4H	9.54	9.89	10.74	11.08	12.76	15.56	15.91	16.75	17.09	18.78
	6H	9.77	10.06	10.99	11.29	12.97	16.18	16.47	17.40	17.70	19.38
	8H	9.79	10.04	11.01	11.25	12.95	16.40	16.65	17.62	17.86	19.56
	12H	9.75	9.97	10.97	11.17	12.91	16.54	16.76	17.76	17.96	19.70
12H	4H	9.68	9.99	10.89	11.19	12.88	15.50	15.82	16.71	17.01	18.70
	6H	10.03	10.28	11.25	11.49	13.19	16.16	16.41	17.38	17.62	19.32
	8H	10.09	10.31	11.32	11.52	13.25	16.38	16.60	17.61	17.81	19.54