

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: P938254

Luminaire Tested: SQ4-FB-150U-050D-93050-1D-UNV-STD-W-12-3500K

Issue Date: 12/17/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P938254  
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-12-3500K  
Description: CORELITE SQ4 SUSPENDED INDIRECT LED LUMINAIRE WITH Batwing Frosted Continuous Roll L  
Light Source: -  
Ballast/Driver: -

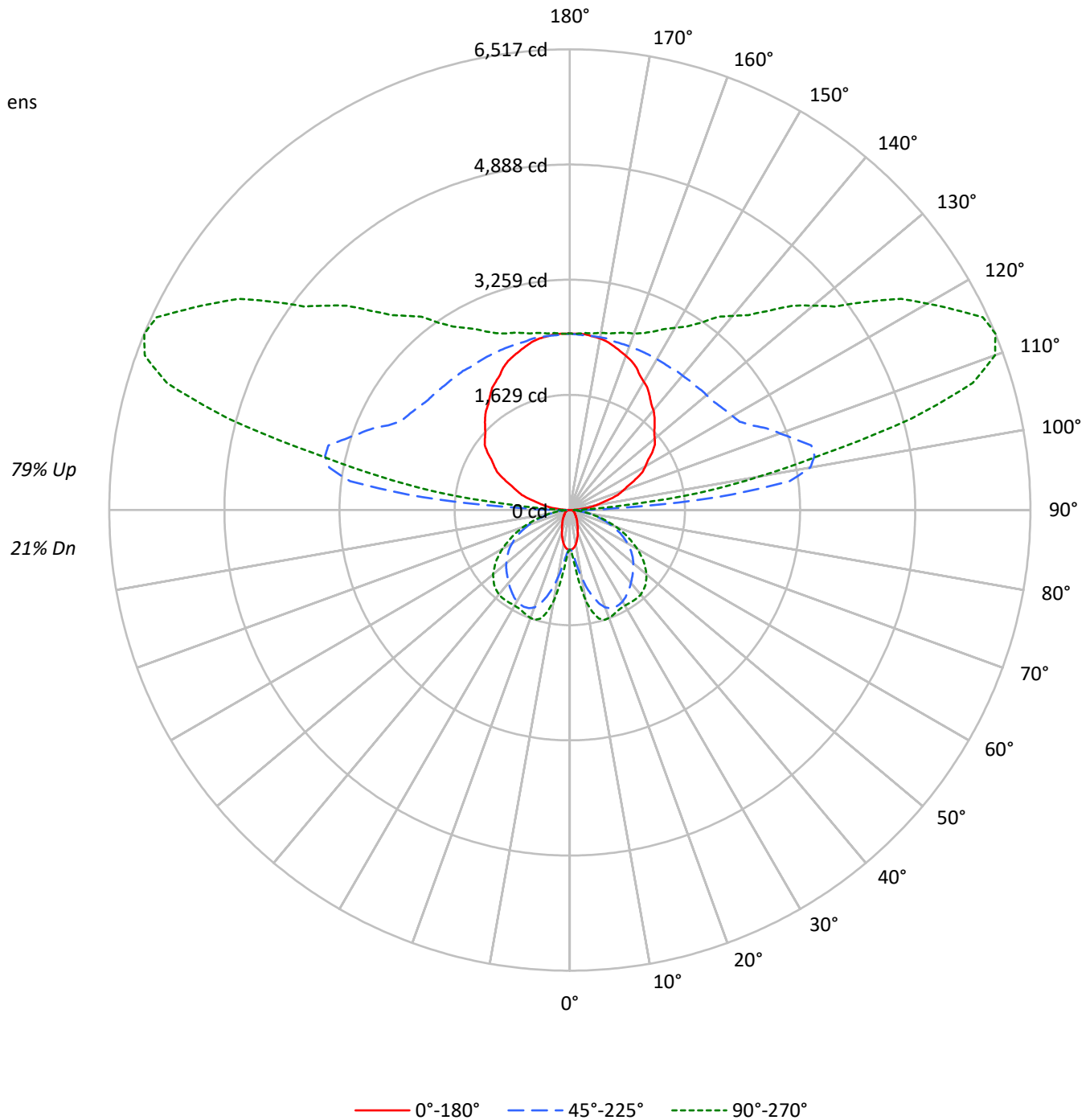
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 20525.0 lumens  
Efficiency: N/A  
Efficacy: 123.1 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

TEST NUMBER: P938254  
CATALOG NUMBER: SQ4-FB-150U-050D-93050-1D-UNV-STD-W-12-3500K

### 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°	1733	1733	1733
5°	1694	2003	2329
10°	1537	2921	3862
15°	1307	3817	4663
20°	1064	4425	4752
25°	888	4631	4656
30°	749	4662	4647
35°	663	4586	4767
40°	578	4487	4891
45°	524	4414	4911
50°	481	4349	4829
55°	461	4254	4615
60°	472	4069	4277
65°	493	3787	3812
70°	525	3305	3221
75°	584	2696	2514
80°	645	1872	1693
85°	583	995	867

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 90°  
 Luminance: 6199 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	72.5	0.4
10°-20°	321.2	1.6
20°-30°	561.8	2.7
30°-40°	723.2	3.5
40°-50°	807.8	3.9
50°-60°	773.7	3.8
60°-70°	613.2	3.0
70°-80°	360.6	1.8
80°-90°	109.7	0.5
90°-100°	1216.7	5.9
100°-110°	3198.8	15.6
110°-120°	3316.9	16.2
120°-130°	2660.5	13.0
130°-140°	2087.6	10.2
140°-150°	1602.3	7.8
150°-160°	1153.9	5.6
160°-170°	706.0	3.4
170°-180°	238.5	1.2
0°-30°	955.5	4.7
0°-40°	1678.7	8.2
0°-60°	3260.3	15.9
0°-90°	4343.8	21.2
90°-120°	7732.4	37.7
90°-150°	14082.8	68.6
90°-180°	16181.0	78.8
0°-180°	20525.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	560	560	560	560	560	
5°	546	585	659	746	773	50
15°	409	755	1272	1542	1591	114
25°	261	856	1515	1582	1584	120
35°	177	818	1427	1508	1567	110
45°	121	652	1261	1445	1510	93
55°	86	414	1070	1243	1277	79
65°	68	220	794	894	906	68
75°	50	135	436	479	481	53
85°	18	42	108	119	121	19
90°	17	47	127	64	64	15
95°	161	630	2096	1081	735	179
105°	576	873	3536	5369	5009	611
115°	1024	1243	2833	5651	6450	1011
125°	1424	1596	2576	4354	5136	1264
135°	1697	1868	2496	3515	3985	1313
145°	1968	2094	2464	2999	3233	1233
155°	2225	2287	2464	2706	2784	1022
165°	2401	2432	2464	2561	2593	677
175°	2496	2496	2481	2513	2513	237
180°	2496	2496	2496	2496	2496	



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**CANDELA DISTRIBUTION (FULL):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	560.3	560.3	560.3	560.3	560.3	560.3	560.3	560.3	560.3	560.3	560.3
2.5°	560.3	560.3	563.9	565.7	569.2	571.0	574.7	578.3	589.1	590.9	594.5
5°	545.9	553.0	576.5	585.4	610.7	644.9	659.3	682.8	731.4	745.8	754.8
7.5°	524.2	540.4	598.1	612.5	675.6	765.7	803.5	853.9	931.4	969.2	999.8
10°	490.0	524.2	626.9	661.2	763.8	900.8	971.0	1041.2	1158.4	1210.6	1230.4
12.5°	452.1	508.0	657.5	704.3	852.1	1052.1	1136.8	1214.2	1347.5	1417.8	1428.6
15°	409.0	484.6	686.3	754.8	945.8	1178.1	1271.9	1367.3	1491.7	1542.1	1554.7
17.5°	371.1	466.5	713.4	785.5	1017.9	1291.7	1387.1	1466.4	1567.3	1601.5	1610.6
20°	324.3	437.8	731.4	825.1	1093.5	1374.6	1466.4	1527.7	1596.2	1617.7	1621.3
22.5°	290.1	407.1	742.2	839.5	1143.9	1425.0	1502.4	1551.1	1598.0	1605.1	1606.9
25°	261.3	372.9	740.4	855.7	1187.2	1455.6	1515.0	1551.1	1578.1	1581.7	1581.7
27.5°	234.2	335.1	733.2	859.3	1219.6	1462.9	1509.7	1534.8	1547.5	1554.7	1554.7
30°	210.8	299.0	715.2	852.1	1234.0	1455.6	1493.5	1506.1	1518.6	1529.5	1534.8
32.5°	192.8	264.8	688.1	837.7	1235.8	1437.6	1464.6	1471.8	1489.8	1515.0	1524.1
35°	176.6	230.6	657.5	817.9	1225.1	1408.8	1426.8	1434.0	1470.0	1507.9	1520.4
37.5°	160.4	205.4	617.9	783.7	1208.8	1374.6	1387.1	1399.7	1455.6	1500.6	1515.0
40°	144.1	183.7	571.0	745.8	1183.6	1333.1	1344.0	1363.7	1437.6	1489.8	1504.2
42.5°	131.5	165.7	520.6	706.2	1151.2	1286.3	1302.5	1331.3	1415.9	1471.8	1488.0
45°	120.7	147.7	466.5	652.1	1109.7	1237.6	1261.0	1300.7	1390.8	1444.8	1459.2
47.5°	109.9	135.1	410.8	596.3	1064.7	1189.0	1219.6	1264.6	1356.5	1408.8	1421.4
50°	100.9	122.5	354.9	536.8	1016.0	1136.8	1172.8	1219.6	1313.3	1361.9	1378.2
52.5°	93.6	111.7	302.6	477.4	960.2	1082.7	1124.2	1172.8	1261.0	1307.9	1318.7
55°	86.5	102.7	257.6	414.4	902.6	1025.0	1070.1	1116.9	1203.4	1243.1	1250.2
57.5°	82.9	95.4	219.8	354.9	841.3	960.2	1010.6	1053.9	1134.9	1165.6	1172.8
60°	77.4	90.1	191.0	304.5	774.6	899.0	942.2	985.4	1053.9	1079.1	1084.5
62.5°	72.1	86.5	169.3	255.8	706.2	826.9	870.2	909.7	967.4	985.4	992.6
65°	68.5	82.9	153.1	219.8	635.9	751.3	794.5	828.7	875.5	893.5	897.1
67.5°	64.8	79.2	140.5	189.2	565.7	675.6	708.0	740.4	776.4	794.5	796.3
70°	59.4	75.7	129.7	167.5	493.6	589.1	616.2	650.4	679.2	688.1	693.6
72.5°	55.9	70.3	122.5	151.3	419.7	506.2	531.5	551.2	576.5	585.4	585.4
75°	50.4	63.0	115.3	135.1	344.1	414.4	435.9	455.8	475.6	479.2	473.8
77.5°	45.0	55.9	99.1	113.5	268.4	327.9	345.9	356.7	372.9	376.5	378.3
80°	37.9	48.6	77.4	88.3	194.6	241.4	254.0	263.0	277.5	277.5	281.0
82.5°	28.8	37.9	55.9	63.0	131.5	165.7	176.6	181.9	191.0	191.0	191.0
85°	18.0	23.5	36.0	41.5	79.2	100.9	108.1	109.9	117.1	118.9	118.9
87.5°	9.0	12.6	23.5	25.2	41.5	52.3	52.3	55.9	55.9	54.1	52.3
90°	16.7	30.2	43.6	46.9	73.7	109.4	127.3	113.2	84.9	63.7	63.7
92.5°	67.0	180.9	294.8	323.3	454.5	629.5	717.0	628.3	451.1	318.3	305.7
95°	160.8	369.2	577.7	629.9	1118.5	1770.0	2095.7	1870.1	1419.0	1080.6	1042.2
97.5°	278.1	462.0	645.9	691.9	1506.6	2592.9	3136.0	2993.5	2708.3	2494.4	2421.5
100°	368.5	535.3	702.1	743.8	1647.9	2853.3	3456.0	3466.4	3487.2	3502.9	3416.0
102.5°	445.6	601.2	756.8	795.8	1712.6	2935.2	3546.5	3728.2	4091.5	4364.0	4289.5
105°	576.3	708.1	839.9	872.8	1760.7	2944.5	3536.4	3943.7	4758.2	5369.1	5329.1
107.5°	710.3	833.2	956.0	986.7	1769.6	2813.4	3335.4	3903.5	5039.6	5891.8	5901.4
110°	800.8	911.7	1022.6	1050.4	1756.2	2697.3	3167.9	3803.0	5073.2	6025.8	6067.5



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
112.5°	889.6	995.3	1101.1	1127.5	1756.8	2595.9	3015.4	3665.4	4965.4	5940.4	6004.4
115°	1023.6	1121.1	1218.7	1243.1	1773.0	2479.6	2832.9	3459.0	4711.3	5650.6	5739.4
117.5°	1155.9	1244.5	1333.1	1355.2	1805.8	2406.7	2707.2	3272.3	4402.5	5250.2	5348.7
120°	1232.9	1316.4	1399.7	1420.6	1832.7	2382.2	2656.9	3173.3	4205.9	4980.4	5076.2
122.5°	1308.3	1392.5	1476.6	1497.7	1871.3	2369.4	2618.4	3083.4	4013.3	4710.8	4805.1
125°	1424.0	1500.6	1577.4	1596.5	1923.2	2358.8	2576.5	2971.5	3761.5	4353.9	4440.8
127.5°	1517.7	1595.2	1672.6	1692.0	1975.1	2352.6	2541.3	2880.5	3558.8	4067.5	4140.8
130°	1568.0	1651.4	1734.8	1755.6	2013.0	2356.3	2527.9	2829.8	3433.7	3886.5	3954.3
132.5°	1620.0	1703.3	1786.7	1807.5	2043.7	2358.7	2516.2	2786.5	3327.1	3732.5	3793.2
135°	1697.0	1772.9	1848.9	1867.9	2077.3	2356.6	2496.1	2722.5	3175.1	3514.6	3566.9
137.5°	1775.8	1851.0	1926.2	1945.0	2127.5	2371.0	2492.7	2684.1	3066.8	3353.8	3396.6
140°	1841.1	1910.3	1979.6	1996.9	2158.2	2373.4	2481.0	2646.3	2976.9	3224.8	3264.8
142.5°	1891.3	1955.4	2019.4	2035.4	2183.9	2382.0	2481.0	2626.2	2916.6	3134.4	3168.9
145°	1968.4	2024.3	2080.1	2094.0	2217.4	2382.0	2464.3	2583.0	2820.5	2998.7	3024.7
147.5°	2045.4	2099.8	2154.1	2167.7	2266.6	2398.4	2464.3	2557.7	2744.6	2884.8	2906.4
150°	2095.7	2144.9	2194.1	2206.3	2292.3	2407.0	2464.3	2543.2	2701.1	2819.4	2836.9
152.5°	2147.7	2184.9	2222.1	2231.4	2309.0	2412.5	2464.3	2531.7	2666.4	2767.5	2780.7
155°	2224.8	2252.3	2279.8	2286.7	2345.9	2424.8	2464.3	2517.9	2625.1	2705.5	2714.3
157.5°	2281.7	2308.5	2335.2	2342.0	2382.7	2437.0	2464.3	2506.0	2589.3	2651.9	2658.1
160°	2320.2	2341.1	2361.9	2367.1	2399.5	2442.7	2464.3	2500.0	2571.4	2625.1	2628.6
162.5°	2358.7	2374.4	2389.9	2393.9	2417.3	2448.6	2464.3	2494.4	2554.8	2600.0	2603.3
165°	2400.6	2414.7	2428.9	2432.5	2443.0	2457.2	2464.3	2485.8	2529.0	2561.4	2565.0
167.5°	2439.2	2445.9	2452.5	2454.2	2463.2	2475.1	2481.0	2495.1	2523.4	2544.7	2546.2
170°	2464.3	2471.0	2477.7	2479.4	2479.9	2480.6	2481.0	2495.1	2523.4	2544.7	2544.7
172.5°	2477.7	2479.1	2480.6	2481.0	2481.0	2481.0	2481.0	2492.2	2514.6	2531.3	2530.0
175°	2496.1	2496.1	2496.1	2496.1	2491.1	2484.4	2481.0	2488.1	2502.2	2512.9	2512.9
177.5°	2496.1	2496.1	2496.1	2496.1	2492.2	2487.0	2484.4	2490.0	2501.1	2509.5	2507.9
180°	2496.1	2496.1	2496.1	2496.1	2496.1	2496.1	2496.1	2496.1	2496.1	2496.1	2496.1



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**CANDELA DISTRIBUTION (continued):**

	80°	90°
0°	560.3	560.3
2.5°	598.1	594.5
5°	769.3	772.8
7.5°	1035.9	1034.1
10°	1288.1	1304.3
12.5°	1471.8	1475.4
15°	1583.5	1590.7
17.5°	1626.8	1628.6
20°	1628.6	1625.0
22.5°	1608.7	1605.1
25°	1585.3	1583.5
27.5°	1563.7	1565.5
30°	1554.7	1560.1
32.5°	1554.7	1563.7
35°	1558.3	1567.3
37.5°	1556.5	1567.3
40°	1549.2	1561.9
42.5°	1529.5	1538.5
45°	1498.8	1509.7
47.5°	1459.2	1466.4
50°	1408.8	1415.9
52.5°	1345.7	1347.5
55°	1270.1	1277.3
57.5°	1189.0	1190.8
60°	1098.9	1104.3
62.5°	1003.5	1003.5
65°	902.6	906.1
67.5°	798.1	807.0
70°	691.8	693.6
72.5°	587.3	587.3
75°	479.2	481.0
77.5°	376.5	376.5
80°	279.2	281.0
82.5°	192.8	196.3
85°	120.7	120.7
87.5°	55.9	50.4
90°	63.7	63.7
92.5°	255.0	204.4
95°	888.8	735.4
97.5°	2129.6	1837.7
100°	3068.3	2720.6
102.5°	3991.7	3693.9
105°	5169.1	5009.0
107.5°	5940.2	5978.9
110°	6234.3	6401.1





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**CANDELA DISTRIBUTION (continued):**

	80°	90°
112.5°	6260.6	6516.7
115°	6094.5	6449.6
117.5°	5742.5	6136.4
120°	5458.8	5841.6
122.5°	5182.7	5560.2
125°	4788.6	5136.3
127.5°	4434.2	4727.5
130°	4225.3	4496.3
132.5°	4035.8	4278.5
135°	3776.2	3985.4
137.5°	3567.9	3739.1
140°	3424.9	3585.0
142.5°	3306.6	3444.3
145°	3129.0	3233.2
147.5°	2992.8	3079.1
150°	2906.9	2976.9
152.5°	2833.6	2886.4
155°	2749.2	2784.2
157.5°	2682.6	2707.2
160°	2642.8	2656.9
162.5°	2616.7	2630.2
165°	2579.1	2593.3
167.5°	2552.1	2558.1
170°	2544.7	2544.7
172.5°	2524.8	2519.6
175°	2512.9	2512.9
177.5°	2502.0	2496.1
180°	2496.1	2496.1



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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	0.01	0.51	1.16	2.79	12.54	13.20	13.70	14.36	15.99
	3H	0.04	0.63	1.21	1.79	3.44	14.37	14.96	15.54	16.12	17.77
	4H	0.32	0.89	1.51	2.05	3.70	15.01	15.57	16.19	16.73	18.38
	6H	0.56	1.08	1.75	2.25	3.91	15.43	15.95	16.62	17.12	18.77
	8H	0.63	1.12	1.82	2.30	3.95	15.55	16.04	16.74	17.22	18.87
	12H	0.64	1.11	1.83	2.28	3.95	15.61	16.08	16.81	17.25	18.93
4H	2H	6.54	7.11	7.73	8.27	9.92	12.79	13.35	13.98	14.52	16.16
	3H	8.09	8.57	9.29	9.75	11.41	14.82	15.29	16.01	16.48	18.14
	4H	8.18	8.61	9.37	9.79	11.47	15.58	16.02	16.78	17.19	18.87
	6H	8.18	8.55	9.38	9.75	11.41	16.11	16.49	17.31	17.68	19.35
	8H	8.15	8.50	9.35	9.69	11.37	16.27	16.62	17.47	17.81	19.49
	12H	8.09	8.41	9.31	9.61	11.30	16.36	16.67	17.57	17.87	19.56
8H	4H	9.61	9.96	10.81	11.15	12.83	15.62	15.97	16.82	17.16	18.84
	6H	9.84	10.13	11.06	11.36	13.04	16.25	16.54	17.46	17.77	19.45
	8H	9.86	10.11	11.08	11.31	13.02	16.47	16.72	17.69	17.92	19.63
	12H	9.82	10.04	11.04	11.24	12.97	16.60	16.83	17.83	18.03	19.76
12H	4H	9.74	10.06	10.96	11.26	12.95	15.57	15.88	16.78	17.08	18.77
	6H	10.10	10.35	11.32	11.56	13.26	16.23	16.48	17.45	17.69	19.39
	8H	10.16	10.38	11.38	11.58	13.32	16.45	16.67	17.68	17.88	19.61