

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: P936813

Luminaire Tested: SQ4-FB-050U-100D-835-1D-UNV-STD-W-12

Issue Date: 12/17/2024

**Test Information**

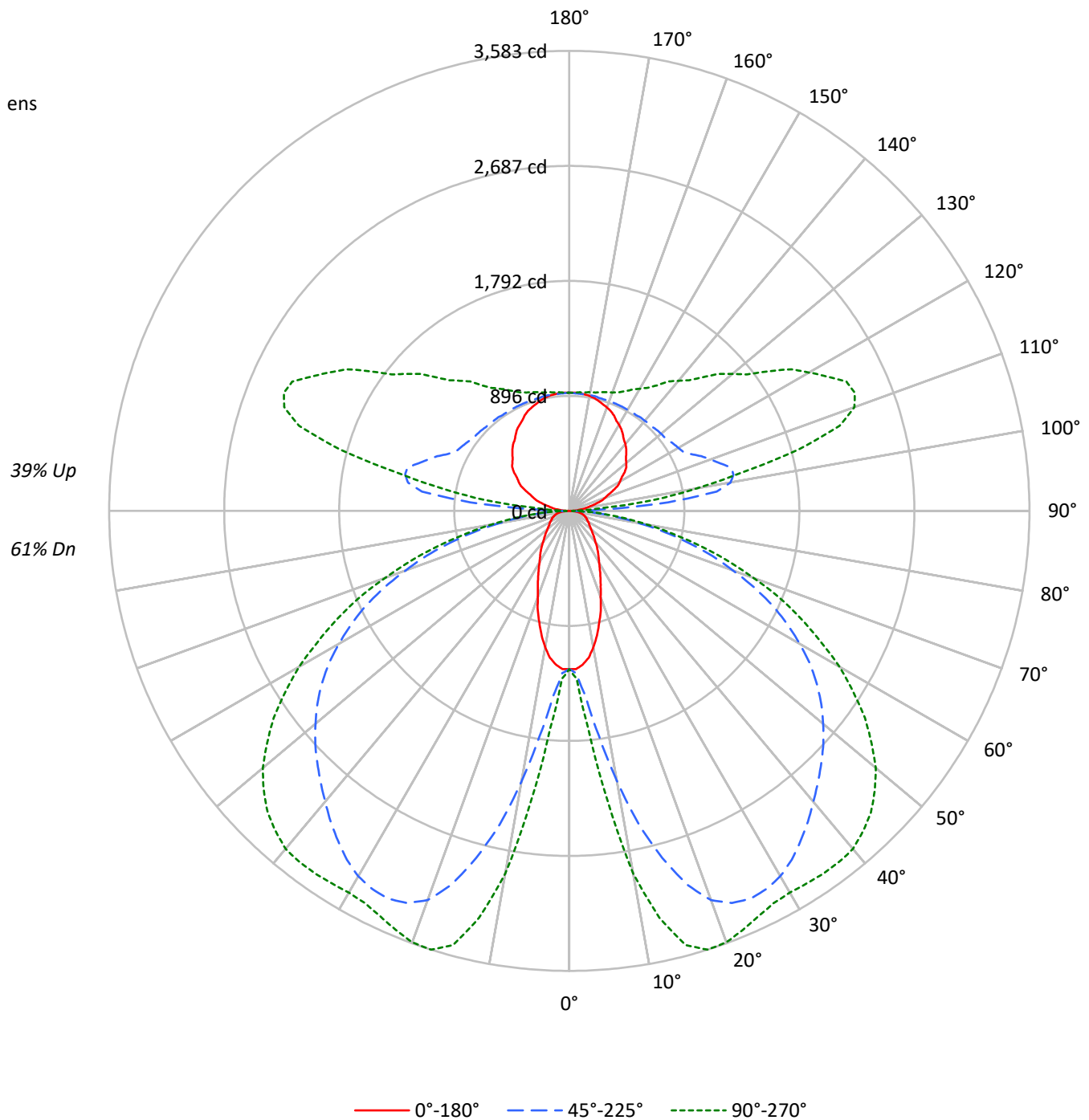
Test Method: LM-79-2019  
Report Number: P936813  
REPORT IS A COMBINATION OF REPORTS P933463 AND P933786  
Test Lab: INNOVATION CENTER  
Issue Date: 12/17/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ4-FB-050U-100D-835-1D-UNV-STD-W-12  
Description: CORELITE SQ4 SUSPENDED INDIRECT LED LUMINAIRE WITH Batwing Frosted Continuous Roll L  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 15512.0 lumens  
Efficiency: N/A  
Efficacy: 114.4 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-Direct  
  
Input Watts (W): 135.6  
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: P936813  
CATALOG NUMBER: SQ4-FB-050U-100D-835-1D-UNV-STD-W-12

### 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	50	30	10	0
RCR																					
0	110	110	110	110	103	103	103	103	90	90	90	78	78	78	67	67	67	67	67	67	61
1	100	95	91	87	93	89	85	82	78	75	72	67	65	63	58	56	55	55	55	55	50
2	90	82	75	70	84	77	71	66	67	63	59	58	55	52	50	48	45	45	45	45	41
3	82	72	64	57	76	67	60	54	59	53	49	51	47	43	44	40	38	38	38	38	34
4	74	63	54	48	69	59	51	45	52	46	41	45	40	36	39	35	32	32	32	32	28
5	68	56	47	41	63	52	44	39	46	40	35	40	35	31	34	30	27	27	27	27	24
6	63	50	41	35	58	47	39	33	41	35	30	36	31	27	31	27	23	23	23	23	21
7	58	45	36	30	54	42	34	29	37	31	26	32	27	23	28	24	21	21	21	21	18
8	53	40	32	26	50	38	30	25	34	27	23	29	24	20	25	21	18	18	18	18	16
9	50	37	29	23	46	35	27	22	31	24	20	27	22	18	23	19	16	16	16	16	14
10	46	33	26	21	43	32	25	20	28	22	18	25	20	16	21	17	14	14	14	14	12

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

	0°	45°	90°
0°	3813	3813	3813
5°	3726	4408	5125
10°	3381	6427	8496
15°	2875	8399	10259
20°	2341	9735	10456
25°	1954	10190	10243
30°	1648	10257	10224
35°	1458	10089	10488
40°	1271	9870	10761
45°	1152	9711	10804
50°	1058	9569	10625
55°	1014	9359	10154
60°	1039	8952	9410
65°	1083	8331	8388
70°	1156	7271	7087
75°	1287	5933	5530
80°	1415	4120	3726
85°	1283	2190	1908

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 10804 cd/sqm



TEST NUMBER: P936813

CATALOG NUMBER: SQ4-FB-050U-100D-835-1D-UNV-STD-W-12

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	159.5	1.0
10°-20°	706.7	4.6
20°-30°	1236.1	8.0
30°-40°	1591.3	10.3
40°-50°	1777.4	11.5
50°-60°	1702.3	11.0
60°-70°	1349.1	8.7
70°-80°	793.3	5.1
80°-90°	223.9	1.4
90°-100°	449.1	2.9
100°-110°	1180.7	7.6
110°-120°	1224.2	7.9
120°-130°	982.0	6.3
130°-140°	770.5	5.0
140°-150°	591.4	3.8
150°-160°	425.9	2.7
160°-170°	260.6	1.7
170°-180°	88.0	0.6
0°-30°	2102.3	13.6
0°-40°	3693.5	23.8
0°-60°	7173.2	46.2
0°-90°	9539.5	61.5
90°-120°	2854.0	18.4
90°-150°	5197.9	33.5
90°-180°	5972.0	38.5
0°-180°	15512.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1233	1233	1233	1233	1233	
5°	1201	1288	1451	1641	1700	111
15°	900	1661	2798	3393	3500	250
25°	575	1883	3333	3480	3484	265
35°	388	1800	3139	3318	3448	243
45°	266	1435	2774	3179	3322	205
55°	190	912	2354	2735	2810	173
65°	151	484	1748	1966	1994	149
75°	111	297	959	1054	1058	116
85°	40	91	238	262	266	42
90°	6	17	47	24	24	8
95°	59	232	774	399	271	66
105°	213	322	1305	1982	1849	226
115°	378	459	1046	2086	2381	373
125°	526	589	951	1607	1896	467
135°	626	689	921	1297	1471	485
145°	726	773	910	1107	1193	455
155°	821	844	910	999	1028	377
165°	886	898	910	945	957	250
175°	921	921	916	928	928	87
180°	921	921	921	921	921	



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**CANDELA DISTRIBUTION (FULL):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	1232.7	1232.7	1232.7	1232.7	1232.7	1232.7	1232.7	1232.7	1232.7	1232.7	1232.7
2.5°	1232.7	1232.7	1240.6	1244.6	1252.5	1256.5	1264.4	1272.3	1296.1	1300.1	1308.0
5°	1201.0	1216.8	1268.4	1288.2	1343.7	1419.0	1450.7	1502.2	1609.2	1640.9	1660.7
7.5°	1153.4	1189.1	1315.9	1347.6	1486.3	1684.5	1767.8	1878.7	2049.2	2132.4	2199.8
10°	1078.1	1153.4	1379.3	1454.6	1680.6	1981.8	2136.4	2291.0	2548.6	2663.5	2707.1
12.5°	994.9	1117.7	1446.7	1549.8	1874.8	2314.7	2501.0	2671.5	2964.8	3119.4	3143.1
15°	899.7	1066.2	1510.1	1660.7	2080.9	2592.2	2798.3	3008.4	3281.9	3392.8	3420.6
17.5°	816.5	1026.6	1569.6	1728.1	2239.4	2841.9	3052.0	3226.4	3448.3	3523.6	3543.5
20°	713.4	963.2	1609.2	1815.3	2405.9	3024.2	3226.4	3361.1	3511.7	3559.3	3567.2
22.5°	638.1	895.8	1633.0	1847.0	2516.9	3135.2	3305.6	3412.7	3515.7	3531.6	3535.5
25°	574.7	820.5	1629.0	1882.7	2612.0	3202.6	3333.4	3412.7	3472.1	3480.0	3480.0
27.5°	515.3	737.2	1613.2	1890.6	2683.4	3218.4	3321.5	3377.0	3404.7	3420.6	3420.6
30°	463.7	658.0	1573.5	1874.8	2715.1	3202.6	3285.8	3313.6	3341.3	3365.1	3377.0
32.5°	424.1	582.6	1514.1	1843.1	2719.0	3163.0	3222.4	3238.3	3277.9	3333.4	3353.2
35°	388.4	507.3	1446.7	1799.5	2695.2	3099.5	3139.2	3155.0	3234.3	3317.5	3345.3
37.5°	352.8	451.9	1359.5	1724.2	2659.6	3024.2	3052.0	3079.7	3202.6	3301.7	3333.4
40°	317.1	404.3	1256.5	1640.9	2604.1	2933.1	2956.8	3000.4	3163.0	3277.9	3309.6
42.5°	289.3	364.7	1145.5	1553.7	2532.7	2830.0	2865.7	2929.1	3115.4	3238.3	3273.9
45°	265.6	325.0	1026.6	1434.8	2441.6	2723.0	2774.5	2861.7	3059.9	3178.8	3210.5
47.5°	241.8	297.3	903.7	1312.0	2342.5	2616.0	2683.4	2782.4	2984.6	3099.5	3127.3
50°	222.0	269.5	780.8	1181.2	2235.5	2501.0	2580.3	2683.4	2889.5	2996.5	3032.2
52.5°	206.1	245.7	665.9	1050.4	2112.6	2382.1	2473.3	2580.3	2774.5	2877.6	2901.4
55°	190.3	225.9	566.8	911.6	1985.8	2255.3	2354.4	2457.4	2647.7	2734.9	2750.7
57.5°	182.3	210.1	483.6	780.8	1851.0	2112.6	2223.6	2318.7	2497.1	2564.4	2580.3
60°	170.4	198.2	420.1	669.8	1704.3	1977.8	2073.0	2168.1	2318.7	2374.2	2386.1
62.5°	158.5	190.3	372.6	562.8	1553.7	1819.3	1914.4	2001.6	2128.5	2168.1	2183.9
65°	150.6	182.3	336.9	483.6	1399.2	1652.8	1747.9	1823.3	1926.3	1965.9	1973.9
67.5°	142.7	174.4	309.2	416.2	1244.6	1486.3	1557.7	1629.0	1708.3	1747.9	1751.9
70°	130.8	166.5	285.4	368.6	1086.0	1296.1	1355.6	1430.9	1494.3	1514.1	1526.0
72.5°	122.9	154.6	269.5	332.9	923.5	1113.8	1169.3	1212.9	1268.4	1288.2	1288.2
75°	111.0	138.7	253.7	297.3	757.0	911.6	959.2	1002.8	1046.4	1054.3	1042.4
77.5°	99.1	122.9	218.0	249.7	590.6	721.4	761.0	784.8	820.5	828.4	832.4
80°	83.2	107.0	170.4	194.2	428.1	531.1	558.9	578.7	610.4	610.4	618.3
82.5°	63.4	83.2	122.9	138.7	289.3	364.7	388.4	400.3	420.1	420.1	420.1
85°	39.6	51.5	79.3	91.2	174.4	222.0	237.8	241.8	257.6	261.6	261.6
87.5°	19.8	27.7	51.5	55.5	91.2	114.9	114.9	122.9	122.9	118.9	114.9
90°	6.2	11.1	16.1	17.3	27.2	40.4	47.0	41.8	31.3	23.5	23.5
92.5°	24.7	66.7	108.8	119.3	167.7	232.3	264.6	231.9	166.5	117.5	112.8
95°	59.4	136.3	213.3	232.5	412.8	653.3	773.5	690.2	523.7	398.8	384.6
97.5°	102.6	170.5	238.4	255.4	556.1	957.0	1157.5	1104.9	999.6	920.7	893.8
100°	136.0	197.6	259.1	274.5	608.2	1053.1	1275.6	1279.4	1287.1	1292.9	1260.8
102.5°	164.5	221.9	279.3	293.7	632.1	1083.4	1309.0	1376.0	1510.1	1610.7	1583.2
105°	212.7	261.3	309.9	322.1	649.8	1086.8	1305.3	1455.6	1756.2	1981.7	1966.9
107.5°	262.2	307.5	352.9	364.2	653.2	1038.5	1231.1	1440.8	1860.2	2174.7	2178.3
110°	295.6	336.5	377.5	387.7	648.2	995.6	1169.3	1403.7	1872.5	2224.1	2239.5



TEST NUMBER: P936813

CATALOG NUMBER: SQ4-FB-050U-100D-835-1D-UNV-STD-W-12

**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
112.5°	328.3	367.3	406.3	416.1	648.4	958.1	1113.0	1352.9	1832.7	2192.6	2216.2
115°	377.8	413.8	449.8	458.8	654.4	915.2	1045.6	1276.7	1738.9	2085.6	2118.4
117.5°	426.6	459.3	492.0	500.2	666.5	888.3	999.2	1207.8	1624.9	1937.8	1974.1
120°	455.1	485.9	516.6	524.3	676.4	879.3	980.7	1171.3	1552.4	1838.3	1873.6
122.5°	482.9	514.0	545.0	552.8	690.7	874.5	966.4	1138.0	1481.3	1738.7	1773.5
125°	525.6	553.9	582.2	589.3	709.9	870.6	951.0	1096.8	1388.3	1607.0	1639.1
127.5°	560.2	588.8	617.4	624.5	729.0	868.3	938.0	1063.2	1313.5	1501.3	1528.4
130°	578.8	609.6	640.3	648.0	743.0	869.7	933.1	1044.5	1267.4	1434.5	1459.5
132.5°	597.9	628.7	659.5	667.2	754.4	870.6	928.7	1028.5	1228.0	1377.6	1400.0
135°	626.4	654.4	682.4	689.4	766.7	869.8	921.3	1004.9	1172.0	1297.3	1316.6
137.5°	655.4	683.2	711.0	717.9	785.3	875.2	920.1	990.7	1132.0	1237.9	1253.7
140°	679.5	705.1	730.6	737.0	796.6	876.0	915.7	976.7	1098.8	1190.3	1205.1
142.5°	698.1	721.7	745.4	751.3	806.1	879.2	915.7	969.3	1076.5	1156.9	1169.6
145°	726.5	747.1	767.7	772.9	818.5	879.2	909.6	953.4	1041.1	1106.8	1116.4
147.5°	755.0	775.0	795.1	800.1	836.6	885.3	909.6	944.1	1013.1	1064.8	1072.8
150°	773.5	791.6	809.8	814.3	846.1	888.4	909.6	938.7	996.9	1040.6	1047.1
152.5°	792.7	806.4	820.2	823.6	852.3	890.5	909.6	934.5	984.2	1021.5	1026.4
155°	821.1	831.3	841.5	844.0	865.9	895.0	909.6	929.4	968.9	998.6	1001.8
157.5°	842.2	852.1	861.9	864.4	879.5	899.6	909.6	925.0	955.7	978.8	981.1
160°	856.4	864.1	871.8	873.7	885.7	901.6	909.6	922.8	949.1	968.9	970.2
162.5°	870.6	876.4	882.2	883.6	892.3	903.8	909.6	920.7	942.9	959.6	960.8
165°	886.1	891.3	896.5	897.8	901.7	907.0	909.6	917.6	933.5	945.4	946.7
167.5°	900.3	902.7	905.2	905.8	909.1	913.5	915.7	920.9	931.4	939.2	939.8
170°	909.6	912.0	914.5	915.1	915.3	915.6	915.7	920.9	931.4	939.2	939.2
172.5°	914.5	915.0	915.6	915.7	915.7	915.7	915.7	919.8	928.1	934.3	933.8
175°	921.3	921.3	921.3	921.3	919.4	916.9	915.7	918.3	923.6	927.5	927.5
177.5°	921.3	921.3	921.3	921.3	919.9	918.0	917.0	919.1	923.2	926.3	925.7
180°	921.3	921.3	921.3	921.3	921.3	921.3	921.3	921.3	921.3	921.3	921.3



TEST NUMBER: P936813

CATALOG NUMBER: SQ4-FB-050U-100D-835-1D-UNV-STD-W-12

**CANDELA DISTRIBUTION (continued):**

	80°	90°
0°	1232.7	1232.7
2.5°	1315.9	1308.0
5°	1692.5	1700.4
7.5°	2279.1	2275.1
10°	2834.0	2869.6
12.5°	3238.3	3246.2
15°	3484.0	3499.9
17.5°	3579.1	3583.1
20°	3583.1	3575.2
22.5°	3539.5	3531.6
25°	3488.0	3484.0
27.5°	3440.4	3444.4
30°	3420.6	3432.5
32.5°	3420.6	3440.4
35°	3428.5	3448.3
37.5°	3424.5	3448.3
40°	3408.7	3436.4
42.5°	3365.1	3384.9
45°	3297.7	3321.5
47.5°	3210.5	3226.4
50°	3099.5	3115.4
52.5°	2960.8	2964.8
55°	2794.3	2810.2
57.5°	2616.0	2619.9
60°	2417.8	2429.7
62.5°	2207.7	2207.7
65°	1985.8	1993.7
67.5°	1755.9	1775.7
70°	1522.0	1526.0
72.5°	1292.1	1292.1
75°	1054.3	1058.3
77.5°	828.4	828.4
80°	614.4	618.3
82.5°	424.1	432.0
85°	265.6	265.6
87.5°	122.9	111.0
90°	23.5	23.5
92.5°	94.1	75.4
95°	328.0	271.4
97.5°	786.0	678.3
100°	1132.5	1004.2
102.5°	1473.3	1363.4
105°	1907.9	1848.8
107.5°	2192.5	2206.8
110°	2301.0	2362.6





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**CANDELA DISTRIBUTION (continued):**

	80°	90°
112.5°	2310.8	2405.3
115°	2249.5	2380.6
117.5°	2119.5	2264.9
120°	2014.9	2156.1
122.5°	1912.9	2052.2
125°	1767.4	1895.8
127.5°	1636.6	1744.9
130°	1559.6	1659.6
132.5°	1489.6	1579.2
135°	1393.8	1471.0
137.5°	1316.9	1380.1
140°	1264.1	1323.2
142.5°	1220.5	1271.3
145°	1154.9	1193.4
147.5°	1104.6	1136.5
150°	1072.9	1098.8
152.5°	1045.9	1065.4
155°	1014.8	1027.7
157.5°	990.1	999.2
160°	975.5	980.7
162.5°	965.8	970.8
165°	952.0	957.2
167.5°	942.0	944.2
170°	939.2	939.2
172.5°	931.9	930.0
175°	927.5	927.5
177.5°	923.5	921.3
180°	921.3	921.3



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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	6.64	7.67	7.49	8.54	9.63	19.84	20.86	20.68	21.73	22.83
	3H	7.36	8.28	8.22	9.17	10.29	21.69	22.62	22.55	23.50	24.62
	4H	7.67	8.54	8.54	9.43	10.56	22.35	23.22	23.22	24.11	25.24
	6H	7.93	8.73	8.81	9.63	10.77	22.79	23.60	23.68	24.49	25.64
	8H	8.00	8.77	8.89	9.68	10.82	22.92	23.69	23.81	24.60	25.75
	12H	8.02	8.76	8.92	9.66	10.83	23.00	23.73	23.90	24.64	25.81
4H	2H	13.89	14.76	14.76	15.65	16.78	20.13	21.00	21.00	21.89	23.02
	3H	15.47	16.20	16.36	17.12	18.27	22.19	22.93	23.08	23.85	24.99
	4H	15.57	16.24	16.47	17.15	18.33	22.97	23.64	23.87	24.56	25.73
	6H	15.59	16.17	16.50	17.11	18.28	23.53	24.11	24.44	25.04	26.22
	8H	15.57	16.11	16.49	17.05	18.23	23.69	24.24	24.61	25.17	26.36
	12H	15.54	16.03	16.47	16.98	18.17	23.80	24.29	24.74	25.24	26.43
8H	4H	17.03	17.57	17.95	18.51	19.70	23.05	23.59	23.96	24.52	25.71
	6H	17.28	17.73	18.23	18.71	19.89	23.69	24.14	24.63	25.11	26.30
	8H	17.30	17.70	18.26	18.67	19.87	23.91	24.31	24.87	25.28	26.48
	12H	17.28	17.63	18.24	18.59	19.84	24.07	24.42	25.03	25.38	26.63
12H	4H	17.19	17.68	18.12	18.63	19.82	23.01	23.50	23.95	24.45	25.64
	6H	17.54	17.94	18.50	18.91	20.11	23.67	24.07	24.63	25.04	26.24
	8H	17.62	17.97	18.58	18.93	20.18	23.91	24.27	24.87	25.22	26.48