

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: P938411

Luminaire Tested: SQ4-FB-150U-100D-830-1D-UNV-STD-W-6

Issue Date: 12/17/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P938411  
REPORT IS A COMBINATION OF REPORTS P933639 AND P933786  
Test Lab: INNOVATION CENTER  
Issue Date: 12/17/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ4-FB-150U-100D-830-1D-UNV-STD-W-6  
Description: CORELITE SQ4 SUSPENDED INDIRECT LED LUMINAIRE WITH Batwing Frosted Continuous Roll L  
Light Source: -  
Ballast/Driver: -

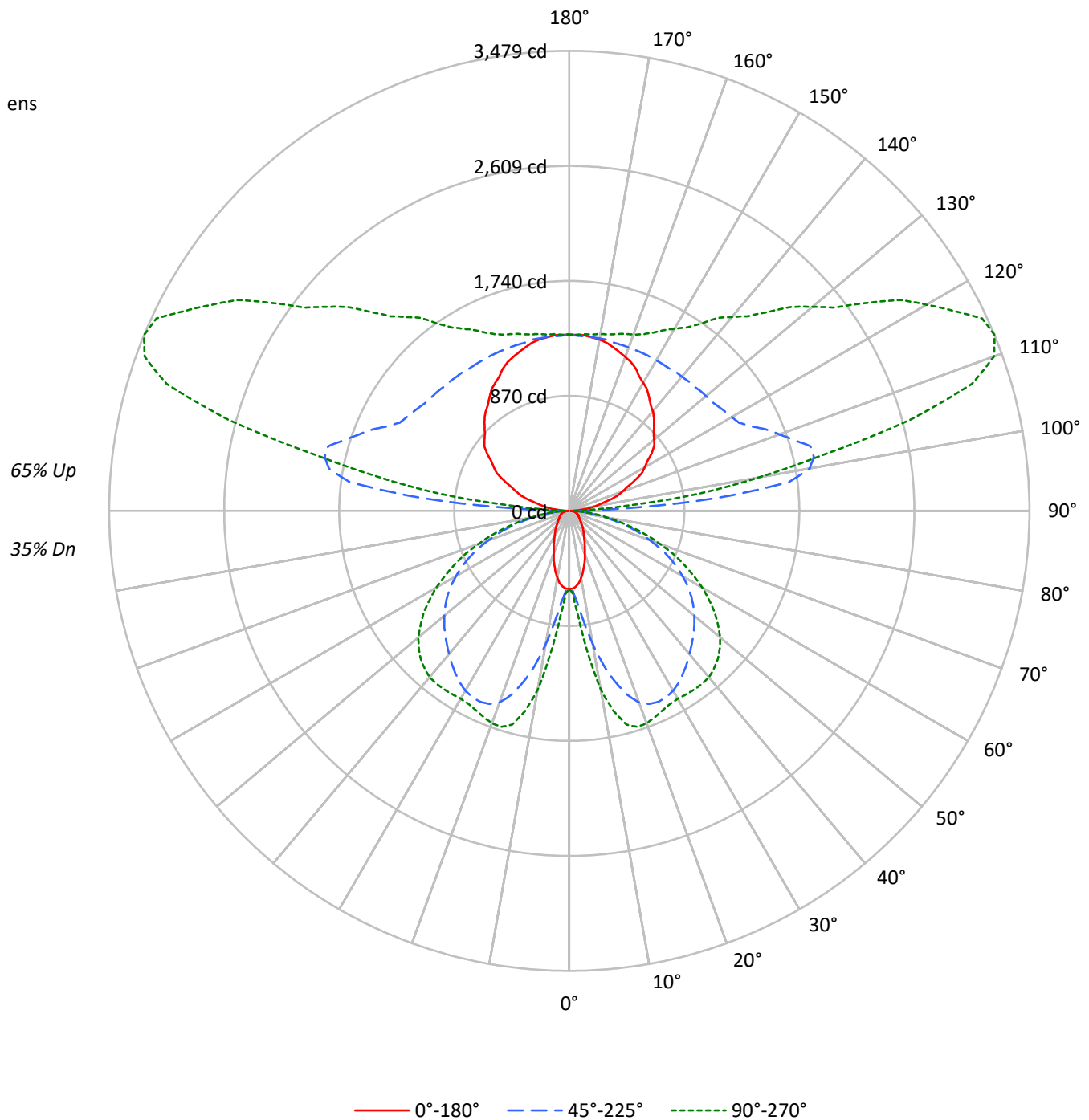
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 13202.4 lumens  
Efficiency: N/A  
Efficacy: 121.6 lumens/watt  
Spacing Criteria (0/90/45): 0.71 / 2.69 / 2.33  
Luminous Opening: Rectangular w/ Sides (W: 0.29' x L: 6' x H: 0.1')  
CIE Type: Semi-Indirect

Input Watts (W): 108.6  
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

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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	103	103	103	103	93	93	93	93	75	75	75	58	58	58	42	42	42	35				35
1	94	90	86	82	85	81	78	75	65	63	60	50	49	47	36	35	35	28				28
2	85	78	72	66	77	70	65	61	56	53	49	43	41	39	32	30	29	23				23
3	77	68	61	55	69	61	55	50	49	45	41	38	35	32	28	26	24	19				19
4	71	60	52	46	63	54	47	42	43	38	34	34	30	27	24	22	20	16				16
5	64	53	45	39	58	48	41	36	39	33	29	30	26	23	22	19	17	14				14
6	59	47	39	33	53	43	36	30	34	29	25	27	23	20	19	17	15	12				12
7	54	42	34	29	49	38	31	26	31	26	22	24	20	17	18	15	13	10				10
8	50	38	30	25	45	35	28	23	28	23	19	22	18	15	16	13	11	9				9
9	47	35	27	22	42	31	25	20	26	20	17	20	16	14	15	12	10	8				8
10	43	31	24	20	39	29	22	18	23	18	15	18	15	12	13	11	9	7				7

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

	0°	45°	90°
0°	3645	3645	3645
5°	3560	4212	4900
10°	3227	6138	8123
15°	2742	8017	9808
20°	2231	9288	9995
25°	1861	9718	9793
30°	1569	9776	9774
35°	1386	9611	10027
40°	1207	9398	10288
45°	1093	9241	10328
50°	1001	9099	10158
55°	958	8892	9707
60°	980	8498	8995
65°	1018	7900	8019
70°	1081	6885	6775
75°	1195	5608	5286
80°	1295	3884	3563
85°	1127	2058	1824

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 10328 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	76.2	0.6
10°-20°	337.8	2.6
20°-30°	590.9	4.5
30°-40°	760.6	5.8
40°-50°	849.6	6.4
50°-60°	813.7	6.2
60°-70°	644.9	4.9
70°-80°	379.2	2.9
80°-90°	110.5	0.8
90°-100°	649.6	4.9
100°-110°	1707.8	12.9
110°-120°	1770.8	13.4
120°-130°	1420.4	10.8
130°-140°	1114.5	8.4
140°-150°	855.5	6.5
150°-160°	616.1	4.7
160°-170°	376.9	2.9
170°-180°	127.4	1.0
0°-30°	1004.9	7.6
0°-40°	1765.5	13.4
0°-60°	3428.8	26.0
0°-90°	4563.3	34.6
90°-120°	4128.3	31.3
90°-150°	7518.7	56.9
90°-180°	8639.0	65.4
0°-180°	13202.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	589	589	589	589	589	
5°	574	616	693	784	813	53
15°	430	794	1338	1622	1673	120
25°	275	900	1593	1663	1665	127
35°	186	860	1500	1586	1648	116
45°	127	686	1326	1520	1588	98
55°	91	436	1125	1307	1343	83
65°	72	231	836	940	953	71
75°	53	142	458	504	506	56
85°	19	44	114	125	127	20
90°	9	25	68	34	34	9
95°	86	336	1119	577	393	95
105°	308	466	1888	2867	2674	326
115°	546	664	1512	3017	3443	540
125°	760	852	1376	2324	2742	675
135°	906	997	1333	1876	2128	701
145°	1051	1118	1316	1601	1726	658
155°	1188	1221	1316	1444	1486	546
165°	1282	1299	1316	1368	1384	362
175°	1333	1333	1325	1342	1342	127
180°	1333	1333	1333	1333	1333	



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**CANDELA DISTRIBUTION (FULL):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	589.2	589.2	589.2	589.2	589.2	589.2	589.2	589.2	589.2	589.2	589.2
2.5°	589.2	589.2	593.0	594.9	598.6	600.6	604.4	608.2	619.5	621.4	625.2
5°	574.1	581.6	606.3	615.8	642.2	678.3	693.4	718.1	769.2	784.4	793.9
7.5°	551.3	568.3	629.0	644.2	710.5	805.2	845.0	898.1	979.5	1019.3	1051.5
10°	515.3	551.3	659.4	695.3	803.3	947.3	1021.2	1095.1	1218.2	1273.2	1294.0
12.5°	475.5	534.3	691.6	740.8	896.2	1106.5	1195.5	1276.9	1417.2	1491.1	1502.4
15°	430.1	509.6	721.9	793.9	994.6	1239.1	1337.6	1438.0	1568.7	1621.8	1635.0
17.5°	390.3	490.7	750.3	826.1	1070.4	1358.5	1458.9	1542.2	1648.3	1684.3	1693.7
20°	341.0	460.4	769.2	867.8	1150.1	1445.6	1542.2	1606.7	1678.6	1701.4	1705.1
22.5°	305.1	428.2	780.6	882.9	1203.0	1498.6	1580.1	1631.2	1680.6	1688.1	1690.0
25°	274.8	392.2	778.7	900.0	1248.5	1530.8	1593.4	1631.2	1659.7	1663.4	1663.4
27.5°	246.3	352.4	771.1	903.7	1282.7	1538.4	1587.6	1614.2	1627.5	1635.0	1635.0
30°	221.7	314.5	752.2	896.2	1297.8	1530.8	1570.6	1583.9	1597.2	1608.5	1614.2
32.5°	202.8	278.5	723.7	881.0	1299.7	1511.9	1540.3	1547.9	1566.8	1593.4	1602.8
35°	185.7	242.5	691.6	860.1	1288.3	1481.6	1500.5	1508.1	1545.9	1585.8	1599.0
37.5°	168.6	216.0	649.9	824.2	1271.3	1445.6	1458.9	1472.1	1530.8	1578.2	1593.4
40°	151.5	193.2	600.6	784.4	1244.7	1402.0	1413.4	1434.2	1511.9	1566.8	1582.0
42.5°	138.3	174.3	547.5	742.7	1210.7	1352.7	1369.8	1400.1	1489.2	1547.9	1565.0
45°	127.0	155.4	490.7	685.8	1167.1	1301.6	1326.3	1367.9	1462.6	1519.5	1534.7
47.5°	115.6	142.1	432.0	627.1	1119.7	1250.4	1282.7	1330.0	1426.6	1481.6	1494.8
50°	106.1	128.9	373.2	564.6	1068.5	1195.5	1233.4	1282.7	1381.1	1432.3	1449.4
52.5°	98.6	117.5	318.3	502.1	1009.8	1138.7	1182.2	1233.4	1326.3	1375.5	1386.9
55°	90.9	108.0	270.9	435.7	949.2	1078.0	1125.4	1174.6	1265.6	1307.2	1314.9
57.5°	87.2	100.4	231.2	373.2	884.8	1009.8	1062.9	1108.4	1193.6	1225.8	1233.4
60°	81.5	94.7	200.9	320.2	814.7	945.4	990.9	1036.3	1108.4	1134.9	1140.5
62.5°	75.8	90.9	178.1	269.0	742.7	869.6	915.1	956.8	1017.4	1036.3	1044.0
65°	72.0	87.2	161.1	231.2	668.8	790.0	835.5	871.5	920.8	939.7	943.5
67.5°	68.2	83.4	147.8	198.9	594.9	710.5	744.5	778.7	816.6	835.5	837.5
70°	62.5	79.5	136.4	176.2	519.1	619.5	648.0	683.9	714.2	723.7	729.4
72.5°	58.7	73.9	128.9	159.2	441.5	532.4	558.9	579.7	606.3	615.8	615.8
75°	53.1	66.3	121.2	142.1	361.8	435.7	458.5	479.3	500.2	504.0	498.3
77.5°	47.3	58.7	104.2	119.4	282.3	344.8	363.8	375.1	392.2	396.0	397.9
80°	39.8	51.1	81.5	92.8	204.6	253.9	267.1	276.6	291.8	291.8	295.6
82.5°	30.3	39.8	58.7	66.3	138.3	174.3	185.7	191.4	200.9	200.9	200.9
85°	18.9	24.7	37.9	43.6	83.4	106.1	113.7	115.6	123.1	125.0	125.0
87.5°	9.5	13.3	24.7	26.5	43.6	55.0	55.0	58.7	58.7	56.9	55.0
90°	9.0	16.2	23.2	25.0	39.4	58.4	68.0	60.4	45.3	34.0	34.0
92.5°	35.8	96.6	157.5	172.7	242.7	336.1	382.8	335.5	240.9	170.0	163.2
95°	85.8	197.1	308.5	336.3	597.2	945.0	1118.9	998.4	757.5	576.9	556.4
97.5°	148.5	246.6	344.8	369.4	804.4	1384.4	1674.3	1598.2	1446.0	1331.8	1292.8
100°	196.7	285.8	374.8	397.1	879.8	1523.4	1845.2	1850.7	1861.9	1870.2	1823.9
102.5°	237.9	321.0	404.1	424.8	914.4	1567.1	1893.5	1990.4	2184.4	2329.9	2290.1
105°	307.6	378.0	448.4	466.0	940.0	1572.0	1888.1	2105.5	2540.4	2866.6	2845.2
107.5°	379.2	444.8	510.4	526.8	944.7	1502.1	1780.7	2084.1	2690.7	3145.6	3150.8
110°	427.5	486.8	546.0	560.8	937.6	1440.0	1691.3	2030.4	2708.5	3217.1	3239.4



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
112.5°	474.9	531.3	587.7	601.9	937.9	1385.9	1609.9	1956.9	2651.0	3171.5	3205.8
115°	546.4	598.6	650.7	663.7	946.5	1323.8	1512.4	1846.7	2515.3	3016.8	3064.2
117.5°	617.1	664.4	711.7	723.6	964.2	1285.0	1445.4	1747.1	2350.4	2803.0	2855.6
120°	658.3	702.9	747.4	758.5	978.5	1271.9	1418.5	1694.2	2245.5	2659.0	2710.1
122.5°	698.5	743.5	788.4	799.6	999.0	1265.0	1398.0	1646.2	2142.7	2515.0	2565.4
125°	760.2	801.1	842.1	852.4	1026.7	1259.3	1375.6	1586.5	2008.2	2324.5	2370.9
127.5°	810.3	851.6	893.0	903.3	1054.5	1256.0	1356.8	1537.8	1900.0	2171.6	2210.8
130°	837.2	881.7	926.3	937.4	1074.8	1258.1	1349.7	1510.9	1833.2	2075.0	2111.1
132.5°	864.9	909.4	954.0	965.1	1091.2	1259.3	1343.4	1487.6	1776.2	1992.7	2025.1
135°	906.0	946.5	987.2	997.3	1109.1	1258.1	1332.7	1453.5	1695.2	1876.4	1904.4
137.5°	948.1	988.2	1028.4	1038.4	1135.9	1265.8	1330.8	1433.0	1637.3	1790.6	1813.4
140°	983.0	1020.0	1056.9	1066.1	1152.3	1267.2	1324.6	1412.9	1589.4	1721.8	1743.1
142.5°	1009.7	1044.0	1078.2	1086.7	1166.0	1271.8	1324.6	1402.2	1557.1	1673.4	1691.7
145°	1050.9	1080.8	1110.6	1118.0	1183.9	1271.8	1315.6	1379.0	1505.9	1601.0	1614.9
147.5°	1092.0	1121.1	1150.1	1157.3	1210.1	1280.5	1315.6	1365.6	1465.3	1540.1	1551.7
150°	1118.9	1145.1	1171.3	1177.9	1223.8	1285.1	1315.6	1357.8	1442.0	1505.2	1514.6
152.5°	1146.6	1166.5	1186.4	1191.4	1232.8	1288.0	1315.6	1351.6	1423.6	1477.5	1484.6
155°	1187.7	1202.5	1217.2	1220.8	1252.5	1294.6	1315.6	1344.2	1401.5	1444.4	1449.1
157.5°	1218.1	1232.5	1246.8	1250.4	1272.1	1301.1	1315.6	1337.9	1382.5	1415.8	1419.1
160°	1238.8	1249.9	1261.0	1263.7	1281.0	1304.1	1315.6	1334.8	1372.9	1401.5	1403.4
162.5°	1259.3	1267.7	1276.0	1278.1	1290.6	1307.3	1315.6	1331.7	1363.9	1388.1	1389.9
165°	1281.7	1289.3	1296.7	1298.6	1304.3	1311.8	1315.6	1327.2	1350.3	1367.6	1369.5
167.5°	1302.3	1305.8	1309.4	1310.3	1315.1	1321.5	1324.6	1332.2	1347.3	1358.6	1359.3
170°	1315.6	1319.2	1322.8	1323.7	1324.0	1324.4	1324.6	1332.2	1347.3	1358.6	1358.6
172.5°	1322.8	1323.6	1324.4	1324.6	1324.6	1324.6	1324.6	1330.6	1342.5	1351.4	1350.7
175°	1332.7	1332.7	1332.7	1332.7	1330.0	1326.4	1324.6	1328.4	1335.9	1341.6	1341.6
177.5°	1332.7	1332.7	1332.7	1332.7	1330.6	1327.8	1326.4	1329.3	1335.3	1339.8	1339.1
180°	1332.7	1332.7	1332.7	1332.7	1332.7	1332.7	1332.7	1332.7	1332.7	1332.7	1332.7



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**CANDELA DISTRIBUTION (continued):**

	80°	90°
0°	589.2	589.2
2.5°	629.0	625.2
5°	809.0	812.8
7.5°	1089.4	1087.5
10°	1354.7	1371.7
12.5°	1547.9	1551.7
15°	1665.4	1672.9
17.5°	1710.9	1712.7
20°	1712.7	1708.9
22.5°	1691.8	1688.1
25°	1667.3	1665.4
27.5°	1644.5	1646.4
30°	1635.0	1640.7
32.5°	1635.0	1644.5
35°	1638.9	1648.3
37.5°	1637.0	1648.3
40°	1629.3	1642.6
42.5°	1608.5	1618.0
45°	1576.3	1587.6
47.5°	1534.7	1542.2
50°	1481.6	1489.2
52.5°	1415.3	1417.2
55°	1335.7	1343.3
57.5°	1250.4	1252.4
60°	1155.7	1161.3
62.5°	1055.3	1055.3
65°	949.2	952.9
67.5°	839.3	848.7
70°	727.5	729.4
72.5°	617.7	617.7
75°	504.0	505.8
77.5°	396.0	396.0
80°	293.7	295.6
82.5°	202.8	206.5
85°	127.0	127.0
87.5°	58.7	53.1
90°	34.0	34.0
92.5°	136.1	109.1
95°	474.5	392.6
97.5°	1137.0	981.1
100°	1638.2	1452.5
102.5°	2131.1	1972.1
105°	2759.7	2674.2
107.5°	3171.4	3192.1
110°	3328.4	3417.5





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**CANDELA DISTRIBUTION (continued):**

	80°	90°
112.5°	3342.5	3479.2
115°	3253.7	3443.4
117.5°	3065.9	3276.2
120°	2914.5	3118.8
122.5°	2767.0	2968.5
125°	2556.5	2742.2
127.5°	2367.3	2524.0
130°	2255.9	2400.5
132.5°	2154.6	2284.3
135°	2016.1	2127.8
137.5°	1904.9	1996.3
140°	1828.5	1914.0
142.5°	1765.3	1838.9
145°	1670.5	1726.2
147.5°	1597.8	1643.9
150°	1552.0	1589.4
152.5°	1512.8	1541.1
155°	1467.7	1486.5
157.5°	1432.3	1445.4
160°	1411.0	1418.5
162.5°	1397.0	1404.2
165°	1376.9	1384.5
167.5°	1362.6	1365.7
170°	1358.6	1358.6
172.5°	1348.0	1345.2
175°	1341.6	1341.6
177.5°	1335.8	1332.7
180°	1332.7	1332.7



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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	3.89	4.65	4.96	5.73	7.20	17.05	17.81	18.12	18.89	20.36
	3H	4.59	5.27	5.67	6.36	7.85	18.88	19.56	19.96	20.65	22.14
	4H	4.88	5.53	5.97	6.62	8.11	19.51	20.16	20.61	21.25	22.75
	6H	5.12	5.72	6.23	6.81	8.32	19.94	20.53	21.04	21.63	23.14
	8H	5.19	5.76	6.29	6.87	8.37	20.05	20.62	21.16	21.73	23.23
	12H	5.20	5.74	6.31	6.85	8.37	20.11	20.65	21.22	21.76	23.28
4H	2H	11.08	11.73	12.18	12.82	14.32	17.31	17.96	18.41	19.05	20.55
	3H	12.64	13.18	13.75	14.30	15.81	19.34	19.89	20.45	21.00	22.51
	4H	12.73	13.23	13.84	14.33	15.86	20.10	20.60	21.22	21.71	23.24
	6H	12.74	13.16	13.85	14.29	15.81	20.63	21.06	21.75	22.19	23.71
	8H	12.71	13.11	13.83	14.23	15.77	20.79	21.19	21.91	22.31	23.85
	12H	12.66	13.02	13.80	14.16	15.70	20.88	21.24	22.01	22.37	23.92
8H	4H	14.16	14.56	15.28	15.68	17.22	20.16	20.56	21.28	21.68	23.22
	6H	14.40	14.73	15.54	15.89	17.43	20.78	21.11	21.92	22.27	23.81
	8H	14.42	14.71	15.56	15.85	17.41	20.99	21.28	22.14	22.42	23.98
	12H	14.38	14.64	15.53	15.77	17.37	21.13	21.38	22.28	22.52	24.11
12H	4H	14.30	14.66	15.44	15.80	17.34	20.10	20.47	21.24	21.60	23.14
	6H	14.66	14.95	15.80	16.09	17.65	20.76	21.05	21.91	22.19	23.75
	8H	14.72	14.98	15.87	16.11	17.71	20.98	21.24	22.13	22.37	23.97