

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: P938424

Luminaire Tested: SQ4-FB-150U-100D-927-1D-UNV-STD-W-8

Issue Date: 12/17/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P938424  
REPORT IS A COMBINATION OF REPORTS P933647 AND P933786  
Test Lab: INNOVATION CENTER  
Issue Date: 12/17/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ4-FB-150U-100D-927-1D-UNV-STD-W-8  
Description: CORELITE SQ4 SUSPENDED INDIRECT LED LUMINAIRE WITH Batwing Frosted Continuous Roll L  
Light Source: -  
Ballast/Driver: -

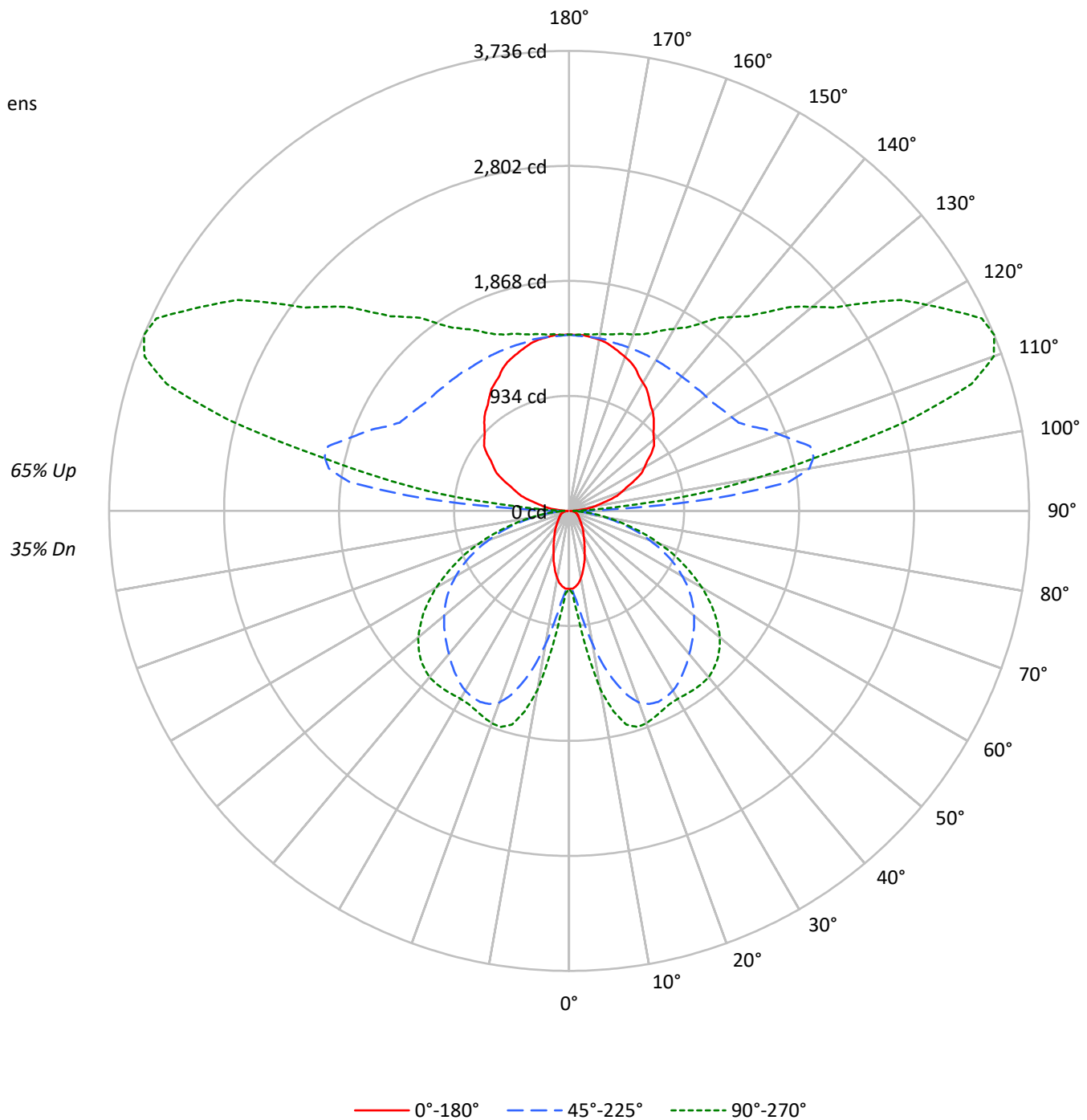
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 14178.8 lumens  
Efficiency: N/A  
Efficacy: 97.9 lumens/watt  
Spacing Criteria (0/90/45): 0.71 / 2.69 / 2.33  
Luminous Opening: Rectangular w/ Sides (W: 0.29' x L: 8' x H: 0.1')  
CIE Type: Semi-Indirect

Input Watts (W): 144.8  
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

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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°	2936	2936	2936
5°	2868	3393	3946
10°	2602	4947	6543
15°	2211	6463	7901
20°	1800	7489	8052
25°	1502	7837	7888
30°	1266	7887	7873
35°	1120	7756	8077
40°	976	7586	8287
45°	884	7461	8320
50°	811	7349	8182
55°	776	7185	7819
60°	795	6869	7247
65°	826	6390	6460
70°	880	5572	5457
75°	976	4543	4259
80°	1065	3151	2870
85°	946	1672	1469

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 8320 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	81.9	0.6
10°-20°	362.8	2.6
20°-30°	634.6	4.5
30°-40°	816.9	5.8
40°-50°	912.5	6.4
50°-60°	873.9	6.2
60°-70°	692.6	4.9
70°-80°	407.3	2.9
80°-90°	118.6	0.8
90°-100°	697.6	4.9
100°-110°	1834.1	12.9
110°-120°	1901.7	13.4
120°-130°	1525.4	10.8
130°-140°	1196.9	8.4
140°-150°	918.7	6.5
150°-160°	661.6	4.7
160°-170°	404.8	2.9
170°-180°	136.8	1.0
0°-30°	1079.3	7.6
0°-40°	1896.2	13.4
0°-60°	3682.6	26.0
0°-90°	4901.1	34.6
90°-120°	4433.5	31.3
90°-150°	8074.5	56.9
90°-180°	9278.0	65.4
0°-180°	14178.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	633	633	633	633	633	
5°	616	661	745	842	873	57
15°	462	853	1437	1742	1797	129
25°	295	967	1711	1787	1789	136
35°	199	924	1612	1703	1770	125
45°	136	737	1424	1632	1705	105
55°	98	468	1209	1404	1443	89
65°	77	248	897	1009	1024	77
75°	57	153	492	541	543	60
85°	20	47	122	134	136	22
90°	10	27	73	36	36	9
95°	92	361	1202	620	422	102
105°	330	500	2028	3078	2872	350
115°	587	713	1624	3240	3698	580
125°	816	915	1477	2496	2945	725
135°	973	1071	1431	2015	2285	753
145°	1129	1201	1413	1719	1854	707
155°	1276	1311	1413	1551	1596	586
165°	1376	1395	1413	1469	1487	388
175°	1431	1431	1422	1441	1441	136
180°	1431	1431	1431	1431	1431	



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**CANDELA DISTRIBUTION (FULL):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	632.9	632.9	632.9	632.9	632.9	632.9	632.9	632.9	632.9	632.9	632.9
2.5°	632.9	632.9	636.9	638.9	643.0	645.0	649.1	653.2	665.4	667.4	671.5
5°	616.5	624.7	651.2	661.4	689.8	728.5	744.7	771.2	826.1	842.5	852.6
7.5°	592.1	610.5	675.6	691.8	763.1	864.8	907.5	964.5	1052.1	1094.8	1129.4
10°	553.5	592.1	708.2	746.8	862.8	1017.4	1096.8	1176.2	1308.4	1367.4	1389.8
12.5°	510.7	573.8	742.7	795.6	962.5	1188.3	1284.0	1371.5	1522.1	1601.4	1613.6
15°	461.9	547.4	775.3	852.6	1068.3	1330.8	1436.6	1544.5	1684.8	1741.8	1756.1
17.5°	419.2	527.1	805.8	887.2	1149.7	1459.0	1566.9	1656.3	1770.3	1809.0	1819.2
20°	366.3	494.5	826.1	931.9	1235.2	1552.6	1656.3	1725.6	1802.9	1827.3	1831.4
22.5°	327.6	459.8	838.4	948.3	1292.1	1609.6	1697.1	1752.0	1805.0	1813.0	1815.1
25°	295.1	421.2	836.3	966.6	1341.0	1644.2	1711.3	1752.0	1782.6	1786.6	1786.6
27.5°	264.5	378.5	828.2	970.7	1377.6	1652.3	1705.2	1733.7	1748.0	1756.1	1756.1
30°	238.1	337.8	807.8	962.5	1393.9	1644.2	1686.9	1701.2	1715.4	1727.6	1733.7
32.5°	217.8	299.1	777.3	946.2	1395.9	1623.9	1654.3	1662.5	1682.8	1711.3	1721.5
35°	199.4	260.5	742.7	923.8	1383.7	1591.3	1611.6	1619.8	1660.4	1703.2	1717.4
37.5°	181.1	232.0	697.9	885.2	1365.4	1552.6	1566.9	1581.1	1644.2	1695.0	1711.3
40°	162.8	207.6	645.0	842.5	1336.9	1505.8	1518.0	1540.4	1623.9	1682.8	1699.1
42.5°	148.5	187.2	588.0	797.6	1300.3	1452.9	1471.2	1503.7	1599.4	1662.5	1680.8
45°	136.4	166.9	527.1	736.6	1253.5	1397.9	1424.4	1469.2	1570.9	1631.9	1648.3
47.5°	124.1	152.6	463.9	673.5	1202.6	1343.0	1377.6	1428.5	1532.2	1591.3	1605.5
50°	114.0	138.4	400.9	606.4	1147.7	1284.0	1324.7	1377.6	1483.4	1538.4	1556.6
52.5°	105.8	126.1	341.9	539.2	1084.5	1222.9	1269.7	1324.7	1424.4	1477.3	1489.5
55°	97.6	116.0	291.0	468.0	1019.5	1157.8	1208.7	1261.6	1359.3	1404.0	1412.2
57.5°	93.6	107.9	248.2	400.9	950.3	1084.5	1141.5	1190.4	1282.0	1316.5	1324.7
60°	87.5	101.7	215.7	343.9	875.0	1015.4	1064.2	1113.0	1190.4	1218.9	1225.0
62.5°	81.4	97.6	191.3	289.0	797.6	934.0	982.8	1027.6	1092.7	1113.0	1121.2
65°	77.3	93.6	172.9	248.2	718.3	848.5	897.4	936.0	988.9	1009.3	1013.4
67.5°	73.2	89.6	158.7	213.7	638.9	763.1	799.7	836.3	877.0	897.4	899.4
70°	67.1	85.5	146.5	189.3	557.6	665.4	695.9	734.6	767.2	777.3	783.4
72.5°	63.1	79.4	138.4	170.9	474.1	571.8	600.3	622.7	651.2	661.4	661.4
75°	57.0	71.2	130.2	152.6	388.7	468.0	492.4	514.8	537.2	541.3	535.2
77.5°	50.9	63.1	111.9	128.2	303.2	370.4	390.7	402.9	421.2	425.3	427.4
80°	42.7	55.0	87.5	99.7	219.8	272.7	286.9	297.1	313.4	313.4	317.5
82.5°	32.6	42.7	63.1	71.2	148.5	187.2	199.4	205.5	215.7	215.7	215.7
85°	20.3	26.5	40.7	46.8	89.6	114.0	122.1	124.1	132.3	134.3	134.3
87.5°	10.2	14.2	26.5	28.5	46.8	59.0	59.0	63.1	63.1	61.1	59.0
90°	9.6	17.3	24.9	26.9	42.3	62.8	73.0	64.9	48.7	36.5	36.5
92.5°	38.4	103.7	169.1	185.4	260.6	361.0	411.1	360.3	258.7	182.5	175.3
95°	92.2	211.8	331.3	361.1	641.3	1014.8	1201.6	1072.2	813.6	619.5	597.5
97.5°	159.5	264.9	370.4	396.7	863.9	1486.7	1798.1	1716.3	1552.9	1430.2	1388.4
100°	211.3	306.9	402.6	426.5	944.9	1635.9	1981.5	1987.5	1999.5	2008.4	1958.6
102.5°	255.5	344.7	433.9	456.2	982.0	1682.9	2033.4	2137.6	2345.9	2502.1	2459.5
105°	330.4	405.9	481.6	500.4	1009.5	1688.2	2027.6	2261.2	2728.2	3078.5	3055.5
107.5°	407.3	477.7	548.1	565.7	1014.6	1613.2	1912.4	2238.1	2889.6	3378.1	3383.7
110°	459.2	522.8	586.4	602.2	1006.9	1546.5	1816.4	2180.5	2908.8	3455.0	3478.9



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
112.5°	510.0	570.6	631.2	646.4	1007.2	1488.3	1728.9	2101.6	2846.9	3405.9	3442.7
115°	586.9	642.8	698.7	712.7	1016.6	1421.7	1624.2	1983.2	2701.2	3239.8	3290.7
117.5°	662.7	713.6	764.4	777.1	1035.4	1379.9	1552.2	1876.2	2524.2	3010.2	3066.7
120°	706.9	754.8	802.6	814.5	1050.8	1365.8	1523.4	1819.4	2411.6	2855.6	2910.4
122.5°	750.1	798.4	846.6	858.7	1072.9	1358.5	1501.3	1767.8	2301.1	2700.9	2755.1
125°	816.4	860.4	904.4	915.4	1102.6	1352.4	1477.2	1703.7	2156.6	2496.3	2546.2
127.5°	870.3	914.6	959.0	970.1	1132.4	1348.9	1457.1	1651.5	2040.4	2332.1	2374.1
130°	899.1	946.9	994.7	1006.6	1154.2	1351.0	1449.4	1622.5	1968.7	2228.4	2267.3
132.5°	928.9	976.7	1024.5	1036.4	1171.9	1352.4	1442.7	1597.6	1907.5	2140.0	2174.8
135°	973.0	1016.6	1060.1	1071.0	1191.0	1351.1	1431.1	1560.9	1820.5	2015.2	2045.1
137.5°	1018.2	1061.3	1104.3	1115.1	1219.8	1359.4	1429.3	1539.0	1758.4	1922.9	1947.5
140°	1055.6	1095.3	1135.0	1144.9	1237.5	1360.8	1422.5	1517.3	1706.9	1849.0	1871.9
142.5°	1084.4	1121.1	1157.8	1167.0	1252.2	1365.7	1422.5	1505.7	1672.2	1797.1	1816.8
145°	1128.6	1160.6	1192.7	1200.7	1271.4	1365.7	1412.9	1480.9	1617.2	1719.3	1734.3
147.5°	1172.8	1204.0	1235.2	1242.9	1299.6	1375.1	1412.9	1466.5	1573.6	1654.0	1666.4
150°	1201.6	1229.8	1257.9	1265.0	1314.2	1380.0	1412.9	1458.1	1548.6	1616.5	1626.5
152.5°	1231.4	1252.7	1274.1	1279.4	1323.9	1383.2	1412.9	1451.5	1528.8	1586.7	1594.3
155°	1275.6	1291.4	1307.2	1311.1	1345.0	1390.2	1412.9	1443.6	1505.1	1551.2	1556.2
157.5°	1308.2	1323.6	1339.0	1342.8	1366.1	1397.3	1412.9	1436.8	1484.6	1520.5	1524.1
160°	1330.3	1342.3	1354.2	1357.2	1375.8	1400.5	1412.9	1433.4	1474.4	1505.1	1507.1
162.5°	1352.4	1361.4	1370.4	1372.6	1386.0	1403.9	1412.9	1430.2	1464.8	1490.7	1492.6
165°	1376.4	1384.5	1392.6	1394.6	1400.7	1408.8	1412.9	1425.3	1450.1	1468.6	1470.6
167.5°	1398.5	1402.3	1406.2	1407.2	1412.3	1419.1	1422.5	1430.6	1446.8	1459.0	1459.8
170°	1412.9	1416.7	1420.6	1421.6	1421.9	1422.3	1422.5	1430.6	1446.8	1459.0	1459.0
172.5°	1420.6	1421.4	1422.3	1422.5	1422.5	1422.5	1422.5	1428.9	1441.7	1451.3	1450.5
175°	1431.1	1431.1	1431.1	1431.1	1428.3	1424.4	1422.5	1426.6	1434.7	1440.7	1440.7
177.5°	1431.1	1431.1	1431.1	1431.1	1428.9	1425.9	1424.4	1427.7	1434.0	1438.8	1438.0
180°	1431.1	1431.1	1431.1	1431.1	1431.1	1431.1	1431.1	1431.1	1431.1	1431.1	1431.1



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**CANDELA DISTRIBUTION (continued):**

	80°	90°
0°	632.9	632.9
2.5°	675.6	671.5
5°	868.9	872.9
7.5°	1170.0	1168.0
10°	1454.9	1473.2
12.5°	1662.5	1666.6
15°	1788.6	1796.8
17.5°	1837.5	1839.5
20°	1839.5	1835.4
22.5°	1817.1	1813.0
25°	1790.7	1788.6
27.5°	1766.2	1768.3
30°	1756.1	1762.2
32.5°	1756.1	1766.2
35°	1760.1	1770.3
37.5°	1758.1	1770.3
40°	1750.0	1764.2
42.5°	1727.6	1737.7
45°	1693.0	1705.2
47.5°	1648.3	1656.3
50°	1591.3	1599.4
52.5°	1520.1	1522.1
55°	1434.6	1442.7
57.5°	1343.0	1345.0
60°	1241.2	1247.4
62.5°	1133.4	1133.4
65°	1019.5	1023.6
67.5°	901.4	911.6
70°	781.4	783.4
72.5°	663.4	663.4
75°	541.3	543.3
77.5°	425.3	425.3
80°	315.4	317.5
82.5°	217.8	221.8
85°	136.4	136.4
87.5°	63.1	57.0
90°	36.5	36.5
92.5°	146.2	117.2
95°	509.6	421.7
97.5°	1221.0	1053.7
100°	1759.2	1559.9
102.5°	2288.7	2118.0
105°	2963.7	2871.9
107.5°	3405.9	3428.0
110°	3574.5	3670.1





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**CANDELA DISTRIBUTION (continued):**

	80°	90°
112.5°	3589.5	3736.3
115°	3494.3	3697.9
117.5°	3292.5	3518.4
120°	3129.9	3349.3
122.5°	2971.5	3188.0
125°	2745.6	2944.9
127.5°	2542.4	2710.6
130°	2422.7	2578.0
132.5°	2313.9	2453.1
135°	2165.1	2285.1
137.5°	2045.7	2143.8
140°	1963.7	2055.5
142.5°	1895.8	1974.8
145°	1794.0	1853.8
147.5°	1715.9	1765.4
150°	1666.7	1706.9
152.5°	1624.6	1655.0
155°	1576.3	1596.4
157.5°	1538.1	1552.2
160°	1515.3	1523.4
162.5°	1500.3	1508.0
165°	1478.8	1486.9
167.5°	1463.3	1466.7
170°	1459.0	1459.0
172.5°	1447.6	1444.6
175°	1440.7	1440.7
177.5°	1434.5	1431.1
180°	1431.1	1431.1



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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	3.14	3.90	4.21	4.98	6.45	16.32	17.08	17.39	18.16	19.63
	3H	3.84	4.52	4.92	5.61	7.10	18.15	18.83	19.23	19.92	21.41
	4H	4.13	4.78	5.22	5.87	7.37	18.79	19.44	19.88	20.53	22.03
	6H	4.38	4.97	5.48	6.07	7.58	19.22	19.81	20.32	20.91	22.41
	8H	4.44	5.01	5.55	6.12	7.62	19.33	19.90	20.44	21.01	22.51
	12H	4.46	5.00	5.57	6.10	7.63	19.40	19.94	20.51	21.04	22.57
4H	2H	10.34	10.99	11.44	12.08	13.58	16.58	17.23	17.68	18.32	19.81
	3H	11.90	12.44	13.01	13.56	15.07	18.62	19.16	19.72	20.27	21.78
	4H	11.99	12.49	13.10	13.60	15.13	19.38	19.88	20.49	20.98	22.51
	6H	12.00	12.43	13.12	13.55	15.08	19.91	20.34	21.03	21.47	22.99
	8H	11.97	12.37	13.09	13.49	15.03	20.07	20.47	21.19	21.59	23.13
	12H	11.92	12.29	13.06	13.42	14.96	20.16	20.52	21.30	21.66	23.20
8H	4H	13.43	13.83	14.55	14.95	16.49	19.43	19.83	20.55	20.95	22.49
	6H	13.66	14.00	14.81	15.16	16.69	20.06	20.39	21.20	21.55	23.08
	8H	13.68	13.97	14.83	15.11	16.67	20.27	20.56	21.42	21.71	23.26
	12H	13.64	13.90	14.80	15.04	16.63	20.41	20.67	21.57	21.81	23.40
12H	4H	13.57	13.93	14.70	15.06	16.61	19.38	19.74	20.52	20.87	22.42
	6H	13.92	14.21	15.07	15.35	16.91	20.04	20.33	21.18	21.47	23.03
	8H	13.99	14.24	15.14	15.38	16.97	20.26	20.52	21.41	21.66	23.25