

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: P937481

Luminaire Tested: SQ4-FB-100U-050D-B2750-1D-UNV-STD-W-12-5000K

Issue Date: 12/17/2024

**Test Information**

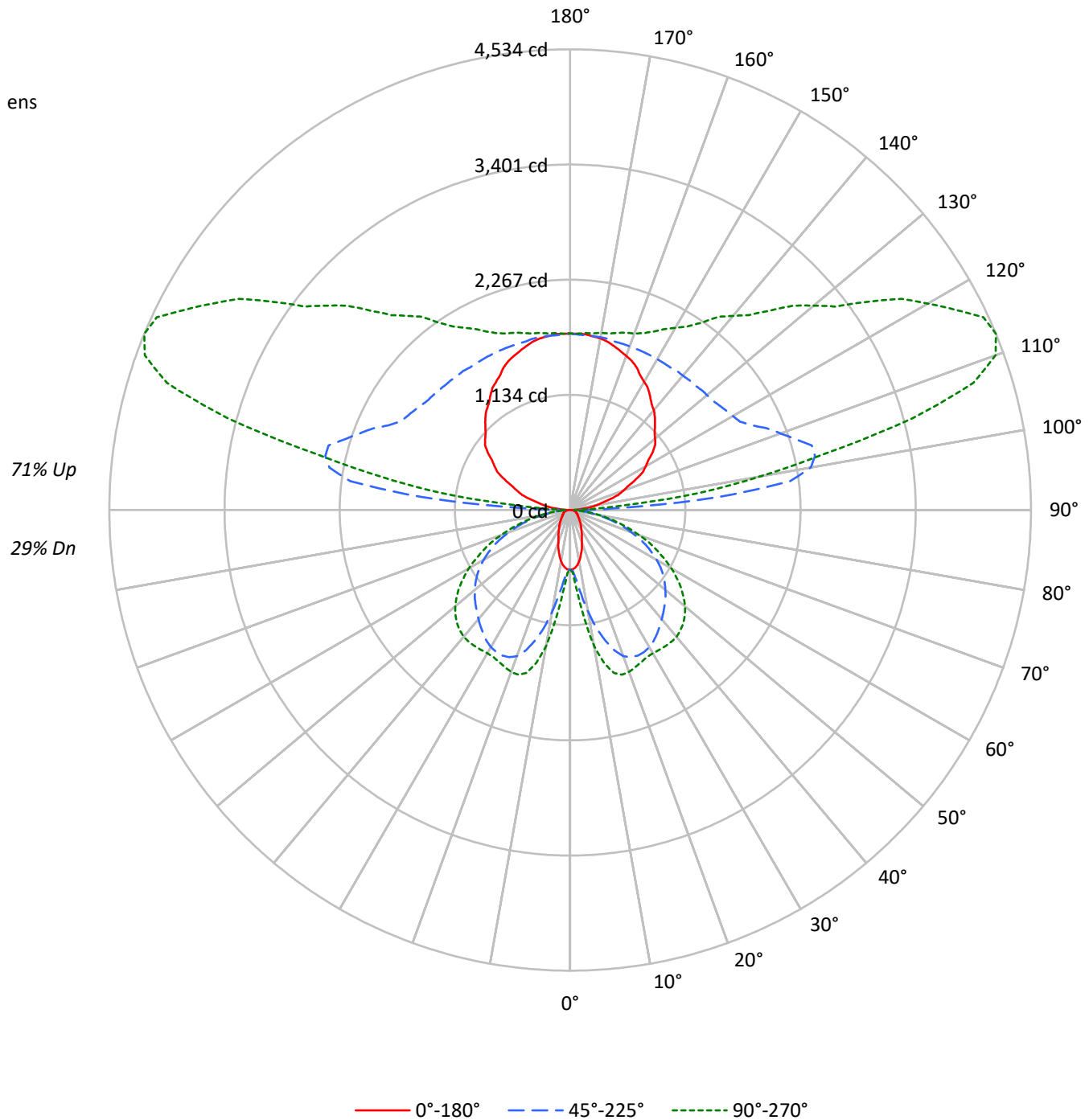
Test Method: LM-79-2019  
Report Number: P937481  
REPORT IS A COMBINATION OF REPORTS P933557 AND P933786  
Test Lab: INNOVATION CENTER  
Issue Date: 12/17/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ4-FB-100U-050D-B2750-1D-UNV-STD-W-12-5000K  
Description: CORELITE SQ4 SUSPENDED INDIRECT LED LUMINAIRE WITH Batwing Frosted Continuous Roll L  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 15785.6 lumens  
Efficiency: N/A  
Efficacy: 127.7 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): 123.6  
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

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### 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	102	102	102	102	91	91	91	91	71	71	71	53	53	53	37	37	37	29			29
1	93	88	84	81	83	79	76	73	62	60	58	46	45	44	32	31	30	23			23
2	84	77	71	66	75	69	64	59	54	50	47	40	38	36	28	26	25	19			19
3	76	67	60	54	68	60	54	49	47	43	39	35	32	30	24	22	21	16			16
4	70	59	51	45	62	53	46	41	42	37	33	31	28	25	21	19	18	13			13
5	64	52	44	38	57	47	40	35	37	32	28	28	24	21	19	17	15	11			11
6	58	47	39	33	52	42	35	30	33	28	24	25	21	18	17	15	13	10			10
7	54	42	34	28	48	38	31	26	30	25	21	22	19	16	15	13	11	8			8
8	50	38	30	25	44	34	27	23	27	22	18	20	17	14	14	12	10	7			7
9	46	34	27	22	41	31	24	20	24	20	16	18	15	12	13	11	9	7			7
10	43	31	24	19	38	28	22	18	22	18	14	17	14	11	12	10	8	6			6

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

	0°	45°	90°
0°	1808	1808	1808
5°	1767	2090	2430
10°	1603	3047	4029
15°	1363	3982	4864
20°	1110	4616	4958
25°	926	4831	4857
30°	782	4863	4848
35°	691	4784	4973
40°	603	4680	5103
45°	546	4605	5123
50°	502	4537	5038
55°	481	4437	4814
60°	493	4244	4462
65°	514	3950	3977
70°	548	3448	3360
75°	610	2813	2622
80°	672	1954	1767
85°	609	1038	904

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 5123 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	75.6	0.5
10°-20°	335.1	2.1
20°-30°	586.1	3.7
30°-40°	754.5	4.8
40°-50°	842.7	5.3
50°-60°	807.2	5.1
60°-70°	639.7	4.1
70°-80°	376.1	2.4
80°-90°	111.1	0.7
90°-100°	846.5	5.4
100°-110°	2225.5	14.1
110°-120°	2307.6	14.6
120°-130°	1851.0	11.7
130°-140°	1452.3	9.2
140°-150°	1114.7	7.1
150°-160°	802.8	5.1
160°-170°	491.2	3.1
170°-180°	165.9	1.1
0°-30°	996.8	6.3
0°-40°	1751.3	11.1
0°-60°	3401.2	21.5
0°-90°	4528.1	28.7
90°-120°	5379.5	34.1
90°-150°	9797.5	62.1
90°-180°	11257.0	71.3
0°-180°	15785.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	584	584	584	584	584	
5°	570	611	688	778	806	53
15°	427	788	1327	1609	1659	119
25°	272	893	1580	1650	1652	126
35°	184	853	1488	1573	1635	115
45°	126	680	1316	1507	1575	97
55°	90	432	1116	1297	1332	82
65°	72	229	829	932	945	71
75°	53	141	455	500	502	55
85°	19	43	113	124	126	20
90°	12	33	88	44	44	11
95°	112	438	1458	752	512	124
105°	401	607	2460	3735	3485	425
115°	712	865	1971	3931	4487	703
125°	991	1111	1792	3029	3573	880
135°	1181	1300	1737	2445	2773	913
145°	1369	1457	1714	2086	2249	858
155°	1548	1591	1714	1882	1937	711
165°	1670	1692	1714	1782	1804	471
175°	1737	1737	1726	1748	1748	165
180°	1737	1737	1737	1737	1737	



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**CANDELA DISTRIBUTION (FULL):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	584.5	584.5	584.5	584.5	584.5	584.5	584.5	584.5	584.5	584.5	584.5
2.5°	584.5	584.5	588.2	590.1	593.8	595.7	599.5	603.3	614.6	616.4	620.2
5°	569.5	576.9	601.4	610.7	637.1	672.8	687.8	712.3	763.0	778.0	787.5
7.5°	546.9	563.8	623.9	638.9	704.8	798.8	838.2	890.8	971.6	1011.1	1043.0
10°	511.2	546.9	654.0	689.8	796.8	939.7	1012.9	1086.2	1208.4	1263.0	1283.6
12.5°	471.7	530.0	685.9	734.8	888.9	1097.5	1185.9	1266.7	1405.8	1479.1	1490.3
15°	426.7	505.6	716.0	787.5	986.7	1229.1	1326.8	1426.4	1556.1	1608.7	1621.9
17.5°	387.1	486.7	744.2	819.4	1061.9	1347.5	1447.0	1529.8	1635.1	1670.7	1680.2
20°	338.3	456.7	763.0	860.8	1140.8	1434.0	1529.8	1593.7	1665.1	1687.6	1691.4
22.5°	302.6	424.7	774.3	875.8	1193.4	1486.6	1567.3	1618.2	1667.0	1674.5	1676.3
25°	272.5	389.0	772.4	892.7	1238.5	1518.5	1580.5	1618.2	1646.3	1650.1	1650.1
27.5°	244.3	349.6	764.9	896.5	1272.3	1526.1	1574.9	1601.2	1614.3	1621.9	1621.9
30°	219.9	312.0	746.1	888.9	1287.3	1518.5	1558.0	1571.2	1584.3	1595.6	1601.2
32.5°	201.1	276.3	717.9	873.9	1289.2	1499.7	1527.9	1535.4	1554.2	1580.5	1589.9
35°	184.2	240.6	685.9	853.2	1278.0	1469.6	1488.4	1496.0	1533.5	1573.0	1586.1
37.5°	167.3	214.3	644.6	817.5	1261.0	1434.0	1447.0	1460.2	1518.5	1565.5	1580.5
40°	150.4	191.7	595.7	778.0	1234.7	1390.7	1402.0	1422.7	1499.7	1554.2	1569.2
42.5°	137.2	172.9	543.1	736.7	1200.9	1341.9	1358.8	1388.9	1477.1	1535.4	1552.3
45°	125.9	154.1	486.7	680.3	1157.7	1291.1	1315.5	1356.9	1450.9	1507.2	1522.2
47.5°	114.6	140.9	428.5	622.0	1110.7	1240.4	1272.3	1319.3	1415.1	1469.6	1482.8
50°	105.3	127.8	370.2	560.0	1059.9	1185.9	1223.4	1272.3	1370.1	1420.8	1437.7
52.5°	97.7	116.6	315.7	498.0	1001.7	1129.5	1172.7	1223.4	1315.5	1364.4	1375.7
55°	90.2	107.1	268.7	432.3	941.6	1069.3	1116.3	1165.2	1255.4	1296.8	1304.2
57.5°	86.5	99.6	229.3	370.2	877.7	1001.7	1054.3	1099.4	1183.9	1216.0	1223.4
60°	80.8	94.0	199.2	317.7	808.1	937.8	982.9	1028.0	1099.4	1125.8	1131.4
62.5°	75.2	90.2	176.6	266.8	736.7	862.6	907.8	949.0	1009.2	1028.0	1035.5
65°	71.5	86.5	159.7	229.3	663.4	783.7	828.8	864.5	913.4	932.1	935.9
67.5°	67.6	82.7	146.5	197.4	590.1	704.8	738.6	772.4	810.0	828.8	830.7
70°	62.0	78.9	135.3	174.8	514.9	614.6	642.8	678.5	708.5	717.9	723.6
72.5°	58.3	73.3	127.8	157.8	437.9	528.1	554.4	575.1	601.4	610.7	610.7
75°	52.6	65.8	120.3	140.9	358.9	432.3	454.8	475.5	496.1	499.9	494.3
77.5°	47.0	58.3	103.4	118.4	280.0	342.0	360.8	372.1	389.0	392.7	394.6
80°	39.5	50.7	80.8	92.1	203.0	251.8	265.0	274.4	289.4	289.4	293.2
82.5°	30.1	39.5	58.3	65.8	137.2	172.9	184.2	189.8	199.2	199.2	199.2
85°	18.8	24.5	37.5	43.2	82.7	105.3	112.7	114.6	122.2	124.0	124.0
87.5°	9.4	13.2	24.5	26.3	43.2	54.5	54.5	58.3	58.3	56.4	54.5
90°	11.7	21.0	30.3	32.6	51.3	76.1	88.5	78.7	59.0	44.3	44.3
92.5°	46.6	125.8	205.1	224.9	316.3	438.0	498.8	437.2	313.9	221.5	212.7
95°	111.9	256.9	402.0	438.2	778.1	1231.4	1458.0	1301.1	987.1	751.7	725.0
97.5°	193.4	321.4	449.3	481.4	1048.1	1803.8	2181.7	2082.5	1884.2	1735.4	1684.7
100°	256.4	372.4	488.4	517.4	1146.4	1985.0	2404.4	2411.7	2426.2	2437.0	2376.6
102.5°	310.0	418.2	526.5	553.6	1191.5	2042.1	2467.3	2593.7	2846.5	3036.1	2984.2
105°	401.0	492.6	584.3	607.2	1224.9	2048.5	2460.3	2743.7	3310.4	3735.3	3707.5
107.5°	494.2	579.6	665.1	686.5	1231.1	1957.3	2320.4	2715.7	3506.1	4099.0	4105.7
110°	557.1	634.3	711.4	730.8	1221.8	1876.5	2203.9	2645.7	3529.4	4192.2	4221.2



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
112.5°	618.9	692.5	766.0	784.4	1222.2	1806.0	2097.9	2550.1	3454.5	4132.8	4177.3
115°	712.1	780.0	847.8	864.8	1233.4	1725.0	1970.8	2406.5	3277.7	3931.1	3992.8
117.5°	804.2	865.8	927.5	942.9	1256.4	1674.4	1883.4	2276.5	3062.9	3652.6	3721.1
120°	857.8	915.8	973.9	988.4	1275.1	1657.4	1848.5	2207.7	2926.1	3465.0	3531.5
122.5°	910.3	968.8	1027.3	1042.0	1301.9	1648.4	1821.7	2145.1	2792.1	3277.3	3343.0
125°	990.7	1044.0	1097.4	1110.7	1338.0	1641.0	1792.5	2067.3	2616.9	3029.1	3089.5
127.5°	1055.9	1109.8	1163.7	1177.1	1374.1	1636.7	1768.1	2004.0	2475.8	2829.7	2880.7
130°	1090.9	1148.9	1206.9	1221.4	1400.5	1639.4	1758.7	1968.8	2388.9	2703.9	2751.1
132.5°	1127.1	1185.1	1243.1	1257.5	1421.8	1640.9	1750.5	1938.5	2314.6	2596.7	2638.9
135°	1180.7	1233.4	1286.3	1299.5	1445.2	1639.5	1736.6	1894.1	2208.9	2445.1	2481.5
137.5°	1235.4	1287.7	1340.0	1353.1	1480.1	1649.5	1734.3	1867.3	2133.6	2333.3	2363.1
140°	1280.9	1329.1	1377.2	1389.2	1501.5	1651.2	1726.0	1841.0	2071.1	2243.6	2271.4
142.5°	1315.8	1360.4	1404.9	1416.0	1519.3	1657.1	1726.0	1827.1	2029.1	2180.6	2204.5
145°	1369.4	1408.3	1447.1	1456.9	1542.7	1657.2	1714.5	1797.0	1962.2	2086.2	2104.3
147.5°	1423.0	1460.9	1498.7	1508.1	1576.9	1668.6	1714.5	1779.5	1909.5	2007.0	2022.0
150°	1458.0	1492.2	1526.3	1534.9	1594.8	1674.6	1714.5	1769.4	1879.1	1961.5	1973.6
152.5°	1494.1	1520.0	1546.0	1552.4	1606.4	1678.4	1714.5	1761.3	1855.0	1925.3	1934.5
155°	1547.7	1566.9	1586.1	1590.9	1632.1	1687.0	1714.5	1751.7	1826.3	1882.2	1888.3
157.5°	1587.3	1606.0	1624.7	1629.4	1657.8	1695.6	1714.5	1743.4	1801.4	1844.9	1849.2
160°	1614.1	1628.7	1643.2	1646.8	1669.3	1699.4	1714.5	1739.3	1789.0	1826.3	1828.7
162.5°	1640.9	1651.8	1662.7	1665.4	1681.8	1703.5	1714.5	1735.4	1777.3	1808.8	1811.1
165°	1670.1	1679.9	1689.8	1692.2	1699.6	1709.5	1714.5	1729.5	1759.5	1782.0	1784.4
167.5°	1696.9	1701.6	1706.2	1707.4	1713.6	1721.9	1726.0	1735.9	1755.6	1770.4	1771.4
170°	1714.5	1719.1	1723.8	1724.9	1725.3	1725.8	1726.0	1735.9	1755.6	1770.4	1770.4
172.5°	1723.7	1724.7	1725.8	1726.0	1726.0	1726.0	1726.0	1733.8	1749.4	1761.1	1760.1
175°	1736.6	1736.6	1736.6	1736.6	1733.0	1728.4	1726.0	1731.0	1740.8	1748.2	1748.2
177.5°	1736.6	1736.6	1736.6	1736.6	1733.9	1730.2	1728.4	1732.3	1740.0	1745.8	1744.8
180°	1736.6	1736.6	1736.6	1736.6	1736.6	1736.6	1736.6	1736.6	1736.6	1736.6	1736.6



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**CANDELA DISTRIBUTION (continued):**

	80°	90°
0°	584.5	584.5
2.5°	623.9	620.2
5°	802.5	806.2
7.5°	1080.6	1078.8
10°	1343.7	1360.7
12.5°	1535.4	1539.1
15°	1652.0	1659.4
17.5°	1697.1	1698.9
20°	1698.9	1695.2
22.5°	1678.2	1674.5
25°	1653.8	1652.0
27.5°	1631.2	1633.2
30°	1621.9	1627.5
32.5°	1621.9	1631.2
35°	1625.6	1635.1
37.5°	1623.8	1635.1
40°	1616.2	1629.4
42.5°	1595.6	1605.0
45°	1563.6	1574.9
47.5°	1522.2	1529.8
50°	1469.6	1477.1
52.5°	1403.9	1405.8
55°	1325.0	1332.4
57.5°	1240.4	1242.2
60°	1146.4	1152.0
62.5°	1046.8	1046.8
65°	941.6	945.3
67.5°	832.6	841.9
70°	721.7	723.6
72.5°	612.7	612.7
75°	499.9	501.7
77.5°	392.7	392.7
80°	291.3	293.2
82.5°	201.1	204.8
85°	125.9	125.9
87.5°	58.3	52.6
90°	44.3	44.3
92.5°	177.4	142.2
95°	618.3	511.6
97.5°	1481.6	1278.6
100°	2134.7	1892.8
102.5°	2777.1	2569.9
105°	3596.1	3484.8
107.5°	4132.7	4159.6
110°	4337.2	4453.3





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**CANDELA DISTRIBUTION (continued):**

	80°	90°
112.5°	4355.5	4533.7
115°	4240.0	4487.0
117.5°	3995.1	4269.1
120°	3797.7	4064.0
122.5°	3605.5	3868.2
125°	3331.4	3573.3
127.5°	3084.9	3289.0
130°	2939.6	3128.2
132.5°	2807.8	2976.7
135°	2627.1	2772.7
137.5°	2482.2	2601.4
140°	2382.8	2494.2
142.5°	2300.3	2396.2
145°	2176.9	2249.4
147.5°	2082.1	2142.1
150°	2022.4	2071.1
152.5°	1971.3	2008.1
155°	1912.6	1937.0
157.5°	1866.3	1883.4
160°	1838.6	1848.5
162.5°	1820.5	1829.8
165°	1794.3	1804.1
167.5°	1775.5	1779.6
170°	1770.4	1770.4
172.5°	1756.5	1752.8
175°	1748.2	1748.2
177.5°	1740.7	1736.6
180°	1736.6	1736.6



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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	0.70	1.41	1.81	2.52	4.07	13.89	14.60	15.00	15.72	17.26
	3H	1.39	2.03	2.51	3.15	4.71	15.72	16.36	16.84	17.48	19.04
	4H	1.68	2.29	2.81	3.41	4.98	16.36	16.97	17.50	18.10	19.66
	6H	1.92	2.49	3.06	3.61	5.19	16.79	17.35	17.93	18.48	20.05
	8H	1.99	2.52	3.13	3.66	5.23	16.91	17.44	18.05	18.58	20.15
	12H	2.00	2.51	3.15	3.64	5.24	16.97	17.48	18.12	18.62	20.21
4H	2H	7.90	8.51	9.04	9.63	11.20	14.14	14.75	15.28	15.88	17.44
	3H	9.45	9.96	10.60	11.11	12.69	16.18	16.69	17.33	17.84	19.42
	4H	9.54	10.01	10.69	11.15	12.75	16.94	17.41	18.09	18.55	20.15
	6H	9.54	9.95	10.70	11.11	12.69	17.48	17.88	18.63	19.04	20.63
	8H	9.52	9.89	10.67	11.04	12.65	17.64	18.02	18.79	19.17	20.77
	12H	9.47	9.81	10.64	10.97	12.58	17.73	18.07	18.90	19.23	20.84
8H	4H	10.98	11.35	12.13	12.51	14.11	16.99	17.37	18.15	18.52	20.12
	6H	11.21	11.52	12.39	12.72	14.32	17.62	17.93	18.79	19.12	20.72
	8H	11.23	11.50	12.41	12.67	14.29	17.84	18.11	19.02	19.28	20.90
	12H	11.19	11.43	12.37	12.60	14.25	17.98	18.22	19.16	19.39	21.04
12H	4H	11.11	11.46	12.29	12.62	14.23	16.94	17.28	18.11	18.44	20.05
	6H	11.47	11.74	12.65	12.91	14.54	17.60	17.87	18.78	19.04	20.66
	8H	11.53	11.77	12.72	12.94	14.60	17.82	18.06	19.01	19.23	20.89