

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: P938012

Luminaire Tested: SQ4-FB-125U-100D-830-1D-UNV-STD-W-8

Issue Date: 12/17/2024

**Test Information**

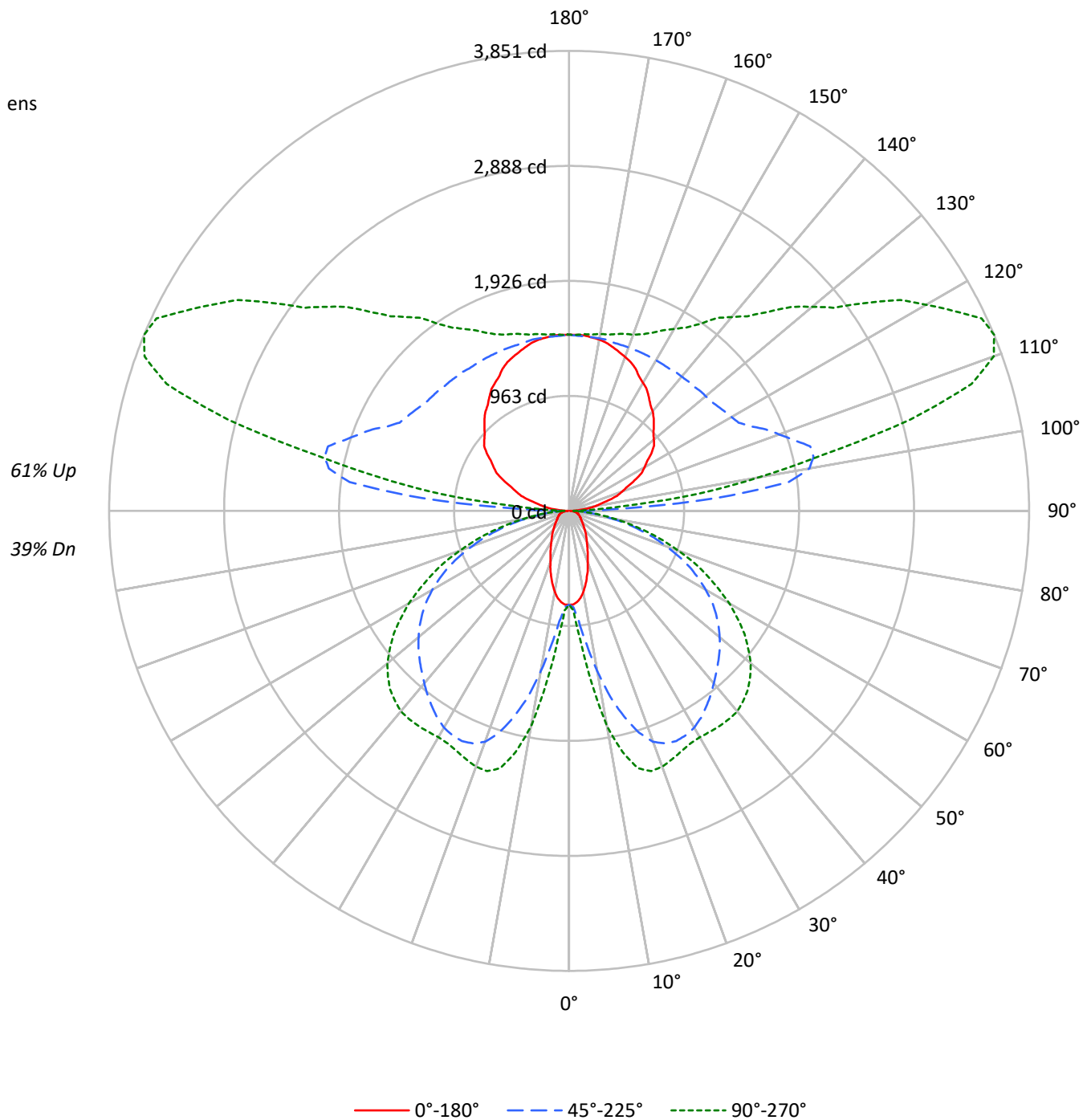
Test Method: LM-79-2019  
Report Number: P938012  
REPORT IS A COMBINATION OF REPORTS P933615 AND P933786  
Test Lab: INNOVATION CENTER  
Issue Date: 12/17/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ4-FB-125U-100D-830-1D-UNV-STD-W-8  
Description: CORELITE SQ4 SUSPENDED INDIRECT LED LUMINAIRE WITH Batwing Frosted Continuous Roll L  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 15645.9 lumens  
Efficiency: N/A  
Efficacy: 121.5 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): 128.8  
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	104	104	104	104	95	95	95	95	77	77	77	61	61	61	46	46	46	39				39
1	95	90	86	83	86	82	79	76	67	65	62	53	51	50	40	39	38	32				32
2	86	78	72	67	78	71	66	61	58	54	51	46	43	41	35	33	31	26				26
3	78	68	61	55	71	62	56	51	51	46	42	40	37	34	30	28	26	21				21
4	71	60	52	46	64	55	48	42	45	40	35	35	32	29	27	24	22	18				18
5	65	53	45	39	59	49	41	36	40	34	30	31	27	24	24	21	19	15				15
6	60	47	39	33	54	43	36	31	35	30	26	28	24	21	21	18	16	13				13
7	55	43	35	29	50	39	32	27	32	26	23	25	21	18	19	16	14	11				11
8	51	38	31	25	46	35	28	23	29	24	20	23	19	16	18	15	13	10				10
9	47	35	27	22	43	32	25	21	26	21	17	21	17	14	16	13	11	9				9
10	44	32	25	20	40	29	23	18	24	19	16	19	15	13	15	12	10	8				8

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

	0°	45°	90°
0°	3645	3645	3645
5°	3561	4213	4900
10°	3230	6142	8123
15°	2745	8024	9809
20°	2235	9299	9997
25°	1864	9730	9794
30°	1572	9792	9775
35°	1390	9629	10028
40°	1211	9418	10289
45°	1097	9263	10330
50°	1006	9124	10158
55°	963	8920	9709
60°	986	8528	8997
65°	1026	7933	8020
70°	1094	6918	6775
75°	1211	5641	5288
80°	1325	3912	3564
85°	1174	2076	1824

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 10330 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	101.6	0.6
10°-20°	450.4	2.9
20°-30°	787.9	5.0
30°-40°	1014.3	6.5
40°-50°	1132.9	7.2
50°-60°	1085.1	6.9
60°-70°	859.9	5.5
70°-80°	505.7	3.2
80°-90°	146.1	0.9
90°-100°	719.0	4.6
100°-110°	1890.3	12.1
110°-120°	1960.0	12.5
120°-130°	1572.2	10.0
130°-140°	1233.6	7.9
140°-150°	946.8	6.1
150°-160°	681.9	4.4
160°-170°	417.2	2.7
170°-180°	141.0	0.9
0°-30°	1340.0	8.6
0°-40°	2354.3	15.0
0°-60°	4572.2	29.2
0°-90°	6083.9	38.9
90°-120°	4569.3	29.2
90°-150°	8322.0	53.2
90°-180°	9562.0	61.1
0°-180°	15645.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	786	786	786	786	786	
5°	766	821	925	1046	1084	71
15°	574	1059	1784	2163	2231	160
25°	366	1200	2125	2218	2221	169
35°	248	1147	2001	2115	2198	155
45°	169	914	1768	2026	2117	131
55°	121	581	1501	1743	1791	110
65°	96	308	1114	1253	1271	95
75°	71	190	611	672	675	74
85°	25	58	152	167	169	27
90°	10	28	75	38	38	10
95°	95	372	1238	638	435	106
105°	340	516	2090	3173	2960	361
115°	605	734	1674	3339	3811	597
125°	842	943	1522	2573	3035	747
135°	1003	1104	1475	2077	2355	776
145°	1163	1237	1456	1772	1911	729
155°	1315	1351	1456	1599	1645	604
165°	1419	1437	1456	1514	1532	400
175°	1475	1475	1466	1485	1485	140
180°	1475	1475	1475	1475	1475	



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**CANDELA DISTRIBUTION (FULL):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	785.7	785.7	785.7	785.7	785.7	785.7	785.7	785.7	785.7	785.7	785.7
2.5°	785.7	785.7	790.8	793.3	798.4	800.8	805.9	811.0	826.2	828.7	833.7
5°	765.5	775.6	808.5	821.1	856.5	904.5	924.6	957.5	1025.7	1046.0	1058.6
7.5°	735.2	757.9	838.8	859.0	947.4	1073.7	1126.7	1197.5	1306.2	1359.2	1402.2
10°	687.2	735.2	879.2	927.2	1071.2	1263.2	1361.7	1460.3	1624.4	1697.8	1725.5
12.5°	634.1	712.4	922.2	987.8	1195.0	1475.4	1594.1	1702.8	1889.7	1988.3	2003.4
15°	573.5	679.6	962.6	1058.6	1326.4	1652.3	1783.6	1917.5	2091.8	2162.6	2180.3
17.5°	520.4	654.4	1000.5	1101.5	1427.4	1811.4	1945.4	2056.5	2197.9	2245.9	2258.6
20°	454.8	613.9	1025.7	1157.0	1533.5	1927.7	2056.5	2142.4	2238.4	2268.7	2273.8
22.5°	406.8	570.9	1040.9	1177.3	1604.3	1998.4	2107.0	2175.2	2241.0	2251.0	2253.6
25°	366.3	522.9	1038.3	1200.1	1664.9	2041.3	2124.7	2175.2	2213.1	2218.2	2218.2
27.5°	328.4	469.9	1028.3	1205.1	1710.4	2051.5	2117.2	2152.5	2170.2	2180.3	2180.3
30°	295.6	419.4	1002.9	1195.0	1730.6	2041.3	2094.4	2112.1	2129.8	2144.9	2152.5
32.5°	270.4	371.4	965.1	1174.7	1733.1	2016.1	2054.0	2064.1	2089.3	2124.7	2137.3
35°	247.6	323.4	922.2	1147.0	1717.9	1975.7	2000.9	2011.0	2061.5	2114.6	2132.3
37.5°	224.9	288.0	866.5	1099.0	1695.2	1927.7	1945.4	1963.1	2041.3	2104.4	2124.7
40°	202.1	257.7	800.8	1046.0	1659.8	1869.6	1884.7	1912.5	2016.1	2089.3	2109.5
42.5°	184.4	232.4	730.1	990.3	1614.4	1803.9	1826.6	1867.0	1985.7	2064.1	2086.9
45°	169.3	207.2	654.4	914.5	1556.3	1735.6	1768.5	1824.0	1950.3	2026.1	2046.4
47.5°	154.1	189.5	576.0	836.2	1493.1	1667.5	1710.4	1773.6	1902.3	1975.7	1993.4
50°	141.5	171.8	497.7	752.8	1424.9	1594.1	1644.7	1710.4	1841.7	1910.0	1932.6
52.5°	131.4	156.6	424.5	669.5	1346.5	1518.3	1576.4	1644.7	1768.5	1834.2	1849.3
55°	121.2	144.0	361.3	581.1	1265.7	1437.5	1500.6	1566.4	1687.6	1743.2	1753.3
57.5°	116.2	133.9	308.2	497.7	1179.8	1346.5	1417.3	1478.0	1591.6	1634.6	1644.7
60°	108.6	126.3	267.8	426.9	1086.4	1260.7	1321.3	1381.9	1478.0	1513.3	1520.9
62.5°	101.0	121.2	237.5	358.8	990.3	1159.6	1220.2	1275.9	1356.7	1381.9	1392.0
65°	96.0	116.2	214.7	308.2	891.9	1053.5	1114.1	1162.1	1227.8	1253.1	1258.2
67.5°	90.9	111.2	197.0	265.3	793.3	947.4	992.9	1038.3	1088.9	1114.1	1116.7
70°	83.4	106.1	181.9	235.0	692.2	826.2	864.0	912.0	952.5	965.1	972.6
72.5°	78.3	98.6	171.8	212.2	588.6	709.9	745.3	773.1	808.5	821.1	821.1
75°	70.7	88.4	161.7	189.5	482.6	581.1	611.4	639.2	667.0	672.1	664.4
77.5°	63.2	78.3	138.9	159.2	376.5	459.8	485.1	500.2	522.9	528.0	530.6
80°	53.1	68.3	108.6	123.8	272.8	338.5	356.2	368.8	389.1	389.1	394.2
82.5°	40.4	53.1	78.3	88.4	184.4	232.4	247.6	255.2	267.8	267.8	267.8
85°	25.2	32.9	50.6	58.1	111.2	141.5	151.6	154.1	164.2	166.7	166.7
87.5°	12.6	17.7	32.9	35.4	58.1	73.2	73.2	78.3	78.3	75.8	73.2
90°	9.9	17.9	25.7	27.7	43.6	64.7	75.2	66.8	50.1	37.6	37.6
92.5°	39.6	106.9	174.3	191.1	268.6	372.0	423.7	371.3	266.6	188.0	180.6
95°	95.0	218.3	341.5	372.3	661.0	1046.0	1238.4	1105.1	838.5	638.5	615.9
97.5°	164.3	273.0	381.7	408.9	890.3	1532.3	1853.2	1769.0	1600.4	1474.1	1430.9
100°	217.8	316.3	414.9	439.6	973.8	1686.1	2042.3	2048.4	2060.8	2070.0	2018.7
102.5°	263.3	355.2	447.2	470.3	1012.1	1734.6	2095.7	2203.1	2417.8	2578.8	2534.8
105°	340.5	418.4	496.3	515.8	1040.4	1740.0	2089.8	2330.4	2811.8	3172.8	3149.2
107.5°	419.8	492.3	564.9	583.1	1045.7	1662.6	1971.0	2306.7	2978.1	3481.7	3487.4
110°	473.2	538.8	604.4	620.7	1037.8	1593.9	1872.0	2247.4	2997.9	3560.8	3585.5



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
112.5°	525.7	588.1	650.7	666.2	1038.1	1534.0	1781.9	2166.0	2934.2	3510.3	3548.2
115°	604.9	662.5	720.1	734.5	1047.7	1465.3	1674.1	2044.0	2784.1	3339.1	3391.6
117.5°	683.1	735.5	787.7	800.8	1067.2	1422.2	1599.8	1933.7	2601.6	3102.5	3160.7
120°	728.6	777.9	827.1	839.5	1083.0	1407.7	1570.0	1875.2	2485.4	2943.1	2999.6
122.5°	773.1	822.8	872.5	885.0	1105.7	1400.1	1547.3	1822.0	2371.6	2783.8	2839.5
125°	841.5	886.8	932.1	943.4	1136.4	1393.8	1522.5	1756.0	2222.8	2572.9	2624.2
127.5°	896.9	942.7	988.4	999.9	1167.2	1390.2	1501.8	1702.2	2103.0	2403.6	2446.9
130°	926.6	975.9	1025.1	1037.5	1189.6	1392.4	1493.8	1672.2	2029.1	2296.7	2336.8
132.5°	957.2	1006.6	1055.8	1068.1	1207.7	1393.8	1486.9	1646.6	1966.0	2205.6	2241.4
135°	1002.8	1047.7	1092.6	1103.8	1227.5	1392.5	1475.0	1608.8	1876.2	2076.9	2107.8
137.5°	1049.3	1093.8	1138.2	1149.3	1257.2	1401.1	1473.0	1586.1	1812.3	1981.9	2007.2
140°	1087.9	1128.8	1169.8	1180.0	1275.4	1402.5	1466.1	1563.8	1759.1	1905.7	1929.3
142.5°	1117.7	1155.5	1193.3	1202.7	1290.5	1407.6	1466.1	1551.9	1723.5	1852.2	1872.5
145°	1163.2	1196.1	1229.2	1237.4	1310.4	1407.6	1456.2	1526.3	1666.8	1772.0	1787.4
147.5°	1208.8	1240.9	1273.0	1281.0	1339.5	1417.3	1456.2	1511.4	1621.9	1704.7	1717.5
150°	1238.4	1267.5	1296.5	1303.8	1354.6	1422.3	1456.2	1502.8	1596.1	1666.1	1676.4
152.5°	1269.1	1291.1	1313.1	1318.6	1364.5	1425.6	1456.2	1496.0	1575.7	1635.4	1643.3
155°	1314.7	1330.9	1347.2	1351.3	1386.3	1432.9	1456.2	1487.9	1551.3	1598.8	1604.0
157.5°	1348.3	1364.1	1380.0	1383.9	1408.0	1440.1	1456.2	1480.8	1530.1	1567.1	1570.7
160°	1371.1	1383.4	1395.8	1398.8	1417.9	1443.5	1456.2	1477.3	1519.6	1551.2	1553.3
162.5°	1393.8	1403.0	1412.3	1414.6	1428.5	1446.9	1456.2	1474.0	1509.6	1536.4	1538.4
165°	1418.6	1427.0	1435.3	1437.4	1443.7	1452.0	1456.2	1469.0	1494.5	1513.6	1515.7
167.5°	1441.4	1445.3	1449.3	1450.3	1455.5	1462.6	1466.1	1474.4	1491.2	1503.7	1504.6
170°	1456.2	1460.2	1464.2	1465.2	1465.5	1465.9	1466.1	1474.4	1491.2	1503.7	1503.7
172.5°	1464.1	1465.0	1465.9	1466.1	1466.1	1466.1	1466.1	1472.7	1485.9	1495.9	1495.1
175°	1475.0	1475.0	1475.0	1475.0	1472.0	1468.1	1466.1	1470.3	1478.6	1485.0	1485.0
177.5°	1475.0	1475.0	1475.0	1475.0	1472.7	1469.7	1468.1	1471.4	1478.0	1482.9	1482.1
180°	1475.0	1475.0	1475.0	1475.0	1475.0	1475.0	1475.0	1475.0	1475.0	1475.0	1475.0



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**CANDELA DISTRIBUTION (continued):**

	80°	90°
0°	785.7	785.7
2.5°	838.8	833.7
5°	1078.8	1083.8
7.5°	1452.6	1450.2
10°	1806.4	1829.1
12.5°	2064.1	2069.2
15°	2220.7	2230.8
17.5°	2281.3	2283.9
20°	2283.9	2278.8
22.5°	2256.1	2251.0
25°	2223.3	2220.7
27.5°	2192.9	2195.5
30°	2180.3	2187.9
32.5°	2180.3	2192.9
35°	2185.3	2197.9
37.5°	2182.8	2197.9
40°	2172.7	2190.4
42.5°	2144.9	2157.5
45°	2102.0	2117.2
47.5°	2046.4	2056.5
50°	1975.7	1985.7
52.5°	1887.2	1889.7
55°	1781.1	1791.3
57.5°	1667.5	1669.9
60°	1541.1	1548.7
62.5°	1407.2	1407.2
65°	1265.7	1270.8
67.5°	1119.2	1131.8
70°	970.1	972.6
72.5°	823.6	823.6
75°	672.1	674.6
77.5°	528.0	528.0
80°	391.6	394.2
82.5°	270.4	275.4
85°	169.3	169.3
87.5°	78.3	70.7
90°	37.6	37.6
92.5°	150.7	120.7
95°	525.2	434.6
97.5°	1258.5	1086.0
100°	1813.1	1607.7
102.5°	2358.8	2182.8
105°	3054.5	2960.0
107.5°	3510.2	3533.1
110°	3684.0	3782.6





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**CANDELA DISTRIBUTION (continued):**

	80°	90°
112.5°	3699.5	3850.9
115°	3601.4	3811.3
117.5°	3393.4	3626.2
120°	3225.8	3451.9
122.5°	3062.6	3285.7
125°	2829.8	3035.2
127.5°	2620.3	2793.6
130°	2496.9	2657.0
132.5°	2384.9	2528.3
135°	2231.5	2355.1
137.5°	2108.4	2209.6
140°	2023.9	2118.5
142.5°	1953.9	2035.3
145°	1849.0	1910.6
147.5°	1768.5	1819.6
150°	1717.8	1759.1
152.5°	1674.4	1705.7
155°	1624.6	1645.3
157.5°	1585.2	1599.8
160°	1561.6	1570.0
162.5°	1546.3	1554.3
165°	1524.1	1532.5
167.5°	1508.1	1511.6
170°	1503.7	1503.7
172.5°	1491.9	1488.9
175°	1485.0	1485.0
177.5°	1478.5	1475.0
180°	1475.0	1475.0



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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	4.39	5.19	5.43	6.24	7.66	17.57	18.36	18.61	19.42	20.83
	3H	5.09	5.81	6.14	6.86	8.30	19.40	20.12	20.45	21.18	22.61
	4H	5.38	6.06	6.45	7.13	8.57	20.04	20.72	21.11	21.79	23.23
	6H	5.63	6.26	6.70	7.32	8.78	20.47	21.10	21.54	22.16	23.62
	8H	5.70	6.29	6.77	7.38	8.83	20.59	21.19	21.67	22.27	23.72
	12H	5.71	6.28	6.79	7.36	8.83	20.66	21.22	21.74	22.30	23.77
4H	2H	11.60	12.28	12.66	13.34	14.78	17.83	18.51	18.90	19.57	21.02
	3H	13.16	13.73	14.23	14.81	16.27	19.87	20.44	20.95	21.53	22.99
	4H	13.25	13.77	14.33	14.85	16.33	20.64	21.16	21.72	22.24	23.72
	6H	13.26	13.71	14.35	14.81	16.28	21.17	21.62	22.26	22.72	24.20
	8H	13.23	13.65	14.32	14.75	16.23	21.33	21.75	22.42	22.85	24.34
	12H	13.18	13.57	14.29	14.67	16.17	21.42	21.80	22.53	22.91	24.41
8H	4H	14.69	15.11	15.78	16.20	17.69	20.69	21.11	21.78	22.21	23.70
	6H	14.93	15.28	16.04	16.41	17.90	21.32	21.67	22.43	22.80	24.29
	8H	14.94	15.25	16.07	16.37	17.87	21.54	21.84	22.66	22.96	24.47
	12H	14.91	15.18	16.04	16.29	17.84	21.68	21.95	22.80	23.06	24.60
12H	4H	14.83	15.21	15.94	16.32	17.81	20.64	21.02	21.75	22.13	23.62
	6H	15.19	15.49	16.31	16.61	18.11	21.30	21.61	22.42	22.72	24.23
	8H	15.25	15.52	16.38	16.63	18.18	21.53	21.80	22.65	22.91	24.45