

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: P938415

Luminaire Tested: SQ4-FB-150U-100D-835-1D-UNV-STD-W-6

Issue Date: 12/17/2024

**Test Information**

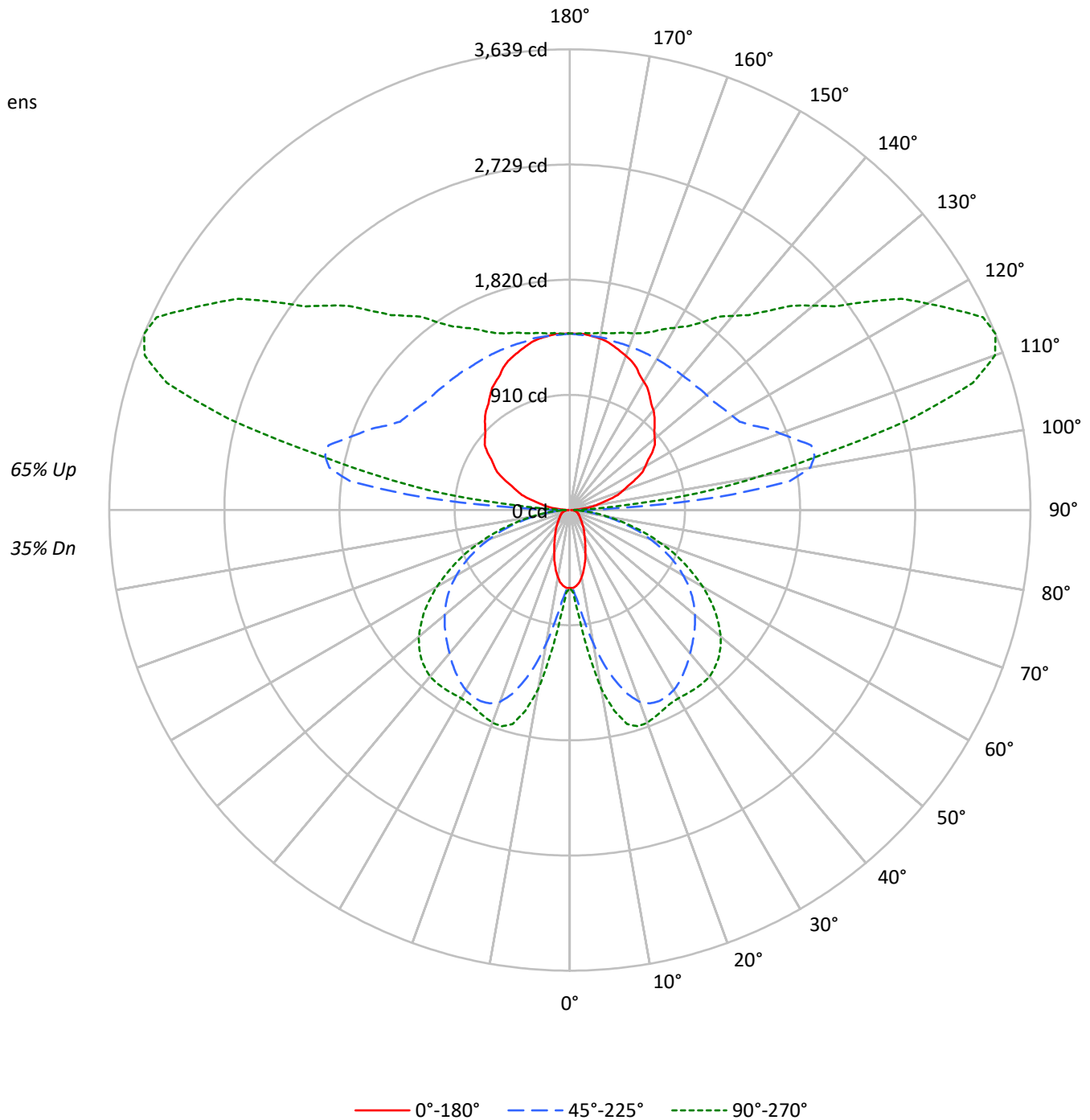
Test Method: LM-79-2019  
Report Number: P938415  
REPORT IS A COMBINATION OF REPORTS P933639 AND P933786  
Test Lab: INNOVATION CENTER  
Issue Date: 12/17/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ4-FB-150U-100D-835-1D-UNV-STD-W-6  
Description: CORELITE SQ4 SUSPENDED INDIRECT LED LUMINAIRE WITH Batwing Frosted Continuous Roll L  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 13810.0 lumens  
Efficiency: N/A  
Efficacy: 127.2 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°	3813	3813	3813
5°	3724	4405	5125
10°	3376	6421	8496
15°	2869	8387	10259
20°	2334	9716	10456
25°	1947	10165	10243
30°	1641	10226	10224
35°	1450	10054	10489
40°	1262	9830	10761
45°	1143	9666	10803
50°	1047	9518	10625
55°	1002	9301	10154
60°	1025	8889	9410
65°	1064	8264	8388
70°	1131	7202	7087
75°	1249	5867	5530
80°	1354	4063	3727
85°	1180	2152	1908

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 10803 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	79.7	0.6
10°-20°	353.4	2.6
20°-30°	618.1	4.5
30°-40°	795.6	5.8
40°-50°	888.7	6.4
50°-60°	851.2	6.2
60°-70°	674.5	4.9
70°-80°	396.7	2.9
80°-90°	115.5	0.8
90°-100°	679.5	4.9
100°-110°	1786.4	12.9
110°-120°	1852.3	13.4
120°-130°	1485.8	10.8
130°-140°	1165.8	8.4
140°-150°	894.8	6.5
150°-160°	644.4	4.7
160°-170°	394.3	2.9
170°-180°	133.2	1.0
0°-30°	1051.1	7.6
0°-40°	1846.8	13.4
0°-60°	3586.6	26.0
0°-90°	4773.3	34.6
90°-120°	4318.3	31.3
90°-150°	7864.8	56.9
90°-180°	9037.0	65.4
0°-180°	13810.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	616	616	616	616	616	
5°	600	644	725	820	850	55
15°	450	830	1399	1696	1750	125
25°	287	941	1667	1740	1742	132
35°	194	900	1570	1659	1724	121
45°	133	717	1387	1589	1661	103
55°	95	456	1177	1367	1405	87
65°	75	242	874	983	997	75
75°	56	149	480	527	529	58
85°	20	46	119	131	133	21
90°	9	26	71	36	36	9
95°	90	352	1170	603	411	100
105°	322	487	1975	2998	2797	341
115°	572	694	1582	3156	3602	565
125°	795	892	1439	2432	2868	706
135°	948	1043	1394	1963	2226	733
145°	1099	1170	1376	1675	1806	689
155°	1242	1277	1376	1511	1555	571
165°	1341	1358	1376	1430	1448	378
175°	1394	1394	1386	1403	1403	132
180°	1394	1394	1394	1394	1394	



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**CANDELA DISTRIBUTION (FULL):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	616.3	616.3	616.3	616.3	616.3	616.3	616.3	616.3	616.3	616.3	616.3
2.5°	616.3	616.3	620.3	622.3	626.2	628.2	632.2	636.2	648.0	650.0	654.0
5°	600.5	608.4	634.2	644.1	671.8	709.5	725.3	751.1	804.6	820.5	830.4
7.5°	576.7	594.5	658.0	673.8	743.2	842.3	883.9	939.4	1024.6	1066.2	1099.9
10°	539.0	576.7	689.7	727.3	840.3	990.9	1068.2	1145.5	1274.3	1331.8	1353.6
12.5°	497.4	558.9	723.4	774.9	937.4	1157.4	1250.5	1335.7	1482.4	1559.7	1571.6
15°	449.9	533.1	755.1	830.4	1040.4	1296.1	1399.2	1504.2	1640.9	1696.4	1710.3
17.5°	408.3	513.3	784.8	864.1	1119.7	1421.0	1526.0	1613.2	1724.2	1761.8	1771.7
20°	356.7	481.6	804.6	907.7	1203.0	1512.1	1613.2	1680.6	1755.9	1779.7	1783.6
22.5°	319.1	447.9	816.5	923.5	1258.4	1567.6	1652.8	1706.3	1757.9	1765.8	1767.8
25°	287.4	410.2	814.5	941.4	1306.0	1601.3	1666.7	1706.3	1736.1	1740.0	1740.0
27.5°	257.6	368.6	806.6	945.3	1341.7	1609.2	1660.7	1688.5	1702.4	1710.3	1710.3
30°	231.9	329.0	786.8	937.4	1357.5	1601.3	1642.9	1656.8	1670.7	1682.5	1688.5
32.5°	212.1	291.3	757.0	921.5	1359.5	1581.5	1611.2	1619.1	1638.9	1666.7	1676.6
35°	194.2	253.7	723.4	899.7	1347.6	1549.8	1569.6	1577.5	1617.1	1658.8	1672.6
37.5°	176.4	225.9	679.8	862.1	1329.8	1512.1	1526.0	1539.9	1601.3	1650.8	1666.7
40°	158.5	202.1	628.2	820.5	1302.0	1466.5	1478.4	1500.2	1581.5	1638.9	1654.8
42.5°	144.7	182.3	572.7	776.9	1266.4	1415.0	1432.8	1464.5	1557.7	1619.1	1637.0
45°	132.8	162.5	513.3	717.4	1220.8	1361.5	1387.3	1430.9	1529.9	1589.4	1605.3
47.5°	120.9	148.6	451.9	656.0	1171.2	1308.0	1341.7	1391.2	1492.3	1549.8	1563.6
50°	111.0	134.8	390.4	590.6	1117.7	1250.5	1290.2	1341.7	1444.7	1498.2	1516.1
52.5°	103.1	122.9	332.9	525.2	1056.3	1191.1	1236.6	1290.2	1387.3	1438.8	1450.7
55°	95.1	113.0	283.4	455.8	992.9	1127.6	1177.2	1228.7	1323.8	1367.4	1375.4
57.5°	91.2	105.0	241.8	390.4	925.5	1056.3	1111.8	1159.4	1248.5	1282.2	1290.2
60°	85.2	99.1	210.1	334.9	852.2	988.9	1036.5	1084.0	1159.4	1187.1	1193.0
62.5°	79.3	95.1	186.3	281.4	776.9	909.6	957.2	1000.8	1064.2	1084.0	1092.0
65°	75.3	91.2	168.5	241.8	699.6	826.4	874.0	911.6	963.2	983.0	986.9
67.5°	71.3	87.2	154.6	208.1	622.3	743.2	778.8	814.5	854.2	874.0	876.0
70°	65.4	83.2	142.7	184.3	543.0	648.0	677.8	715.4	747.1	757.0	763.0
72.5°	61.4	77.3	134.8	166.5	461.8	556.9	584.6	606.4	634.2	644.1	644.1
75°	55.5	69.4	126.8	148.6	378.5	455.8	479.6	501.4	523.2	527.2	521.2
77.5°	49.5	61.4	109.0	124.9	295.3	360.7	380.5	392.4	410.2	414.2	416.2
80°	41.6	53.5	85.2	97.1	214.0	265.6	279.4	289.3	305.2	305.2	309.2
82.5°	31.7	41.6	61.4	69.4	144.7	182.3	194.2	200.2	210.1	210.1	210.1
85°	19.8	25.8	39.6	45.6	87.2	111.0	118.9	120.9	128.8	130.8	130.8
87.5°	9.9	13.9	25.8	27.7	45.6	57.5	57.5	61.4	61.4	59.5	57.5
90°	9.4	16.9	24.3	26.2	41.2	61.1	71.1	63.2	47.4	35.6	35.6
92.5°	37.4	101.0	164.7	180.6	253.9	351.6	400.4	350.9	252.0	177.8	170.7
95°	89.8	206.2	322.7	351.8	624.7	988.5	1170.4	1044.4	792.4	603.4	582.0
97.5°	155.3	258.0	360.7	386.4	841.4	1448.1	1751.4	1671.8	1512.5	1393.1	1352.3
100°	205.8	299.0	392.1	415.4	920.3	1593.5	1930.1	1935.9	1947.6	1956.3	1907.8
102.5°	248.9	335.8	422.7	444.4	956.5	1639.2	1980.6	2082.0	2284.9	2437.1	2395.5
105°	321.8	395.4	469.0	487.4	983.3	1644.4	1975.0	2202.4	2657.3	2998.5	2976.1
107.5°	396.7	465.3	533.9	551.0	988.2	1571.2	1862.7	2180.0	2814.5	3290.4	3295.8
110°	447.2	509.2	571.1	586.6	980.8	1506.3	1769.1	2123.8	2833.2	3365.2	3388.5



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
112.5°	496.8	555.8	614.8	629.6	981.1	1449.7	1684.0	2047.0	2773.0	3317.5	3353.3
115°	571.6	626.1	680.6	694.2	990.1	1384.7	1582.0	1931.7	2631.1	3155.6	3205.2
117.5°	645.5	695.0	744.5	756.9	1008.6	1344.1	1511.9	1827.5	2458.6	2932.0	2987.0
120°	688.6	735.2	781.8	793.4	1023.5	1330.4	1483.8	1772.2	2348.9	2781.4	2834.8
122.5°	730.7	777.7	824.7	836.4	1045.0	1323.2	1462.3	1722.0	2241.3	2630.8	2683.5
125°	795.2	838.0	880.9	891.6	1074.0	1317.3	1438.9	1659.5	2100.6	2431.5	2480.0
127.5°	847.6	890.8	934.1	944.9	1103.0	1313.8	1419.2	1608.6	1987.4	2271.5	2312.5
130°	875.7	922.3	968.9	980.5	1124.3	1316.0	1411.8	1580.4	1917.6	2170.5	2208.3
132.5°	904.7	951.3	997.9	1009.5	1141.4	1317.3	1405.2	1556.1	1858.0	2084.4	2118.3
135°	947.7	990.1	1032.6	1043.2	1160.1	1316.0	1394.0	1520.4	1773.2	1962.8	1992.0
137.5°	991.7	1033.7	1075.7	1086.2	1188.2	1324.1	1392.1	1499.0	1712.7	1873.0	1896.9
140°	1028.2	1066.9	1105.5	1115.2	1205.3	1325.5	1385.6	1477.9	1662.5	1801.0	1823.3
142.5°	1056.2	1092.0	1127.8	1136.7	1219.7	1330.3	1385.6	1466.7	1628.8	1750.4	1769.6
145°	1099.3	1130.5	1161.7	1169.5	1238.4	1330.3	1376.2	1442.5	1575.2	1674.7	1689.2
147.5°	1142.3	1172.7	1203.0	1210.6	1265.8	1339.4	1376.2	1428.4	1532.7	1611.0	1623.1
150°	1170.4	1197.8	1225.2	1232.1	1280.1	1344.2	1376.2	1420.3	1508.4	1574.5	1584.3
152.5°	1199.4	1220.2	1241.0	1246.2	1289.5	1347.3	1376.2	1413.8	1489.1	1545.5	1552.9
155°	1242.4	1257.8	1273.2	1277.0	1310.1	1354.2	1376.2	1406.1	1466.0	1510.9	1515.8
157.5°	1274.2	1289.2	1304.2	1307.9	1330.7	1361.0	1376.2	1399.5	1446.1	1481.0	1484.4
160°	1295.8	1307.4	1319.0	1321.9	1340.0	1364.1	1376.2	1396.2	1436.1	1466.0	1468.0
162.5°	1317.3	1326.0	1334.7	1336.9	1350.0	1367.5	1376.2	1393.0	1426.7	1452.0	1453.9
165°	1340.7	1348.6	1356.4	1358.4	1364.3	1372.2	1376.2	1388.3	1412.4	1430.5	1432.5
167.5°	1362.2	1365.9	1369.7	1370.6	1375.6	1382.3	1385.6	1393.5	1409.3	1421.1	1421.9
170°	1376.2	1379.9	1383.7	1384.6	1384.9	1385.4	1385.6	1393.5	1409.3	1421.1	1421.1
172.5°	1383.7	1384.5	1385.4	1385.6	1385.6	1385.6	1385.6	1391.8	1404.3	1413.6	1412.9
175°	1394.0	1394.0	1394.0	1394.0	1391.2	1387.5	1385.6	1389.5	1397.4	1403.3	1403.3
177.5°	1394.0	1394.0	1394.0	1394.0	1391.8	1388.9	1387.4	1390.5	1396.8	1401.5	1400.7
180°	1394.0	1394.0	1394.0	1394.0	1394.0	1394.0	1394.0	1394.0	1394.0	1394.0	1394.0



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**CANDELA DISTRIBUTION (continued):**

	80°	90°
0°	616.3	616.3
2.5°	658.0	654.0
5°	846.2	850.2
7.5°	1139.5	1137.6
10°	1417.0	1434.8
12.5°	1619.1	1623.1
15°	1742.0	1749.9
17.5°	1789.6	1791.5
20°	1791.5	1787.6
22.5°	1769.7	1765.8
25°	1744.0	1742.0
27.5°	1720.2	1722.2
30°	1710.3	1716.2
32.5°	1710.3	1720.2
35°	1714.3	1724.2
37.5°	1712.3	1724.2
40°	1704.3	1718.2
42.5°	1682.5	1692.5
45°	1648.9	1660.7
47.5°	1605.3	1613.2
50°	1549.8	1557.7
52.5°	1480.4	1482.4
55°	1397.2	1405.1
57.5°	1308.0	1310.0
60°	1208.9	1214.8
62.5°	1103.9	1103.9
65°	992.9	996.8
67.5°	877.9	887.8
70°	761.0	763.0
72.5°	646.1	646.1
75°	527.2	529.1
77.5°	414.2	414.2
80°	307.2	309.2
82.5°	212.1	216.0
85°	132.8	132.8
87.5°	61.4	55.5
90°	35.6	35.6
92.5°	142.4	114.1
95°	496.3	410.7
97.5°	1189.3	1026.3
100°	1713.6	1519.4
102.5°	2229.2	2062.9
105°	2886.7	2797.3
107.5°	3317.4	3339.0
110°	3481.6	3574.8





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**CANDELA DISTRIBUTION (continued):**

	80°	90°
112.5°	3496.3	3639.3
115°	3403.5	3601.9
117.5°	3207.0	3427.0
120°	3048.6	3262.3
122.5°	2894.3	3105.1
125°	2674.2	2868.4
127.5°	2476.3	2640.2
130°	2359.7	2511.0
132.5°	2253.8	2389.4
135°	2108.9	2225.7
137.5°	1992.6	2088.2
140°	1912.7	2002.1
142.5°	1846.6	1923.5
145°	1747.4	1805.6
147.5°	1671.3	1719.6
150°	1623.4	1662.5
152.5°	1582.4	1612.0
155°	1535.3	1554.9
157.5°	1498.2	1511.9
160°	1475.9	1483.8
162.5°	1461.3	1468.8
165°	1440.3	1448.2
167.5°	1425.3	1428.6
170°	1421.1	1421.1
172.5°	1410.0	1407.1
175°	1403.3	1403.3
177.5°	1397.3	1394.0
180°	1394.0	1394.0



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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	4.04	4.80	5.12	5.88	7.36	17.21	17.97	18.28	19.05	20.52
	3H	4.74	5.42	5.82	6.51	8.00	19.03	19.72	20.12	20.80	22.30
	4H	5.03	5.68	6.13	6.77	8.27	19.67	20.32	20.76	21.41	22.91
	6H	5.28	5.88	6.38	6.97	8.48	20.09	20.69	21.19	21.78	23.29
	8H	5.34	5.91	6.45	7.02	8.52	20.21	20.78	21.31	21.89	23.39
	12H	5.36	5.90	6.47	7.00	8.53	20.27	20.81	21.38	21.91	23.44
4H	2H	11.24	11.89	12.34	12.97	14.47	17.47	18.12	18.57	19.21	20.70
	3H	12.80	13.34	13.90	14.45	15.96	19.50	20.04	20.61	21.16	22.67
	4H	12.89	13.39	14.00	14.49	16.02	20.26	20.76	21.37	21.86	23.39
	6H	12.89	13.32	14.01	14.45	15.97	20.79	21.22	21.91	22.35	23.87
	8H	12.87	13.27	13.99	14.39	15.93	20.95	21.35	22.07	22.47	24.01
	12H	12.82	13.18	13.95	14.31	15.86	21.03	21.40	22.17	22.53	24.07
8H	4H	14.32	14.72	15.44	15.84	17.38	20.31	20.71	21.43	21.83	23.37
	6H	14.56	14.89	15.70	16.05	17.59	20.93	21.26	22.07	22.43	23.96
	8H	14.57	14.86	15.72	16.01	17.56	21.15	21.44	22.30	22.58	24.14
	12H	14.54	14.79	15.69	15.93	17.52	21.29	21.54	22.44	22.68	24.27
12H	4H	14.46	14.82	15.59	15.95	17.50	20.26	20.62	21.40	21.76	23.30
	6H	14.81	15.10	15.96	16.25	17.80	20.91	21.21	22.06	22.35	23.90
	8H	14.88	15.13	16.03	16.27	17.86	21.14	21.39	22.29	22.53	24.12