

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: P937473

Luminaire Tested: SQ4-FB-100U-050D-940-1D-UNV-STD-W-12

Issue Date: 12/17/2024

**Test Information**

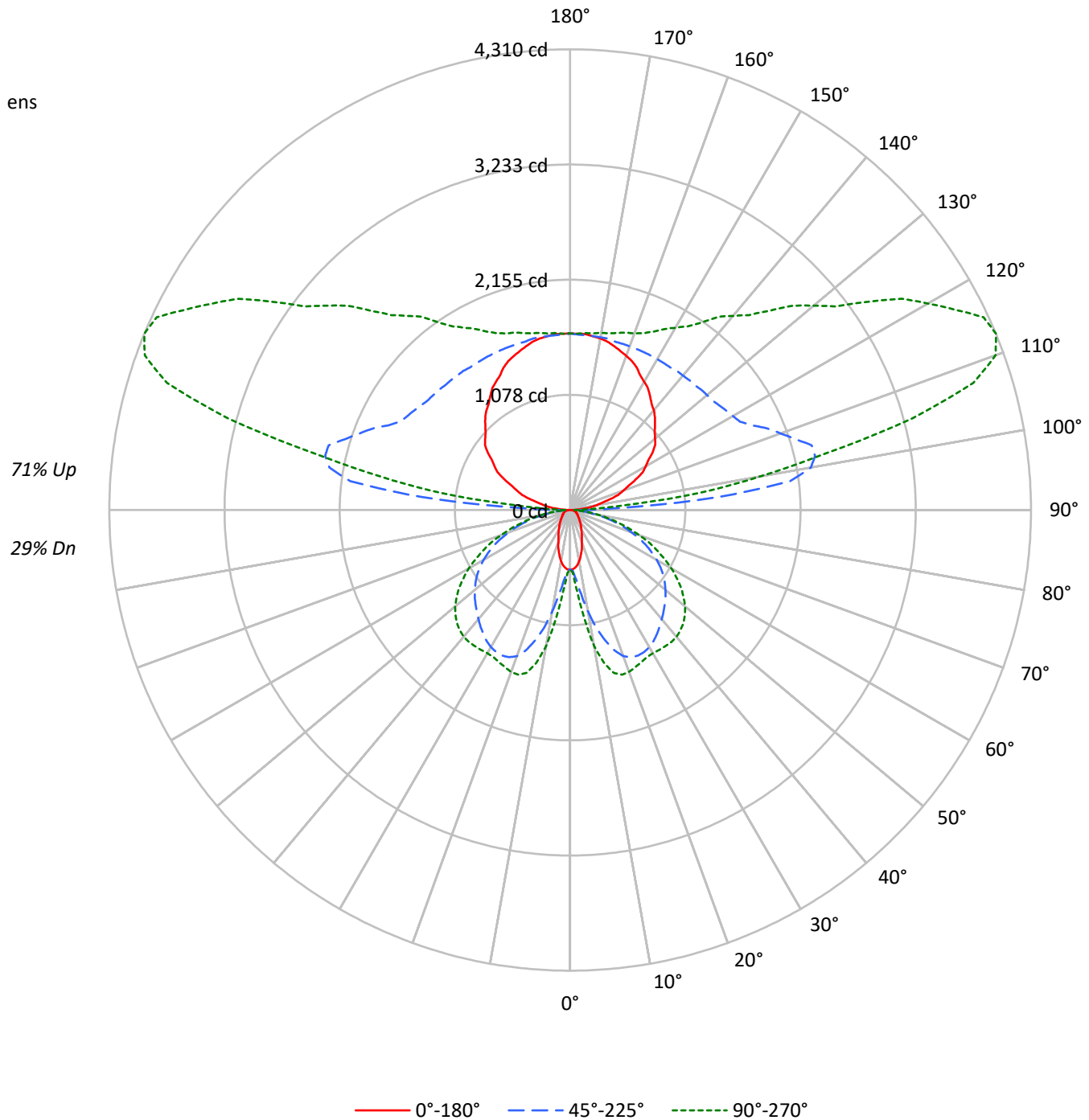
Test Method: LM-79-2019  
Report Number: P937473  
REPORT IS A COMBINATION OF REPORTS P933557 AND P933786  
Test Lab: INNOVATION CENTER  
Issue Date: 12/17/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ4-FB-100U-050D-940-1D-UNV-STD-W-12  
Description: CORELITE SQ4 SUSPENDED INDIRECT LED LUMINAIRE WITH Batwing Frosted Continuous Roll L  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 15008.1 lumens  
Efficiency: N/A  
Efficacy: 121.4 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 (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	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°	1719	1719	1719
5°	1680	1987	2310
10°	1524	2897	3830
15°	1296	3786	4625
20°	1055	4389	4713
25°	881	4594	4618
30°	743	4624	4609
35°	657	4548	4728
40°	573	4450	4851
45°	519	4378	4870
50°	477	4314	4790
55°	457	4219	4577
60°	468	4035	4242
65°	488	3756	3781
70°	522	3278	3195
75°	580	2675	2493
80°	640	1857	1680
85°	577	987	860

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 4870 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	71.9	0.5
10°-20°	318.6	2.1
20°-30°	557.2	3.7
30°-40°	717.3	4.8
40°-50°	801.2	5.3
50°-60°	767.4	5.1
60°-70°	608.2	4.1
70°-80°	357.6	2.4
80°-90°	105.7	0.7
90°-100°	804.8	5.4
100°-110°	2115.8	14.1
110°-120°	2193.9	14.6
120°-130°	1759.8	11.7
130°-140°	1380.8	9.2
140°-150°	1059.8	7.1
150°-160°	763.2	5.1
160°-170°	467.0	3.1
170°-180°	157.8	1.1
0°-30°	947.7	6.3
0°-40°	1665.0	11.1
0°-60°	3233.7	21.5
0°-90°	4305.1	28.7
90°-120°	5114.6	34.1
90°-150°	9315.0	62.1
90°-180°	10703.0	71.3
0°-180°	15008.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	556	556	556	556	556	
5°	541	581	654	740	766	50
15°	406	749	1262	1530	1578	113
25°	259	849	1503	1569	1571	119
35°	175	811	1415	1496	1554	109
45°	120	647	1251	1433	1497	93
55°	86	411	1061	1233	1267	78
65°	68	218	788	886	899	67
75°	50	134	432	475	477	52
85°	18	41	107	118	120	19
90°	11	31	84	42	42	10
95°	106	417	1386	715	486	118
105°	381	577	2339	3551	3313	404
115°	677	822	1874	3738	4266	669
125°	942	1056	1704	2880	3397	836
135°	1122	1236	1651	2325	2636	868
145°	1302	1385	1630	1983	2139	816
155°	1472	1512	1630	1790	1842	676
165°	1588	1609	1630	1694	1715	448
175°	1651	1651	1641	1662	1662	157
180°	1651	1651	1651	1651	1651	



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**CANDELA DISTRIBUTION (FULL):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	555.7	555.7	555.7	555.7	555.7	555.7	555.7	555.7	555.7	555.7	555.7
2.5°	555.7	555.7	559.3	561.0	564.6	566.4	570.0	573.6	584.3	586.1	589.6
5°	541.4	548.5	571.8	580.7	605.7	639.6	653.9	677.2	725.4	739.7	748.7
7.5°	519.9	536.0	593.2	607.5	670.1	759.4	796.9	847.0	923.8	961.3	991.6
10°	486.0	519.9	621.8	655.8	757.6	893.4	963.0	1032.7	1148.9	1200.8	1220.4
12.5°	448.4	503.9	652.1	698.6	845.1	1043.5	1127.5	1204.3	1336.5	1406.2	1416.9
15°	405.6	480.7	680.7	748.7	938.1	1168.5	1261.5	1356.2	1479.5	1529.5	1542.0
17.5°	368.1	462.7	707.6	779.0	1009.6	1281.1	1375.8	1454.5	1554.5	1588.5	1597.4
20°	321.6	434.2	725.4	818.4	1084.6	1363.3	1454.5	1515.2	1583.1	1604.5	1608.1
22.5°	287.7	403.8	736.2	832.7	1134.6	1413.3	1490.2	1538.5	1584.9	1592.0	1593.8
25°	259.1	369.9	734.4	848.8	1177.5	1443.7	1502.7	1538.5	1565.2	1568.8	1568.8
27.5°	232.3	332.4	727.2	852.3	1209.6	1450.9	1497.3	1522.3	1534.8	1542.0	1542.0
30°	209.0	296.6	709.3	845.1	1223.9	1443.7	1481.3	1493.8	1506.2	1517.0	1522.3
32.5°	191.2	262.7	682.5	830.8	1225.7	1425.9	1452.7	1459.8	1477.6	1502.7	1511.6
35°	175.1	228.7	652.1	811.2	1215.1	1397.3	1415.1	1422.3	1458.0	1495.6	1508.0
37.5°	159.0	203.7	612.9	777.3	1198.9	1363.3	1375.8	1388.3	1443.7	1488.4	1502.7
40°	143.0	182.2	566.4	739.7	1173.9	1322.2	1333.0	1352.6	1425.9	1477.6	1491.9
42.5°	130.4	164.4	516.4	700.5	1141.8	1275.8	1291.9	1320.5	1404.4	1459.8	1475.9
45°	119.7	146.5	462.7	646.8	1100.7	1227.5	1250.7	1290.1	1379.4	1433.0	1447.3
47.5°	109.0	134.0	407.4	591.4	1056.0	1179.3	1209.6	1254.3	1345.4	1397.3	1409.8
50°	100.1	121.5	352.0	532.4	1007.7	1127.5	1163.2	1209.6	1302.6	1350.8	1366.9
52.5°	92.9	110.8	300.1	473.5	952.4	1073.9	1115.0	1163.2	1250.7	1297.2	1307.9
55°	85.8	101.9	255.5	411.0	895.2	1016.7	1061.3	1107.8	1193.6	1232.9	1240.0
57.5°	82.2	94.7	218.0	352.0	834.5	952.4	1002.4	1045.3	1125.6	1156.1	1163.2
60°	76.8	89.3	189.4	302.0	768.3	891.6	934.5	977.3	1045.3	1070.3	1075.6
62.5°	71.5	85.8	167.9	253.7	700.5	820.2	863.0	902.3	959.5	977.3	984.5
65°	67.9	82.2	151.8	218.0	630.7	745.1	788.0	821.9	868.4	886.2	889.8
67.5°	64.3	78.6	139.3	187.6	561.0	670.1	702.2	734.4	770.1	788.0	789.8
70°	59.0	75.0	128.7	166.1	489.6	584.3	611.1	645.0	673.6	682.5	687.9
72.5°	55.4	69.7	121.5	150.1	416.3	502.1	527.1	546.7	571.8	580.7	580.7
75°	50.0	62.5	114.4	134.0	341.3	411.0	432.4	452.1	471.7	475.3	469.9
77.5°	44.7	55.4	98.3	112.6	266.2	325.2	343.0	353.8	369.9	373.4	375.2
80°	37.6	48.2	76.8	87.6	193.0	239.4	251.9	260.9	275.2	275.2	278.7
82.5°	28.6	37.6	55.4	62.5	130.4	164.4	175.1	180.4	189.4	189.4	189.4
85°	17.8	23.3	35.7	41.1	78.6	100.1	107.2	109.0	116.2	117.9	117.9
87.5°	9.0	12.5	23.3	25.0	41.1	51.9	51.9	55.4	55.4	53.6	51.9
90°	11.1	20.0	28.8	31.0	48.8	72.4	84.2	74.9	56.1	42.1	42.1
92.5°	44.3	119.6	195.0	213.8	300.7	416.4	474.3	415.7	298.5	210.5	202.2
95°	106.4	244.3	382.2	416.6	739.8	1170.7	1386.2	1237.0	938.5	714.7	689.3
97.5°	183.9	305.6	427.2	457.7	996.5	1715.0	2074.3	1980.0	1791.4	1649.9	1601.7
100°	243.8	354.0	464.3	492.0	1089.9	1887.3	2286.0	2292.9	2306.7	2317.0	2259.5
102.5°	294.7	397.6	500.6	526.3	1132.8	1941.5	2345.8	2466.0	2706.3	2886.5	2837.2
105°	381.2	468.3	555.5	577.3	1164.6	1947.7	2339.2	2608.6	3147.3	3551.4	3524.9
107.5°	469.8	551.1	632.3	652.7	1170.5	1860.9	2206.1	2581.9	3333.5	3897.1	3903.5
110°	529.7	603.0	676.4	694.8	1161.6	1784.1	2095.3	2515.4	3355.6	3985.7	4013.3



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
112.5°	588.4	658.4	728.2	745.7	1162.0	1717.0	1994.5	2424.5	3284.4	3929.2	3971.6
115°	677.0	741.6	806.0	822.2	1172.7	1640.0	1873.8	2287.9	3116.3	3737.5	3796.2
117.5°	764.6	823.2	881.8	896.4	1194.5	1591.9	1790.7	2164.4	2912.0	3472.7	3537.8
120°	815.5	870.7	925.9	939.7	1212.3	1575.8	1757.4	2099.0	2782.0	3294.3	3357.6
122.5°	865.4	921.1	976.7	990.7	1237.8	1567.2	1732.0	2039.5	2654.6	3115.9	3178.3
125°	941.9	992.6	1043.3	1056.0	1272.1	1560.2	1704.2	1965.5	2488.0	2879.9	2937.3
127.5°	1003.9	1055.1	1106.4	1119.1	1306.4	1556.1	1681.0	1905.3	2353.9	2690.4	2738.9
130°	1037.2	1092.3	1147.5	1161.2	1331.6	1558.6	1672.1	1871.8	2271.2	2570.8	2615.6
132.5°	1071.5	1126.7	1181.8	1195.6	1351.8	1560.1	1664.3	1843.0	2200.6	2468.8	2509.0
135°	1122.5	1172.7	1223.0	1235.5	1374.0	1558.7	1651.1	1800.8	2100.1	2324.7	2359.3
137.5°	1174.6	1224.3	1274.0	1286.4	1407.2	1568.3	1648.8	1775.4	2028.5	2218.4	2246.7
140°	1217.8	1263.6	1309.4	1320.8	1427.5	1569.9	1641.0	1750.3	1969.1	2133.1	2159.5
142.5°	1251.0	1293.4	1335.7	1346.3	1444.5	1575.5	1641.0	1737.1	1929.2	2073.2	2095.9
145°	1302.0	1338.9	1375.9	1385.1	1466.7	1575.6	1630.0	1708.5	1865.6	1983.4	2000.7
147.5°	1353.0	1388.9	1424.9	1433.9	1499.2	1586.4	1630.0	1691.8	1815.4	1908.1	1922.4
150°	1386.2	1418.7	1451.2	1459.3	1516.3	1592.1	1630.0	1682.2	1786.6	1864.9	1876.4
152.5°	1420.5	1445.1	1469.8	1475.9	1527.3	1595.7	1630.0	1674.6	1763.7	1830.5	1839.2
155°	1471.5	1489.7	1508.0	1512.5	1551.7	1603.9	1630.0	1665.4	1736.3	1789.5	1795.3
157.5°	1509.2	1526.9	1544.7	1549.1	1576.1	1612.1	1630.0	1657.5	1712.7	1754.1	1758.2
160°	1534.6	1548.5	1562.3	1565.7	1587.1	1615.7	1630.0	1653.6	1700.9	1736.3	1738.6
162.5°	1560.1	1570.4	1580.8	1583.4	1598.9	1619.6	1630.0	1649.9	1689.8	1719.7	1721.9
165°	1587.8	1597.2	1606.6	1608.9	1615.9	1625.3	1630.0	1644.3	1672.8	1694.2	1696.5
167.5°	1613.3	1617.8	1622.2	1623.4	1629.2	1637.1	1641.0	1650.4	1669.2	1683.2	1684.2
170°	1630.0	1634.5	1638.9	1640.0	1640.3	1640.8	1641.0	1650.4	1669.2	1683.2	1683.2
172.5°	1638.8	1639.8	1640.8	1641.0	1641.0	1641.0	1641.0	1648.4	1663.2	1674.3	1673.4
175°	1651.1	1651.1	1651.1	1651.1	1647.7	1643.2	1641.0	1645.7	1655.1	1662.1	1662.1
177.5°	1651.1	1651.1	1651.1	1651.1	1648.5	1645.0	1643.2	1647.0	1654.3	1659.8	1658.9
180°	1651.1	1651.1	1651.1	1651.1	1651.1	1651.1	1651.1	1651.1	1651.1	1651.1	1651.1



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**CANDELA DISTRIBUTION (continued):**

	80°	90°
0°	555.7	555.7
2.5°	593.2	589.6
5°	763.0	766.5
7.5°	1027.4	1025.6
10°	1277.6	1293.6
12.5°	1459.8	1463.3
15°	1570.6	1577.7
17.5°	1613.5	1615.3
20°	1615.3	1611.7
22.5°	1595.6	1592.0
25°	1572.4	1570.6
27.5°	1550.9	1552.8
30°	1542.0	1547.3
32.5°	1542.0	1550.9
35°	1545.6	1554.5
37.5°	1543.8	1554.5
40°	1536.6	1549.1
42.5°	1517.0	1525.9
45°	1486.6	1497.3
47.5°	1447.3	1454.5
50°	1397.3	1404.4
52.5°	1334.8	1336.5
55°	1259.7	1266.8
57.5°	1179.3	1181.0
60°	1089.9	1095.3
62.5°	995.3	995.3
65°	895.2	898.7
67.5°	791.6	800.4
70°	686.2	687.9
72.5°	582.5	582.5
75°	475.3	477.0
77.5°	373.4	373.4
80°	277.0	278.7
82.5°	191.2	194.7
85°	119.7	119.7
87.5°	55.4	50.0
90°	42.1	42.1
92.5°	168.6	135.2
95°	587.9	486.4
97.5°	1408.6	1215.6
100°	2029.5	1799.5
102.5°	2640.3	2443.3
105°	3419.0	3313.1
107.5°	3929.1	3954.7
110°	4123.6	4234.0





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**CANDELA DISTRIBUTION (continued):**

	80°	90°
112.5°	4141.0	4310.4
115°	4031.2	4266.0
117.5°	3798.3	4058.9
120°	3610.7	3863.9
122.5°	3427.9	3677.7
125°	3167.3	3397.3
127.5°	2933.0	3127.0
130°	2794.8	2974.1
132.5°	2669.5	2830.1
135°	2497.7	2636.1
137.5°	2359.9	2473.3
140°	2265.5	2371.3
142.5°	2187.1	2278.2
145°	2069.7	2138.6
147.5°	1979.5	2036.6
150°	1922.8	1969.1
152.5°	1874.2	1909.2
155°	1818.4	1841.6
157.5°	1774.4	1790.7
160°	1748.0	1757.4
162.5°	1730.8	1739.7
165°	1705.9	1715.3
167.5°	1688.1	1692.0
170°	1683.2	1683.2
172.5°	1670.0	1666.5
175°	1662.1	1662.1
177.5°	1655.0	1651.1
180°	1651.1	1651.1



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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	0.52	1.24	1.63	2.35	3.89	13.71	14.43	14.83	15.54	17.09
	3H	1.21	1.86	2.34	2.98	4.54	15.54	16.19	16.67	17.31	18.87
	4H	1.50	2.11	2.64	3.24	4.80	16.19	16.80	17.32	17.92	19.49
	6H	1.75	2.31	2.89	3.43	5.01	16.61	17.18	17.76	18.30	19.88
	8H	1.81	2.35	2.96	3.49	5.06	16.73	17.27	17.88	18.41	19.98
	12H	1.82	2.33	2.97	3.47	5.06	16.80	17.31	17.95	18.44	20.03
4H	2H	7.72	8.34	8.87	9.46	11.02	13.97	14.58	15.11	15.70	17.27
	3H	9.28	9.79	10.42	10.94	12.52	16.00	16.51	17.15	17.66	19.24
	4H	9.37	9.84	10.52	10.97	12.57	16.77	17.24	17.92	18.38	19.97
	6H	9.37	9.77	10.52	10.93	12.52	17.30	17.71	18.46	18.87	20.45
	8H	9.34	9.72	10.50	10.87	12.47	17.46	17.84	18.62	18.99	20.60
	12H	9.29	9.63	10.46	10.79	12.40	17.55	17.89	18.72	19.06	20.67
8H	4H	10.80	11.18	11.96	12.33	13.94	16.82	17.19	17.97	18.34	19.95
	6H	11.04	11.35	12.21	12.54	14.14	17.44	17.75	18.62	18.95	20.55
	8H	11.05	11.32	12.23	12.50	14.12	17.66	17.93	18.84	19.11	20.73
	12H	11.01	11.25	12.20	12.42	14.08	17.80	18.04	18.99	19.21	20.87
12H	4H	10.94	11.28	12.11	12.44	14.05	16.76	17.10	17.93	18.27	19.88
	6H	11.29	11.57	12.48	12.74	14.36	17.42	17.70	18.60	18.87	20.49
	8H	11.36	11.60	12.54	12.77	14.42	17.65	17.89	18.83	19.06	20.71