

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: P938465

Luminaire Tested: SQ4-FB-150U-100D-93050-1D-UNV-STD-W-8-3000K

Issue Date: 12/17/2024

**Test Information**

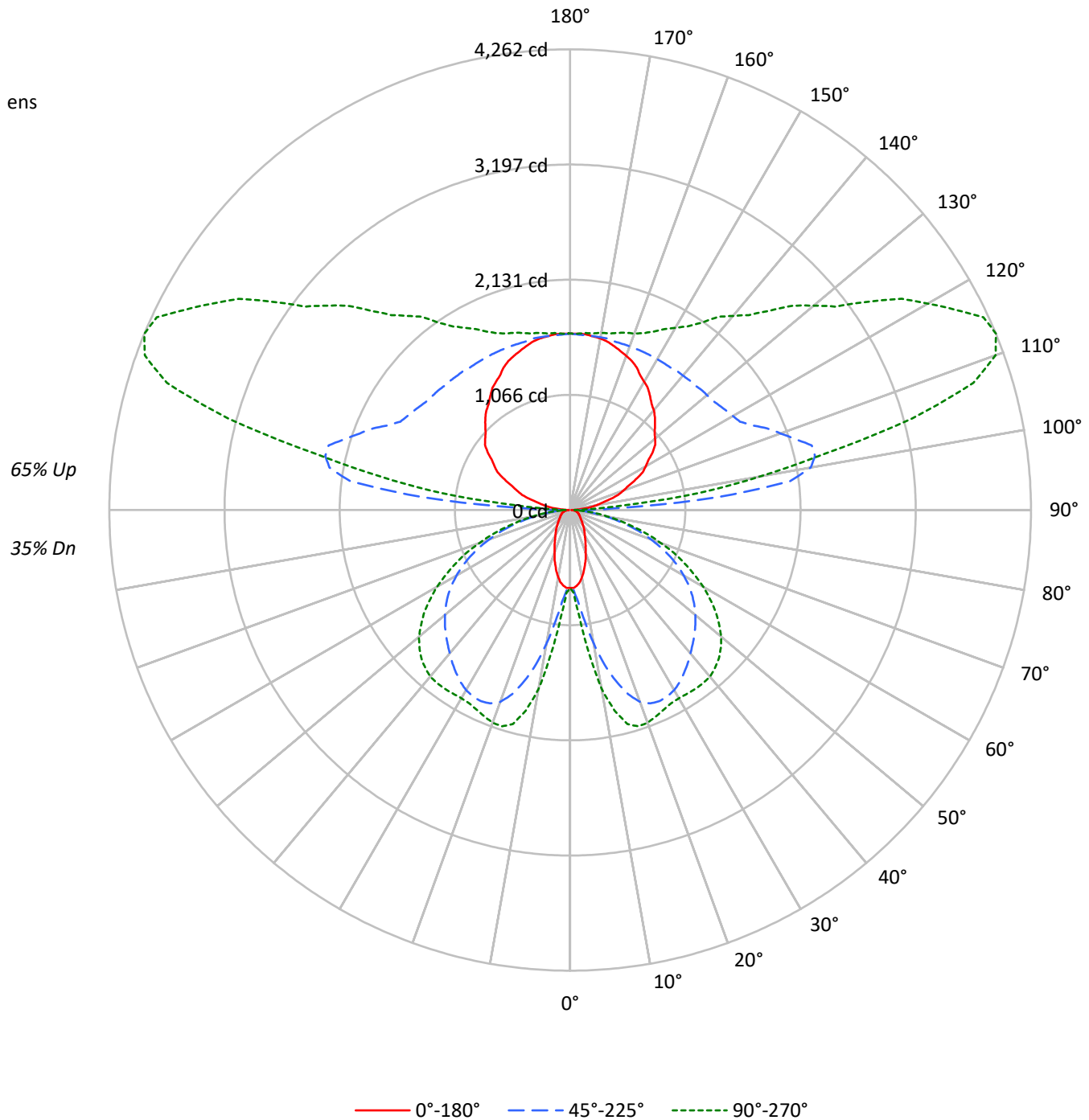
Test Method: LM-79-2019  
Report Number: P938465  
REPORT IS A COMBINATION OF REPORTS P933647 AND P933786  
Test Lab: INNOVATION CENTER  
Issue Date: 12/17/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ4-FB-150U-100D-93050-1D-UNV-STD-W-8-3000K  
Description: CORELITE SQ4 SUSPENDED INDIRECT LED LUMINAIRE WITH Batwing Frosted Continuous Roll L  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 16173.0 lumens  
Efficiency: N/A  
Efficacy: 111.7 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				
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	42	42	42	35
1	94	90	86	82	85	81	78	75	65	63	60	50	49	47	36	35	35	36	35	35	28
2	85	78	72	66	77	70	65	61	56	53	49	43	41	39	32	30	29	32	30	29	23
3	77	68	61	55	69	61	55	50	49	45	41	38	35	32	28	26	24	28	26	24	19
4	71	60	52	46	63	54	47	42	43	38	34	34	30	27	24	22	20	24	22	20	16
5	64	53	45	39	58	48	41	36	39	33	29	30	26	23	22	19	17	22	19	17	14
6	59	47	39	33	53	43	36	30	34	29	25	27	23	20	19	17	15	19	17	15	12
7	54	42	34	29	49	38	31	26	31	26	22	24	20	17	18	15	13	18	15	13	10
8	50	38	30	25	45	35	28	23	28	23	19	22	18	15	16	13	11	16	13	11	9
9	47	35	27	22	42	31	25	20	26	20	17	20	16	14	15	12	10	15	12	10	8
10	43	31	24	20	39	29	22	18	23	18	15	18	15	12	13	11	9	13	11	9	7

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

	0°	45°	90°
0°	3349	3349	3349
5°	3272	3871	4502
10°	2968	5643	7463
15°	2522	7372	9012
20°	2053	8543	9184
25°	1713	8940	8998
30°	1445	8996	8981
35°	1277	8847	9213
40°	1113	8653	9453
45°	1008	8511	9490
50°	925	8382	9333
55°	885	8195	8919
60°	906	7835	8266
65°	943	7288	7368
70°	1005	6356	6225
75°	1113	5182	4858
80°	1215	3594	3273
85°	1081	1907	1675

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 9490 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	93.4	0.6
10°-20°	413.8	2.6
20°-30°	723.9	4.5
30°-40°	931.8	5.8
40°-50°	1040.8	6.4
50°-60°	996.9	6.2
60°-70°	790.0	4.9
70°-80°	464.6	2.9
80°-90°	135.3	0.8
90°-100°	795.8	4.9
100°-110°	2092.1	12.9
110°-120°	2169.2	13.4
120°-130°	1740.0	10.8
130°-140°	1365.3	8.4
140°-150°	1047.9	6.5
150°-160°	754.7	4.7
160°-170°	461.7	2.9
170°-180°	156.0	1.0
0°-30°	1231.1	7.6
0°-40°	2162.9	13.4
0°-60°	4200.6	26.0
0°-90°	5590.5	34.6
90°-120°	5057.0	31.3
90°-150°	9210.2	56.9
90°-180°	10583.0	65.4
0°-180°	16173.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	722	722	722	722	722	
5°	703	754	850	961	996	65
15°	527	972	1639	1987	2050	147
25°	337	1102	1952	2038	2040	155
35°	228	1054	1838	1943	2019	142
45°	156	840	1625	1862	1945	120
55°	111	534	1379	1602	1646	102
65°	88	283	1024	1151	1168	87
75°	65	174	562	617	620	68
85°	23	53	139	153	156	25
90°	11	31	83	42	42	11
95°	105	412	1371	707	481	117
105°	377	571	2313	3511	3276	400
115°	669	813	1853	3696	4218	661
125°	931	1044	1685	2848	3359	827
135°	1110	1222	1632	2299	2606	859
145°	1287	1370	1612	1961	2114	806
155°	1455	1496	1612	1769	1821	669
165°	1570	1591	1612	1675	1696	443
175°	1632	1632	1623	1643	1643	155
180°	1632	1632	1632	1632	1632	



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**CANDELA DISTRIBUTION (FULL):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	721.9	721.9	721.9	721.9	721.9	721.9	721.9	721.9	721.9	721.9	721.9
2.5°	721.9	721.9	726.5	728.8	733.5	735.8	740.4	745.1	759.0	761.3	766.0
5°	703.3	712.6	742.8	754.4	786.9	831.0	849.5	879.7	942.3	960.9	972.5
7.5°	675.4	696.3	770.6	789.2	870.4	986.4	1035.2	1100.2	1200.0	1248.8	1288.2
10°	631.3	675.4	807.8	851.9	984.1	1160.5	1251.1	1341.6	1492.4	1559.8	1585.2
12.5°	582.6	654.5	847.2	907.5	1097.9	1355.5	1464.6	1564.4	1736.1	1826.7	1840.6
15°	526.9	624.4	884.4	972.5	1218.6	1518.0	1638.6	1761.7	1921.8	1986.8	2003.1
17.5°	478.1	601.2	919.1	1012.0	1311.4	1664.2	1787.3	1889.3	2019.3	2063.4	2075.1
20°	417.8	564.0	942.3	1063.0	1408.9	1771.0	1889.3	1968.3	2056.5	2084.3	2089.0
22.5°	373.7	524.5	956.3	1081.6	1473.9	1836.0	1935.8	1998.4	2058.8	2068.0	2070.4
25°	336.6	480.4	953.9	1102.5	1529.6	1875.4	1952.0	1998.4	2033.3	2037.9	2037.9
27.5°	301.7	431.7	944.7	1107.2	1571.4	1884.7	1945.1	1977.6	1993.8	2003.1	2003.1
30°	271.6	385.3	921.4	1097.9	1589.9	1875.4	1924.2	1940.4	1956.7	1970.6	1977.6
32.5°	248.4	341.2	886.6	1079.3	1592.3	1852.2	1887.0	1896.3	1919.5	1952.0	1963.6
35°	227.5	297.1	847.2	1053.8	1578.3	1815.1	1838.3	1847.6	1894.0	1942.7	1959.0
37.5°	206.6	264.6	796.1	1009.7	1557.4	1771.0	1787.3	1803.5	1875.4	1933.4	1952.0
40°	185.7	236.8	735.8	960.9	1524.9	1717.6	1731.5	1757.0	1852.2	1919.5	1938.1
42.5°	169.4	213.5	670.8	909.8	1483.2	1657.3	1678.2	1715.2	1824.3	1896.3	1917.2
45°	155.5	190.3	601.2	840.2	1429.8	1594.6	1624.8	1675.8	1791.8	1861.5	1880.1
47.5°	141.6	174.1	529.2	768.2	1371.7	1531.9	1571.4	1629.4	1747.7	1815.1	1831.3
50°	130.0	157.8	457.2	691.7	1309.1	1464.6	1511.0	1571.4	1692.0	1754.8	1775.6
52.5°	120.7	143.9	390.0	615.1	1237.1	1394.9	1448.3	1511.0	1624.8	1685.1	1699.0
55°	111.4	132.3	331.9	533.8	1162.9	1320.7	1378.7	1439.1	1550.5	1601.5	1610.8
57.5°	106.8	123.0	283.2	457.2	1083.9	1237.1	1302.1	1357.9	1462.3	1501.7	1511.0
60°	99.8	116.0	246.0	392.2	998.1	1158.2	1213.9	1269.6	1357.9	1390.4	1397.3
62.5°	92.8	111.4	218.2	329.6	909.8	1065.4	1121.1	1172.2	1246.4	1269.6	1278.9
65°	88.2	106.8	197.3	283.2	819.4	967.9	1023.6	1067.7	1128.0	1151.3	1155.9
67.5°	83.5	102.1	181.0	243.7	728.8	870.4	912.2	953.9	1000.4	1023.6	1025.9
70°	76.6	97.5	167.1	215.9	636.0	759.0	793.8	837.9	875.1	886.6	893.6
72.5°	71.9	90.6	157.8	195.0	540.8	652.2	684.7	710.3	742.8	754.4	754.4
75°	65.0	81.2	148.5	174.1	443.4	533.8	561.7	587.2	612.8	617.4	610.4
77.5°	58.1	71.9	127.6	146.2	345.9	422.5	445.6	459.5	480.4	485.1	487.5
80°	48.7	62.7	99.8	113.7	250.7	311.0	327.3	338.8	357.5	357.5	362.1
82.5°	37.2	48.7	71.9	81.2	169.4	213.5	227.5	234.4	246.0	246.0	246.0
85°	23.2	30.2	46.5	53.4	102.1	130.0	139.3	141.6	150.9	153.2	153.2
87.5°	11.6	16.2	30.2	32.5	53.4	67.3	67.3	71.9	71.9	69.6	67.3
90°	11.0	19.8	28.5	30.7	48.2	71.6	83.3	74.0	55.5	41.6	41.6
92.5°	43.8	118.3	192.9	211.5	297.3	411.7	468.9	411.0	295.1	208.2	199.9
95°	105.2	241.5	377.8	411.9	731.4	1157.5	1370.6	1223.0	928.0	706.7	681.6
97.5°	181.9	302.1	422.5	452.5	985.4	1695.8	2051.0	1957.7	1771.3	1631.4	1583.7
100°	241.0	350.1	459.2	486.5	1077.8	1866.0	2260.2	2267.1	2280.7	2290.9	2234.0
102.5°	291.4	393.2	494.9	520.4	1120.1	1919.6	2319.4	2438.3	2675.8	2854.0	2805.4
105°	376.9	463.0	549.3	570.8	1151.5	1925.7	2312.8	2579.2	3111.9	3511.4	3485.3
107.5°	464.5	544.9	625.2	645.3	1157.3	1840.0	2181.3	2552.9	3296.0	3853.3	3859.6
110°	523.7	596.3	668.8	686.9	1148.6	1764.1	2071.8	2487.2	3317.9	3940.9	3968.2



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
112.5°	581.8	650.9	720.0	737.3	1148.9	1697.7	1972.0	2397.1	3247.3	3885.0	3926.9
115°	669.4	733.2	797.0	813.0	1159.5	1621.6	1852.7	2262.2	3081.2	3695.5	3753.5
117.5°	756.0	813.9	871.9	886.4	1181.1	1574.0	1770.5	2140.1	2879.2	3433.6	3498.0
120°	806.4	860.9	915.5	929.1	1198.6	1557.9	1737.6	2075.3	2750.8	3257.3	3319.8
122.5°	855.6	910.7	965.7	979.5	1223.8	1549.6	1712.4	2016.5	2624.7	3080.8	3142.6
125°	931.3	981.4	1031.6	1044.1	1257.7	1542.6	1685.0	1943.3	2459.9	2847.5	2904.3
127.5°	992.7	1043.2	1093.9	1106.6	1291.7	1538.6	1662.0	1883.8	2327.4	2660.1	2708.1
130°	1025.5	1080.0	1134.6	1148.2	1316.6	1541.0	1653.2	1850.7	2245.6	2541.8	2586.2
132.5°	1059.5	1114.0	1168.6	1182.2	1336.7	1542.6	1645.6	1822.3	2175.8	2441.0	2480.7
135°	1109.8	1159.5	1209.2	1221.6	1358.6	1541.2	1632.4	1780.5	2076.6	2298.6	2332.8
137.5°	1161.4	1210.6	1259.7	1272.0	1391.4	1550.6	1630.3	1755.5	2005.7	2193.4	2221.4
140°	1204.1	1249.4	1294.6	1305.9	1411.5	1552.2	1622.6	1730.7	1946.9	2109.1	2135.2
142.5°	1236.9	1278.8	1320.7	1331.2	1428.3	1557.8	1622.6	1717.5	1907.4	2049.9	2072.4
145°	1287.3	1323.9	1360.4	1369.5	1450.3	1557.8	1611.6	1689.2	1844.6	1961.2	1978.2
147.5°	1337.7	1373.3	1408.9	1417.8	1482.4	1568.6	1611.6	1672.7	1794.9	1886.6	1900.7
150°	1370.6	1402.7	1434.9	1442.9	1499.1	1574.1	1611.6	1663.2	1766.4	1843.9	1855.3
152.5°	1404.6	1428.9	1453.3	1459.4	1510.2	1577.8	1611.6	1655.7	1743.8	1809.9	1818.5
155°	1455.0	1473.0	1491.0	1495.5	1534.2	1585.8	1611.6	1646.6	1716.8	1769.4	1775.1
157.5°	1492.2	1509.8	1527.3	1531.7	1558.3	1593.9	1611.6	1638.9	1693.5	1734.4	1738.4
160°	1517.4	1531.1	1544.7	1548.1	1569.3	1597.5	1611.6	1635.0	1681.8	1716.8	1719.1
162.5°	1542.6	1552.8	1563.1	1565.7	1580.9	1601.4	1611.6	1631.4	1670.8	1700.4	1702.6
165°	1570.0	1579.2	1588.5	1590.8	1597.7	1606.9	1611.6	1625.7	1654.0	1675.2	1677.5
167.5°	1595.2	1599.6	1604.0	1605.1	1610.9	1618.7	1622.6	1631.8	1650.3	1664.2	1665.2
170°	1611.6	1616.0	1620.4	1621.5	1621.9	1622.3	1622.6	1631.8	1650.3	1664.2	1664.2
172.5°	1620.4	1621.3	1622.3	1622.6	1622.6	1622.6	1622.6	1629.9	1644.4	1655.4	1654.5
175°	1632.4	1632.4	1632.4	1632.4	1629.2	1624.8	1622.6	1627.2	1636.5	1643.4	1643.4
177.5°	1632.4	1632.4	1632.4	1632.4	1629.9	1626.4	1624.8	1628.5	1635.7	1641.2	1640.2
180°	1632.4	1632.4	1632.4	1632.4	1632.4	1632.4	1632.4	1632.4	1632.4	1632.4	1632.4



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**CANDELA DISTRIBUTION (continued):**

	80°	90°
0°	721.9	721.9
2.5°	770.6	766.0
5°	991.1	995.7
7.5°	1334.6	1332.3
10°	1659.5	1680.5
12.5°	1896.3	1901.0
15°	2040.2	2049.5
17.5°	2095.9	2098.3
20°	2098.3	2093.6
22.5°	2072.7	2068.0
25°	2042.6	2040.2
27.5°	2014.6	2017.0
30°	2003.1	2010.1
32.5°	2003.1	2014.6
35°	2007.7	2019.3
37.5°	2005.4	2019.3
40°	1996.1	2012.4
42.5°	1970.6	1982.1
45°	1931.1	1945.1
47.5°	1880.1	1889.3
50°	1815.1	1824.3
52.5°	1733.9	1736.1
55°	1636.4	1645.7
57.5°	1531.9	1534.2
60°	1415.8	1422.8
62.5°	1292.9	1292.9
65°	1162.9	1167.5
67.5°	1028.2	1039.8
70°	891.3	893.6
72.5°	756.7	756.7
75°	617.4	619.7
77.5°	485.1	485.1
80°	359.8	362.1
82.5°	248.4	253.0
85°	155.5	155.5
87.5°	71.9	65.0
90°	41.6	41.6
92.5°	166.8	133.7
95°	581.3	481.0
97.5°	1392.7	1201.9
100°	2006.7	1779.3
102.5°	2610.6	2415.9
105°	3380.6	3275.9
107.5°	3884.9	3910.2
110°	4077.2	4186.3





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**CANDELA DISTRIBUTION (continued):**

	80°	90°
112.5°	4094.4	4261.9
115°	3985.8	4218.0
117.5°	3755.6	4013.2
120°	3570.1	3820.3
122.5°	3389.5	3636.3
125°	3131.8	3359.2
127.5°	2900.0	3091.8
130°	2763.4	2940.6
132.5°	2639.4	2798.2
135°	2469.6	2606.4
137.5°	2333.4	2445.4
140°	2239.9	2344.6
142.5°	2162.5	2252.6
145°	2046.4	2114.5
147.5°	1957.2	2013.7
150°	1901.2	1946.9
152.5°	1853.1	1887.7
155°	1798.1	1820.9
157.5°	1754.4	1770.5
160°	1728.4	1737.6
162.5°	1711.3	1720.1
165°	1686.8	1696.0
167.5°	1669.1	1673.0
170°	1664.2	1664.2
172.5°	1651.2	1647.8
175°	1643.4	1643.4
177.5°	1636.3	1632.4
180°	1632.4	1632.4



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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	3.60	4.36	4.67	5.44	6.91	16.78	17.54	17.85	18.62	20.09
	3H	4.30	4.98	5.38	6.07	7.56	18.61	19.29	19.69	20.38	21.87
	4H	4.59	5.24	5.68	6.33	7.82	19.25	19.90	20.34	20.99	22.48
	6H	4.83	5.43	5.94	6.52	8.03	19.67	20.27	20.78	21.36	22.87
	8H	4.90	5.47	6.00	6.58	8.08	19.79	20.36	20.90	21.47	22.97
	12H	4.91	5.45	6.02	6.56	8.08	19.86	20.40	20.97	21.50	23.03
4H	2H	10.80	11.45	11.90	12.54	14.03	17.04	17.69	18.14	18.78	20.27
	3H	12.36	12.90	13.47	14.02	15.53	19.07	19.62	20.18	20.73	22.24
	4H	12.45	12.95	13.56	14.05	15.58	19.84	20.34	20.95	21.44	22.97
	6H	12.45	12.88	13.57	14.01	15.53	20.37	20.80	21.49	21.93	23.45
	8H	12.43	12.83	13.55	13.95	15.49	20.53	20.93	21.65	22.05	23.59
	12H	12.38	12.74	13.52	13.87	15.42	20.62	20.98	21.75	22.11	23.66
8H	4H	13.88	14.29	15.00	15.41	16.94	19.89	20.29	21.01	21.41	22.95
	6H	14.12	14.45	15.26	15.62	17.15	20.51	20.84	21.65	22.01	23.54
	8H	14.14	14.43	15.29	15.57	17.13	20.73	21.02	21.88	22.16	23.72
	12H	14.10	14.36	15.25	15.50	17.09	20.87	21.13	22.02	22.26	23.86
12H	4H	14.02	14.39	15.16	15.52	17.06	19.84	20.20	20.97	21.33	22.88
	6H	14.38	14.67	15.53	15.81	17.37	20.49	20.78	21.64	21.93	23.48
	8H	14.44	14.70	15.60	15.84	17.43	20.72	20.97	21.87	22.11	23.70