

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: P938476

Luminaire Tested: SQ4-FB-150U-100D-940-1D-UNV-STD-W-8

Issue Date: 12/17/2024

**Test Information**

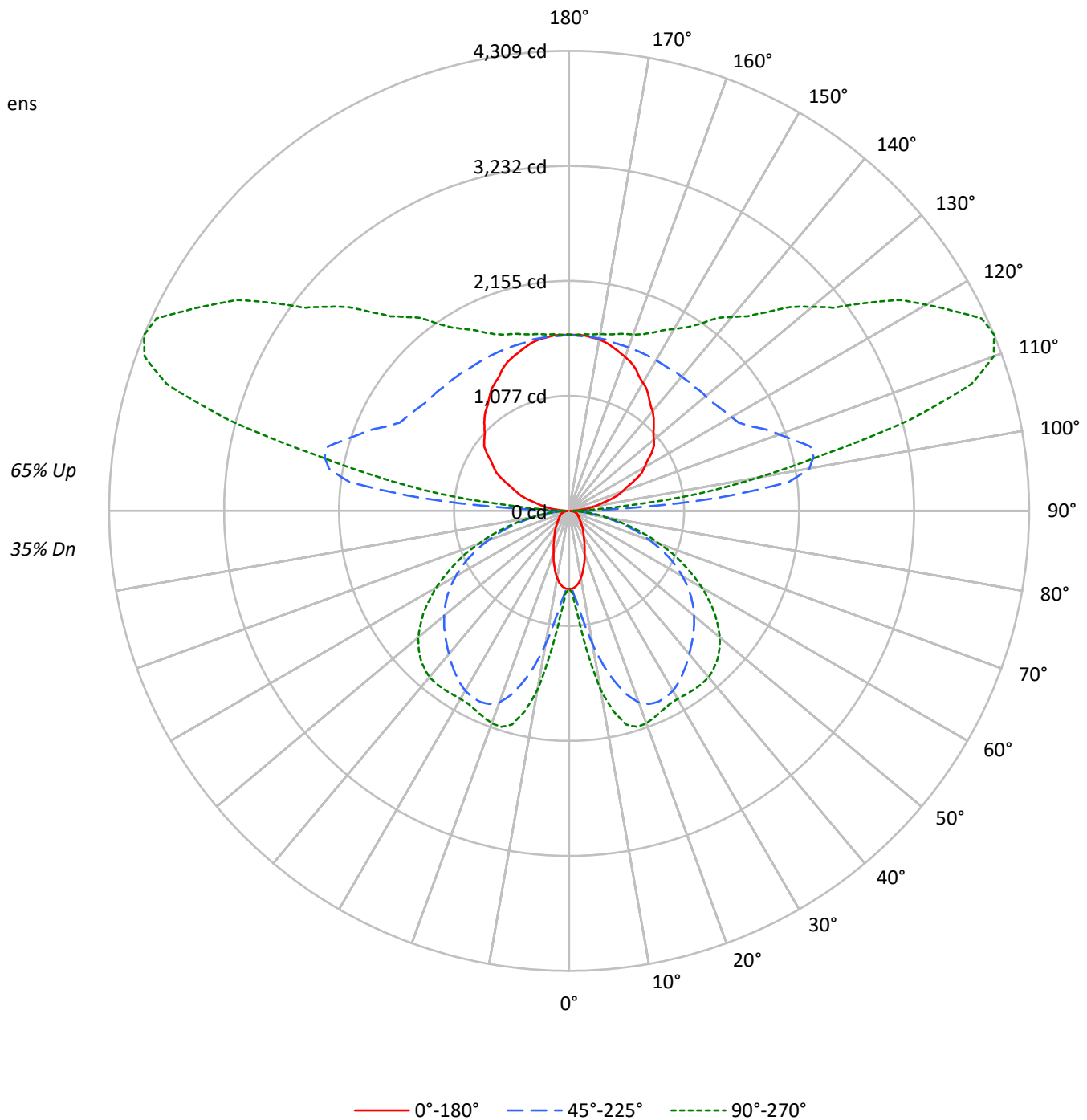
Test Method: LM-79-2019  
Report Number: P938476  
REPORT IS A COMBINATION OF REPORTS P933647 AND P933786  
Test Lab: INNOVATION CENTER  
Issue Date: 12/17/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ4-FB-150U-100D-940-1D-UNV-STD-W-8  
Description: CORELITE SQ4 SUSPENDED INDIRECT LED LUMINAIRE WITH Batwing Frosted Continuous Roll L  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 16351.6 lumens  
Efficiency: N/A  
Efficacy: 112.9 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

TEST NUMBER: P938476  
CATALOG NUMBER: SQ4-FB-150U-100D-940-1D-UNV-STD-W-8

### 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°	3386	3386	3386
5°	3308	3914	4551
10°	3001	5705	7546
15°	2550	7453	9111
20°	2076	8637	9286
25°	1732	9038	9097
30°	1461	9095	9080
35°	1291	8945	9314
40°	1125	8748	9557
45°	1019	8604	9595
50°	935	8475	9436
55°	895	8285	9018
60°	916	7922	8358
65°	954	7369	7450
70°	1015	6426	6294
75°	1125	5240	4912
80°	1230	3634	3310
85°	1090	1928	1695

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 9595 cd/sqm



TEST NUMBER: P938476

CATALOG NUMBER: SQ4-FB-150U-100D-940-1D-UNV-STD-W-8

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	94.4	0.6
10°-20°	418.4	2.6
20°-30°	731.9	4.5
30°-40°	942.1	5.8
40°-50°	1052.3	6.4
50°-60°	1007.9	6.2
60°-70°	798.7	4.9
70°-80°	469.7	2.9
80°-90°	136.8	0.8
90°-100°	804.5	4.9
100°-110°	2115.2	12.9
110°-120°	2193.2	13.4
120°-130°	1759.2	10.8
130°-140°	1380.3	8.4
140°-150°	1059.5	6.5
150°-160°	763.0	4.7
160°-170°	466.8	2.9
170°-180°	157.7	1.0
0°-30°	1244.7	7.6
0°-40°	2186.8	13.4
0°-60°	4247.0	26.0
0°-90°	5652.2	34.6
90°-120°	5112.9	31.3
90°-150°	9311.9	56.9
90°-180°	10699.0	65.4
0°-180°	16351.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	730	730	730	730	730	
5°	711	763	859	972	1007	66
15°	533	983	1657	2009	2072	148
25°	340	1115	1974	2060	2063	157
35°	230	1065	1859	1964	2042	144
45°	157	850	1643	1882	1967	122
55°	113	540	1394	1619	1664	103
65°	89	286	1035	1164	1180	88
75°	66	176	568	624	627	69
85°	23	54	141	155	157	25
90°	11	31	84	42	42	11
95°	106	416	1386	714	486	118
105°	381	577	2338	3550	3312	404
115°	677	822	1873	3736	4265	668
125°	942	1056	1704	2879	3396	836
135°	1122	1235	1650	2324	2635	868
145°	1302	1385	1629	1983	2138	815
155°	1471	1512	1629	1789	1841	676
165°	1587	1608	1629	1694	1715	448
175°	1650	1650	1640	1662	1662	157
180°	1650	1650	1650	1650	1650	



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 CATALOG NUMBER: SQ4-FB-150U-100D-940-1D-UNV-STD-W-8

**CANDELA DISTRIBUTION (FULL):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	729.8	729.8	729.8	729.8	729.8	729.8	729.8	729.8	729.8	729.8	729.8
2.5°	729.8	729.8	734.6	736.9	741.6	743.9	748.6	753.3	767.4	769.7	774.4
5°	711.0	720.4	751.0	762.7	795.6	840.1	858.9	889.4	952.7	971.6	983.3
7.5°	682.9	704.0	779.1	797.9	880.0	997.3	1046.6	1112.3	1213.3	1262.6	1302.4
10°	638.3	682.9	816.7	861.3	995.0	1173.3	1264.9	1356.4	1508.9	1577.0	1602.8
12.5°	589.0	661.7	856.6	917.6	1110.0	1370.5	1480.7	1581.7	1755.3	1846.9	1860.9
15°	532.7	631.3	894.1	983.3	1232.0	1534.7	1656.7	1781.2	1943.0	2008.7	2025.2
17.5°	483.4	607.8	929.3	1023.2	1325.9	1682.6	1807.0	1910.2	2041.6	2086.2	2098.0
20°	422.4	570.3	952.7	1074.7	1424.4	1790.6	1910.2	1990.0	2079.2	2107.3	2112.0
22.5°	377.8	530.3	966.9	1093.6	1490.2	1856.3	1957.2	2020.5	2081.6	2090.9	2093.3
25°	340.3	485.7	964.5	1114.7	1546.5	1896.1	1973.6	2020.5	2055.7	2060.4	2060.4
27.5°	305.0	436.5	955.1	1119.4	1588.7	1905.6	1966.6	1999.4	2015.8	2025.2	2025.2
30°	274.6	389.6	931.6	1110.0	1607.5	1896.1	1945.4	1961.9	1978.3	1992.3	1999.4
32.5°	251.1	345.0	896.4	1091.2	1609.9	1872.7	1907.9	1917.3	1940.7	1973.6	1985.3
35°	230.0	300.4	856.6	1065.4	1595.7	1835.1	1858.6	1868.0	1914.9	1964.2	1980.6
37.5°	208.9	267.6	804.9	1020.8	1574.6	1790.6	1807.0	1823.4	1896.1	1954.8	1973.6
40°	187.7	239.4	743.9	971.6	1541.7	1736.6	1750.6	1776.4	1872.7	1940.7	1959.5
42.5°	171.3	215.9	678.2	919.9	1499.6	1675.6	1696.7	1734.2	1844.5	1917.3	1938.4
45°	157.3	192.4	607.8	849.5	1445.6	1612.2	1642.7	1694.3	1811.6	1882.0	1900.9
47.5°	143.1	176.0	535.0	776.7	1386.9	1548.8	1588.7	1647.4	1767.0	1835.1	1851.6
50°	131.4	159.6	462.3	699.3	1323.6	1480.7	1527.7	1588.7	1710.7	1774.1	1795.2
52.5°	122.0	145.5	394.3	621.9	1250.7	1410.3	1464.3	1527.7	1642.7	1703.7	1717.7
55°	112.6	133.7	335.6	539.7	1175.7	1335.3	1393.9	1455.0	1567.6	1619.2	1628.6
57.5°	108.0	124.4	286.3	462.3	1095.9	1250.7	1316.5	1372.8	1478.4	1518.3	1527.7
60°	100.9	117.3	248.7	396.6	1009.1	1171.0	1227.3	1283.6	1372.8	1405.7	1412.7
62.5°	93.9	112.6	220.6	333.3	919.9	1077.1	1133.4	1185.1	1260.2	1283.6	1293.0
65°	89.2	108.0	199.4	286.3	828.4	978.6	1034.9	1079.5	1140.5	1164.0	1168.7
67.5°	84.4	103.3	183.0	246.4	736.9	880.0	922.3	964.5	1011.4	1034.9	1037.3
70°	77.4	98.6	169.0	218.3	643.0	767.4	802.6	847.2	884.7	896.4	903.5
72.5°	72.7	91.6	159.6	197.1	546.7	659.4	692.3	718.1	751.0	762.7	762.7
75°	65.7	82.1	150.2	176.0	448.3	539.7	567.9	593.7	619.6	624.3	617.2
77.5°	58.7	72.7	129.0	147.9	349.7	427.1	450.6	464.6	485.7	490.4	492.8
80°	49.3	63.4	100.9	115.0	253.4	314.4	330.9	342.6	361.4	361.4	366.1
82.5°	37.6	49.3	72.7	82.1	171.3	215.9	230.0	237.0	248.7	248.7	248.7
85°	23.4	30.5	47.0	54.0	103.3	131.4	140.8	143.1	152.6	154.9	154.9
87.5°	11.7	16.4	30.5	32.9	54.0	68.0	68.0	72.7	72.7	70.4	68.0
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	300.6	416.3	474.1	415.5	298.4	210.5	202.1
95°	106.4	244.2	382.0	416.5	739.5	1170.3	1385.7	1236.5	938.3	714.5	689.1
97.5°	183.9	305.5	427.1	457.5	996.2	1714.6	2073.7	1979.4	1790.8	1649.4	1601.2
100°	243.7	354.0	464.2	491.9	1089.7	1886.6	2285.2	2292.1	2305.9	2316.2	2258.7
102.5°	294.6	397.6	500.4	526.1	1132.5	1940.8	2345.0	2465.2	2705.4	2885.6	2836.4
105°	381.0	468.2	555.4	577.1	1164.2	1946.9	2338.4	2607.7	3146.3	3550.2	3523.8
107.5°	469.7	550.9	632.1	652.4	1170.1	1860.4	2205.4	2581.1	3332.4	3895.8	3902.2
110°	529.5	602.9	676.2	694.5	1161.2	1783.5	2094.7	2514.6	3354.5	3984.5	4012.0



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
112.5°	588.2	658.1	728.0	745.5	1161.6	1716.4	1993.8	2423.6	3283.2	3927.9	3970.2
115°	676.8	741.3	805.8	821.9	1172.3	1639.5	1873.1	2287.1	3115.2	3736.3	3795.0
117.5°	764.3	822.9	881.5	896.2	1194.1	1591.4	1790.0	2163.7	2911.0	3471.5	3536.6
120°	815.3	870.4	925.6	939.3	1211.9	1575.1	1756.8	2098.3	2781.1	3293.2	3356.5
122.5°	865.1	920.8	976.4	990.3	1237.3	1566.7	1731.3	2038.8	2653.7	3114.8	3177.3
125°	941.5	992.3	1043.0	1055.7	1271.6	1559.6	1703.6	1964.8	2487.1	2878.9	2936.3
127.5°	1003.6	1054.8	1106.0	1118.8	1306.0	1555.6	1680.4	1904.6	2353.1	2689.5	2738.0
130°	1036.8	1092.0	1147.1	1160.9	1331.1	1558.0	1671.5	1871.1	2270.4	2569.9	2614.7
132.5°	1071.2	1126.3	1181.5	1195.2	1351.4	1559.7	1663.8	1842.4	2199.8	2467.9	2508.1
135°	1122.1	1172.3	1222.6	1235.1	1373.6	1558.2	1650.4	1800.2	2099.5	2324.0	2358.5
137.5°	1174.2	1223.9	1273.6	1286.0	1406.8	1567.8	1648.3	1774.8	2027.8	2217.6	2245.9
140°	1217.4	1263.2	1308.9	1320.4	1427.1	1569.4	1640.5	1749.8	1968.4	2132.4	2158.8
142.5°	1250.6	1292.9	1335.3	1345.9	1444.1	1575.0	1640.5	1736.5	1928.5	2072.5	2095.2
145°	1301.5	1338.5	1375.4	1384.7	1466.3	1575.0	1629.4	1707.9	1865.0	1982.8	2000.0
147.5°	1352.5	1388.5	1424.4	1433.4	1498.8	1585.9	1629.4	1691.2	1814.7	1907.4	1921.7
150°	1385.7	1418.2	1450.7	1458.8	1515.6	1591.5	1629.4	1681.6	1785.9	1864.3	1875.8
152.5°	1420.1	1444.7	1469.4	1475.5	1526.8	1595.2	1629.4	1674.0	1763.0	1829.9	1838.6
155°	1471.1	1489.3	1507.5	1512.0	1551.2	1603.3	1629.4	1664.8	1735.8	1789.0	1794.7
157.5°	1508.7	1526.5	1544.1	1548.6	1575.5	1611.5	1629.4	1657.0	1712.2	1753.5	1757.6
160°	1534.2	1548.0	1561.7	1565.2	1586.6	1615.1	1629.4	1653.0	1700.3	1735.8	1738.1
162.5°	1559.7	1570.0	1580.4	1582.9	1598.4	1619.1	1629.4	1649.4	1689.2	1719.2	1721.4
165°	1587.3	1596.6	1606.0	1608.3	1615.4	1624.7	1629.4	1643.7	1672.3	1693.7	1696.0
167.5°	1612.8	1617.2	1621.7	1622.8	1628.7	1636.6	1640.5	1649.8	1668.6	1682.6	1683.6
170°	1629.4	1633.8	1638.3	1639.4	1639.8	1640.2	1640.5	1649.8	1668.6	1682.6	1682.6
172.5°	1638.3	1639.2	1640.2	1640.5	1640.5	1640.5	1640.5	1647.9	1662.6	1673.7	1672.8
175°	1650.4	1650.4	1650.4	1650.4	1647.2	1642.7	1640.5	1645.2	1654.5	1661.5	1661.5
177.5°	1650.4	1650.4	1650.4	1650.4	1647.9	1644.4	1642.7	1646.4	1653.8	1659.3	1658.3
180°	1650.4	1650.4	1650.4	1650.4	1650.4	1650.4	1650.4	1650.4	1650.4	1650.4	1650.4



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**CANDELA DISTRIBUTION (continued):**

	80°	90°
0°	729.8	729.8
2.5°	779.1	774.4
5°	1002.0	1006.7
7.5°	1349.3	1347.0
10°	1677.9	1699.0
12.5°	1917.3	1922.0
15°	2062.7	2072.1
17.5°	2119.0	2121.4
20°	2121.4	2116.7
22.5°	2095.6	2090.9
25°	2065.1	2062.7
27.5°	2036.9	2039.3
30°	2025.2	2032.3
32.5°	2025.2	2036.9
35°	2029.9	2041.6
37.5°	2027.6	2041.6
40°	2018.2	2034.6
42.5°	1992.3	2004.0
45°	1952.4	1966.6
47.5°	1900.9	1910.2
50°	1835.1	1844.5
52.5°	1753.0	1755.3
55°	1654.4	1663.8
57.5°	1548.8	1551.2
60°	1431.5	1438.6
62.5°	1307.1	1307.1
65°	1175.7	1180.4
67.5°	1039.6	1051.3
70°	901.1	903.5
72.5°	765.0	765.0
75°	624.3	626.6
77.5°	490.4	490.4
80°	363.7	366.1
82.5°	251.1	255.8
85°	157.3	157.3
87.5°	72.7	65.7
90°	42.1	42.1
92.5°	168.6	135.2
95°	587.7	486.3
97.5°	1408.1	1215.1
100°	2028.8	1798.9
102.5°	2639.4	2442.5
105°	3417.9	3312.1
107.5°	3927.8	3953.4
110°	4122.3	4232.6





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**CANDELA DISTRIBUTION (continued):**

	80°	90°
112.5°	4139.6	4308.9
115°	4029.8	4264.6
117.5°	3797.1	4057.5
120°	3609.5	3862.5
122.5°	3426.9	3676.5
125°	3166.3	3396.2
127.5°	2932.0	3125.9
130°	2793.9	2973.1
132.5°	2668.5	2829.1
135°	2496.9	2635.2
137.5°	2359.1	2472.4
140°	2264.7	2370.5
142.5°	2186.3	2277.5
145°	2069.0	2137.9
147.5°	1978.8	2035.9
150°	1922.2	1968.4
152.5°	1873.6	1908.6
155°	1817.9	1841.0
157.5°	1773.8	1790.0
160°	1747.5	1756.8
162.5°	1730.2	1739.1
165°	1705.4	1714.7
167.5°	1687.6	1691.5
170°	1682.6	1682.6
172.5°	1669.4	1666.0
175°	1661.5	1661.5
177.5°	1654.3	1650.4
180°	1650.4	1650.4



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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	3.64	4.40	4.71	5.48	6.95	16.81	17.58	17.89	18.65	20.13
	3H	4.33	5.02	5.42	6.10	7.59	18.65	19.33	19.73	20.42	21.91
	4H	4.63	5.28	5.72	6.36	7.86	19.29	19.94	20.38	21.02	22.52
	6H	4.87	5.47	5.97	6.56	8.07	19.71	20.31	20.81	21.40	22.91
	8H	4.94	5.51	6.04	6.61	8.12	19.83	20.40	20.94	21.51	23.01
	12H	4.95	5.49	6.06	6.59	8.12	19.89	20.43	21.00	21.54	23.06
4H	2H	10.84	11.49	11.94	12.58	14.07	17.08	17.72	18.18	18.81	20.31
	3H	12.40	12.94	13.50	14.05	15.56	19.11	19.66	20.22	20.77	22.28
	4H	12.49	12.99	13.60	14.09	15.62	19.87	20.37	20.99	21.48	23.01
	6H	12.49	12.92	13.61	14.05	15.57	20.41	20.84	21.53	21.96	23.49
	8H	12.47	12.87	13.58	13.99	15.53	20.57	20.97	21.69	22.09	23.63
	12H	12.42	12.78	13.55	13.91	15.46	20.66	21.02	21.79	22.15	23.70
8H	4H	13.92	14.32	15.04	15.44	16.98	19.93	20.33	21.05	21.45	22.99
	6H	14.16	14.49	15.30	15.65	17.19	20.55	20.88	21.69	22.04	23.58
	8H	14.18	14.47	15.32	15.61	17.16	20.77	21.06	21.92	22.20	23.76
	12H	14.14	14.40	15.29	15.53	17.13	20.91	21.16	22.06	22.30	23.89
12H	4H	14.06	14.42	15.20	15.56	17.10	19.87	20.24	21.01	21.37	22.91
	6H	14.42	14.71	15.56	15.85	17.41	20.53	20.82	21.68	21.96	23.52
	8H	14.48	14.74	15.63	15.88	17.47	20.76	21.01	21.91	22.15	23.74