

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: P937756

Luminaire Tested: SQ4-FB-100U-125D-93050-1D-UNV-STD-W-12-5000K

Issue Date: 12/17/2024

**Test Information**

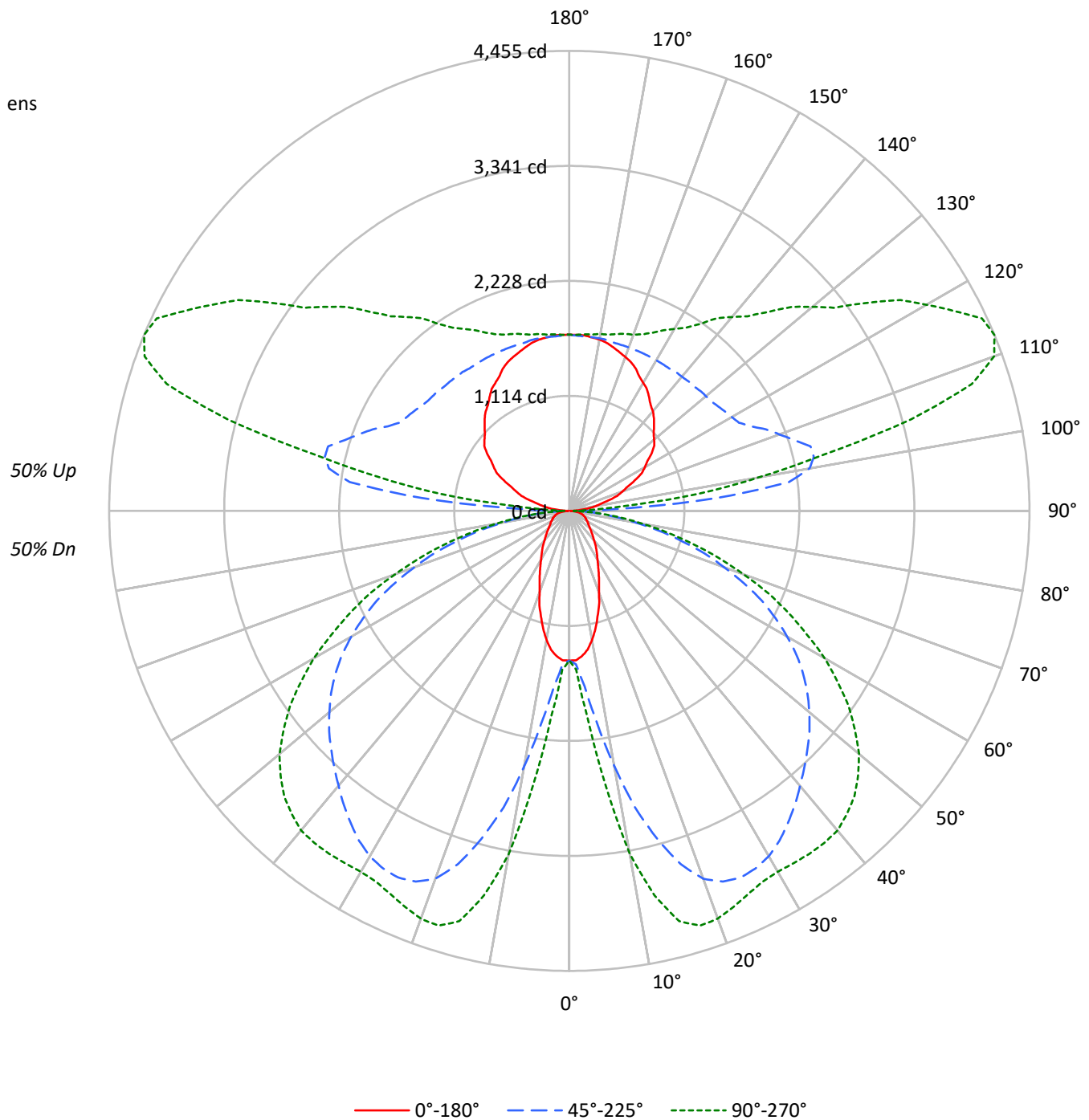
Test Method: LM-79-2019  
Report Number: P937756  
REPORT IS A COMBINATION OF REPORTS P933560 AND P933786  
Test Lab: INNOVATION CENTER  
Issue Date: 12/17/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ4-FB-100U-125D-93050-1D-UNV-STD-W-12-5000K  
Description: CORELITE SQ4 SUSPENDED INDIRECT LED LUMINAIRE WITH Batwing Frosted Continuous Roll L  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 22276.2 lumens  
Efficiency: N/A  
Efficacy: 107.9 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: General Diffuse  
  
Input Watts (W): 206.4  
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	0
RCR																		
0	107	107	107	107	99	99	99	99	84	84	84	69	69	69	56	56	56	50
1	97	93	89	85	90	86	82	79	72	70	67	60	58	57	49	48	47	41
2	88	80	74	68	81	74	69	64	63	59	55	52	49	46	42	40	38	34
3	80	70	62	56	73	65	58	53	55	50	45	46	42	39	37	34	32	28
4	73	62	53	47	67	57	50	44	48	43	38	40	36	32	33	30	27	23
5	67	54	46	40	61	50	43	37	43	37	32	36	31	28	29	26	23	20
6	61	49	40	34	56	45	37	32	38	32	28	32	27	24	26	23	20	17
7	56	44	35	30	52	40	33	28	34	29	24	29	24	21	24	20	17	15
8	52	39	31	26	48	37	29	24	31	25	21	26	22	18	22	18	15	13
9	48	36	28	23	44	33	26	21	28	23	19	24	19	16	20	16	14	11
10	45	33	25	20	41	30	24	19	26	21	17	22	18	15	18	15	12	10

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

	0°	45°	90°
0°	4482	4482	4482
5°	4380	5181	6024
10°	3974	7554	9987
15°	3379	9872	12059
20°	2752	11443	12290
25°	2296	11977	12040
30°	1938	12056	12017
35°	1714	11859	12328
40°	1494	11602	12649
45°	1354	11415	12699
50°	1243	11247	12489
55°	1192	11000	11935
60°	1221	10522	11061
65°	1273	9792	9860
70°	1359	8546	8329
75°	1511	6974	6500
80°	1663	4843	4380
85°	1510	2574	2242

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 12699 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	187.4	0.8
10°-20°	830.7	3.7
20°-30°	1453.0	6.5
30°-40°	1870.4	8.4
40°-50°	2089.2	9.4
50°-60°	2000.9	9.0
60°-70°	1585.7	7.1
70°-80°	932.5	4.2
80°-90°	265.6	1.2
90°-100°	831.7	3.7
100°-110°	2186.6	9.8
110°-120°	2267.3	10.2
120°-130°	1818.6	8.2
130°-140°	1427.0	6.4
140°-150°	1095.3	4.9
150°-160°	788.8	3.5
160°-170°	482.6	2.2
170°-180°	163.0	0.7
0°-30°	2471.0	11.1
0°-40°	4341.4	19.5
0°-60°	8431.5	37.8
0°-90°	11215.3	50.3
90°-120°	5285.6	23.7
90°-150°	9626.5	43.2
90°-180°	11061.0	49.7
0°-180°	22276.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1449	1449	1449	1449	1449	
5°	1412	1514	1705	1929	1999	130
15°	1058	1952	3289	3988	4114	294
25°	676	2213	3918	4090	4095	311
35°	457	2115	3690	3900	4053	285
45°	312	1686	3261	3736	3904	241
55°	224	1072	2767	3215	3303	204
65°	177	568	2054	2311	2343	175
75°	130	350	1128	1239	1244	137
85°	47	107	280	308	312	49
90°	12	32	87	44	44	13
95°	110	431	1432	739	503	122
105°	394	597	2417	3670	3424	418
115°	700	850	1936	3862	4409	691
125°	973	1091	1761	2976	3511	864
135°	1160	1277	1706	2402	2724	898
145°	1346	1431	1684	2050	2210	843
155°	1521	1563	1684	1849	1903	699
165°	1641	1663	1684	1751	1773	463
175°	1706	1706	1696	1718	1718	162
180°	1706	1706	1706	1706	1706	



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**CANDELA DISTRIBUTION (FULL):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	1448.9	1448.9	1448.9	1448.9	1448.9	1448.9	1448.9	1448.9	1448.9	1448.9	1448.9
2.5°	1448.9	1448.9	1458.2	1462.9	1472.2	1476.8	1486.2	1495.5	1523.5	1528.1	1537.4
5°	1411.6	1430.2	1490.8	1514.1	1579.4	1667.9	1705.2	1765.7	1891.5	1928.8	1952.0
7.5°	1355.7	1397.6	1546.8	1584.0	1747.1	1980.0	2077.8	2208.3	2408.7	2506.5	2585.7
10°	1267.2	1355.7	1621.3	1709.8	1975.3	2329.4	2511.1	2692.8	2995.6	3130.7	3182.0
12.5°	1169.4	1313.8	1700.5	1821.6	2203.7	2720.8	2939.7	3140.1	3484.9	3666.6	3694.5
15°	1057.6	1253.2	1775.0	1952.0	2445.9	3046.9	3289.1	3536.1	3857.5	3988.0	4020.6
17.5°	959.7	1206.7	1844.9	2031.2	2632.2	3340.4	3587.4	3792.3	4053.2	4141.7	4165.1
20°	838.6	1132.1	1891.5	2133.7	2828.0	3554.7	3792.3	3950.7	4127.8	4183.7	4192.9
22.5°	750.0	1052.9	1919.5	2171.0	2958.4	3685.2	3885.5	4011.2	4132.4	4151.0	4155.7
25°	675.5	964.4	1914.8	2212.9	3070.1	3764.4	3918.1	4011.2	4081.2	4090.4	4090.4
27.5°	605.7	866.6	1896.1	2222.3	3154.0	3783.0	3904.1	3969.3	4002.0	4020.6	4020.6
30°	545.1	773.3	1849.5	2203.7	3191.3	3764.4	3862.2	3894.8	3927.5	3955.4	3969.3
32.5°	498.5	684.9	1779.7	2166.4	3196.0	3717.8	3787.7	3806.3	3852.9	3918.1	3941.4
35°	456.6	596.3	1700.5	2115.1	3168.1	3643.2	3689.8	3708.5	3801.6	3899.5	3932.0
37.5°	414.6	531.1	1598.0	2026.6	3126.1	3554.7	3587.4	3619.9	3764.4	3880.8	3918.1
40°	372.7	475.2	1476.8	1928.8	3060.9	3447.6	3475.5	3526.8	3717.8	3852.9	3890.1
42.5°	340.1	428.7	1346.4	1826.3	2977.0	3326.5	3368.4	3442.9	3661.9	3806.3	3848.3
45°	312.1	382.0	1206.7	1686.5	2869.8	3200.6	3261.2	3363.7	3596.6	3736.4	3773.7
47.5°	284.2	349.5	1062.2	1542.1	2753.4	3074.8	3154.0	3270.5	3508.2	3643.2	3675.8
50°	260.9	316.8	917.8	1388.4	2627.6	2939.7	3032.9	3154.0	3396.3	3522.1	3564.1
52.5°	242.3	288.9	782.7	1234.6	2483.2	2800.0	2907.2	3032.9	3261.2	3382.3	3410.2
55°	223.6	265.6	666.2	1071.5	2334.1	2650.9	2767.4	2888.5	3112.1	3214.6	3233.2
57.5°	214.3	247.0	568.4	917.8	2175.7	2483.2	2613.6	2725.5	2935.1	3014.3	3032.9
60°	200.3	232.9	493.8	787.4	2003.3	2324.8	2436.6	2548.4	2725.5	2790.6	2804.7
62.5°	186.4	223.6	437.9	661.6	1826.3	2138.4	2250.2	2352.7	2501.8	2548.4	2567.1
65°	177.0	214.3	396.0	568.4	1644.6	1942.8	2054.5	2143.1	2264.2	2310.8	2320.1
67.5°	167.8	205.0	363.4	489.2	1462.9	1747.1	1830.9	1914.8	2008.0	2054.5	2059.2
70°	153.7	195.7	335.4	433.2	1276.5	1523.5	1593.3	1681.9	1756.4	1779.7	1793.6
72.5°	144.4	181.7	316.8	391.3	1085.5	1309.2	1374.3	1425.6	1490.8	1514.1	1514.1
75°	130.4	163.1	298.2	349.5	889.8	1071.5	1127.5	1178.7	1229.9	1239.3	1225.3
77.5°	116.5	144.4	256.2	293.5	694.1	848.0	894.5	922.5	964.4	973.7	978.4
80°	97.8	125.8	200.3	228.3	503.2	624.3	656.9	680.2	717.5	717.5	726.8
82.5°	74.5	97.8	144.4	163.1	340.1	428.7	456.6	470.5	493.8	493.8	493.8
85°	46.6	60.6	93.1	107.2	205.0	260.9	279.5	284.2	302.8	307.5	307.5
87.5°	23.3	32.6	60.6	65.2	107.2	135.1	135.1	144.4	144.4	139.8	135.1
90°	11.5	20.6	29.7	32.0	50.4	74.8	87.0	77.4	58.0	43.5	43.5
92.5°	45.8	123.6	201.5	221.0	310.7	430.3	490.1	429.6	308.4	217.6	209.0
95°	109.9	252.5	395.0	430.6	764.5	1209.9	1432.5	1278.3	969.9	738.6	712.3
97.5°	190.1	315.8	441.5	473.0	1029.8	1772.3	2143.6	2046.2	1851.3	1705.1	1655.2
100°	251.9	365.9	479.9	508.4	1126.4	1950.4	2362.4	2369.6	2383.8	2394.4	2335.1
102.5°	304.6	410.9	517.3	543.9	1170.7	2006.4	2424.3	2548.4	2796.8	2983.1	2932.1
105°	394.0	484.0	574.1	596.6	1203.6	2012.8	2417.4	2695.8	3252.6	3670.1	3642.8
107.5°	485.6	569.5	653.5	674.5	1209.6	1923.1	2279.9	2668.3	3444.9	4027.4	4034.0
110°	547.4	623.2	699.0	718.0	1200.4	1843.7	2165.4	2599.6	3467.8	4119.0	4147.5



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
112.5°	608.1	680.4	752.6	770.7	1200.9	1774.5	2061.2	2505.6	3394.2	4060.6	4104.4
115°	699.7	766.4	833.0	849.7	1211.9	1694.9	1936.4	2364.4	3220.5	3862.5	3923.1
117.5°	790.1	850.7	911.3	926.4	1234.5	1645.2	1850.5	2236.8	3009.4	3588.8	3656.1
120°	842.8	899.8	956.9	971.1	1252.8	1628.4	1816.2	2169.2	2875.0	3404.5	3469.9
122.5°	894.4	951.9	1009.4	1023.8	1279.2	1619.6	1789.9	2107.7	2743.4	3220.1	3284.6
125°	973.4	1025.8	1078.2	1091.3	1314.6	1612.4	1761.2	2031.2	2571.2	2976.2	3035.6
127.5°	1037.5	1090.4	1143.4	1156.6	1350.1	1608.2	1737.2	1969.0	2432.6	2780.3	2830.4
130°	1071.9	1128.9	1185.8	1200.1	1376.1	1610.7	1728.0	1934.4	2347.2	2656.7	2703.1
132.5°	1107.4	1164.4	1221.4	1235.6	1397.0	1612.3	1719.9	1904.7	2274.2	2551.4	2592.9
135°	1160.1	1211.9	1263.8	1276.8	1419.9	1610.8	1706.3	1861.0	2170.3	2402.4	2438.2
137.5°	1213.8	1265.2	1316.6	1329.5	1454.3	1620.7	1704.0	1834.7	2096.4	2292.6	2321.9
140°	1258.5	1305.9	1353.1	1365.0	1475.3	1622.4	1695.9	1808.9	2034.9	2204.4	2231.7
142.5°	1292.8	1336.6	1380.4	1391.3	1492.8	1628.2	1695.9	1795.2	1993.7	2142.5	2166.0
145°	1345.5	1383.7	1421.9	1431.4	1515.8	1628.3	1684.5	1765.6	1928.0	2049.8	2067.6
147.5°	1398.2	1435.4	1472.5	1481.8	1549.3	1639.5	1684.5	1748.4	1876.1	1971.9	1986.7
150°	1432.5	1466.1	1499.7	1508.1	1567.0	1645.3	1684.5	1738.5	1846.3	1927.3	1939.2
152.5°	1468.0	1493.5	1519.0	1525.3	1578.3	1649.1	1684.5	1730.6	1822.6	1891.7	1900.7
155°	1520.7	1539.5	1558.4	1563.1	1603.6	1657.5	1684.5	1721.1	1794.4	1849.3	1855.3
157.5°	1559.6	1578.0	1596.3	1600.9	1628.8	1666.0	1684.5	1713.0	1770.0	1812.7	1816.9
160°	1586.0	1600.3	1614.5	1618.1	1640.2	1669.7	1684.5	1708.9	1757.8	1794.4	1796.8
162.5°	1612.3	1622.9	1633.7	1636.3	1652.4	1673.8	1684.5	1705.1	1746.3	1777.2	1779.5
165°	1640.9	1650.6	1660.3	1662.7	1669.9	1679.7	1684.5	1699.3	1728.8	1750.9	1753.3
167.5°	1667.3	1671.9	1676.4	1677.6	1683.7	1691.9	1695.9	1705.6	1725.0	1739.5	1740.5
170°	1684.5	1689.1	1693.7	1694.8	1695.2	1695.6	1695.9	1705.6	1725.0	1739.5	1739.5
172.5°	1693.6	1694.6	1695.6	1695.9	1695.9	1695.9	1695.9	1703.5	1718.8	1730.3	1729.4
175°	1706.3	1706.3	1706.3	1706.3	1702.8	1698.2	1695.9	1700.8	1710.4	1717.6	1717.6
177.5°	1706.3	1706.3	1706.3	1706.3	1703.6	1700.0	1698.2	1702.0	1709.7	1715.4	1714.3
180°	1706.3	1706.3	1706.3	1706.3	1706.3	1706.3	1706.3	1706.3	1706.3	1706.3	1706.3



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**CANDELA DISTRIBUTION (continued):**

	80°	90°
0°	1448.9	1448.9
2.5°	1546.8	1537.4
5°	1989.4	1998.6
7.5°	2678.8	2674.2
10°	3331.0	3373.0
12.5°	3806.3	3815.6
15°	4095.1	4113.8
17.5°	4207.0	4211.6
20°	4211.6	4202.3
22.5°	4160.4	4151.0
25°	4099.8	4095.1
27.5°	4043.9	4048.6
30°	4020.6	4034.6
32.5°	4020.6	4043.9
35°	4029.9	4053.2
37.5°	4025.3	4053.2
40°	4006.7	4039.2
42.5°	3955.4	3978.7
45°	3876.2	3904.1
47.5°	3773.7	3792.3
50°	3643.2	3661.9
52.5°	3480.2	3484.9
55°	3284.5	3303.2
57.5°	3074.8	3079.5
60°	2841.9	2855.9
62.5°	2595.0	2595.0
65°	2334.1	2343.4
67.5°	2063.9	2087.2
70°	1789.0	1793.6
72.5°	1518.8	1518.8
75°	1239.3	1243.9
77.5°	973.7	973.7
80°	722.1	726.8
82.5°	498.5	507.9
85°	312.1	312.1
87.5°	144.4	130.4
90°	43.5	43.5
92.5°	174.3	139.7
95°	607.5	502.7
97.5°	1455.7	1256.2
100°	2097.4	1859.7
102.5°	2728.6	2525.0
105°	3533.3	3423.9
107.5°	4060.5	4087.0
110°	4261.5	4375.6





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**CANDELA DISTRIBUTION (continued):**

	80°	90°
112.5°	4279.5	4454.6
115°	4166.0	4408.7
117.5°	3925.3	4194.6
120°	3731.4	3993.1
122.5°	3542.6	3800.6
125°	3273.2	3510.9
127.5°	3031.1	3231.6
130°	2888.3	3073.5
132.5°	2758.8	2924.7
135°	2581.2	2724.3
137.5°	2438.9	2556.0
140°	2341.2	2450.6
142.5°	2260.2	2354.3
145°	2138.9	2210.1
147.5°	2045.7	2104.7
150°	1987.1	2034.9
152.5°	1936.9	1973.0
155°	1879.3	1903.2
157.5°	1833.7	1850.5
160°	1806.5	1816.2
162.5°	1788.7	1797.9
165°	1763.0	1772.6
167.5°	1744.5	1748.6
170°	1739.5	1739.5
172.5°	1725.8	1722.2
175°	1717.6	1717.6
177.5°	1710.3	1706.3
180°	1706.3	1706.3



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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	6.25	7.16	7.20	8.13	9.39	19.45	20.35	20.39	21.32	22.58
	3H	6.96	7.77	7.92	8.75	10.04	21.29	22.11	22.25	23.08	24.37
	4H	7.26	8.03	8.23	9.01	10.31	21.94	22.71	22.92	23.69	24.99
	6H	7.51	8.22	8.50	9.21	10.52	22.38	23.09	23.36	24.08	25.38
	8H	7.58	8.26	8.57	9.26	10.57	22.51	23.18	23.49	24.19	25.49
	12H	7.60	8.25	8.60	9.24	10.57	22.58	23.22	23.57	24.22	25.55
4H	2H	13.48	14.25	14.46	15.23	16.53	19.72	20.49	20.70	21.47	22.77
	3H	15.05	15.70	16.04	16.71	18.02	21.78	22.42	22.77	23.43	24.74
	4H	15.15	15.74	16.15	16.74	18.07	22.55	23.14	23.55	24.14	25.48
	6H	15.16	15.67	16.17	16.70	18.03	23.10	23.61	24.11	24.63	25.96
	8H	15.14	15.62	16.15	16.64	17.98	23.26	23.74	24.27	24.76	26.10
	12H	15.10	15.53	16.13	16.57	17.92	23.36	23.79	24.39	24.83	26.18
8H	4H	16.60	17.08	17.61	18.10	19.44	22.62	23.09	23.62	24.11	25.46
	6H	16.85	17.24	17.88	18.30	19.64	23.25	23.65	24.29	24.71	26.05
	8H	16.86	17.21	17.91	18.26	19.62	23.47	23.82	24.52	24.87	26.23
	12H	16.83	17.14	17.88	18.18	19.59	23.62	23.93	24.67	24.97	26.38
12H	4H	16.75	17.18	17.78	18.21	19.56	22.57	23.00	23.60	24.04	25.39
	6H	17.11	17.45	18.15	18.50	19.86	23.23	23.58	24.28	24.63	25.99
	8H	17.18	17.48	18.22	18.53	19.93	23.47	23.78	24.52	24.82	26.22