

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: P938489

Luminaire Tested: SQ4-FB-150U-100D-B2750-1D-UNV-STD-W-6-3500K

Issue Date: 12/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P938489
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-B2750-1D-UNV-STD-W-6-3500K
Description: CORELITE SQ4 SUSPENDED INDIRECT LED LUMINAIRE WITH Batwing Frosted Continuous Roll L
Light Source: -
Ballast/Driver: -

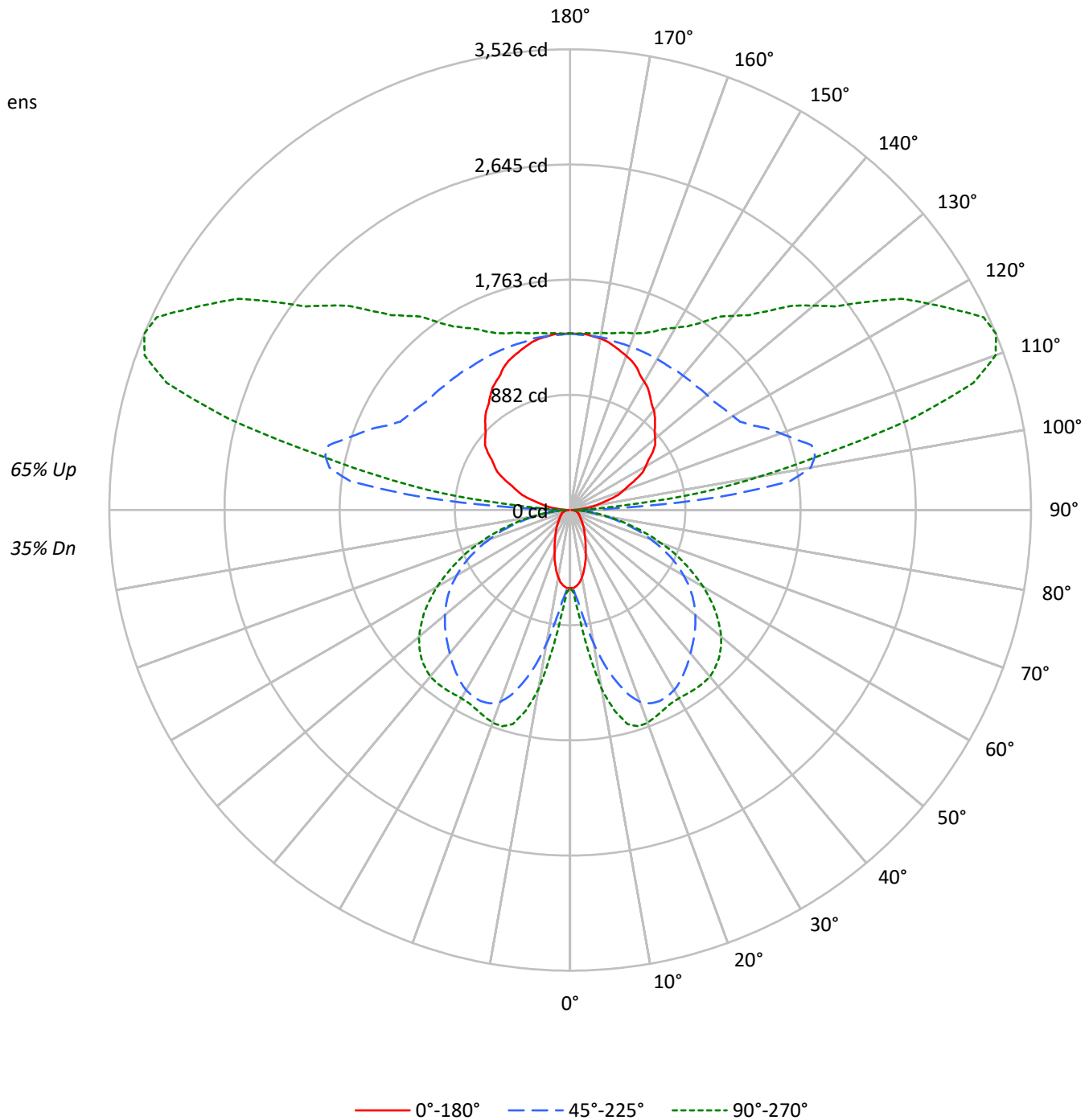
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13381.9 lumens
Efficiency: N/A
Efficacy: 123.2 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_{in}): 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: P938489
CATALOG NUMBER: SQ4-FB-150U-100D-B2750-1D-UNV-STD-W-6-3500K

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
RCR																				
0	103	103	103	103	93	93	93	93	75	75	75	58	58	58	42	42	42	35		
1	94	90	86	82	85	81	78	75	65	63	60	50	49	47	36	35	35	28		
2	85	78	72	66	77	70	65	61	56	53	49	43	41	39	32	30	29	23		
3	77	68	61	55	69	61	55	50	49	45	41	38	35	32	28	26	24	19		
4	71	60	52	46	63	54	47	42	43	38	34	34	30	27	24	22	20	16		
5	64	53	45	39	58	48	41	36	39	33	29	30	26	23	22	19	17	14		
6	59	47	39	33	53	43	36	30	34	29	25	27	23	20	19	17	15	12		
7	54	42	34	29	49	38	31	26	31	26	22	24	20	17	18	15	13	10		
8	50	38	30	25	45	35	28	23	28	23	19	22	18	15	16	13	11	9		
9	47	35	27	22	42	31	25	20	26	20	17	20	16	14	15	12	10	8		
10	43	31	24	20	39	29	22	18	23	18	15	18	15	12	13	11	9	7		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3694	3694	3694
5°	3608	4269	4966
10°	3271	6222	8233
15°	2780	8126	9941
20°	2261	9415	10132
25°	1886	9849	9926
30°	1590	9909	9907
35°	1405	9742	10163
40°	1223	9526	10428
45°	1107	9366	10468
50°	1015	9222	10295
55°	971	9013	9839
60°	993	8613	9118
65°	1032	8007	8128
70°	1097	6979	6866
75°	1211	5684	5358
80°	1312	3937	3611
85°	1145	2085	1849

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 10468 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	77.3	0.6
10°-20°	342.4	2.6
20°-30°	598.9	4.5
30°-40°	771.0	5.8
40°-50°	861.1	6.4
50°-60°	824.8	6.2
60°-70°	653.6	4.9
70°-80°	384.4	2.9
80°-90°	111.9	0.8
90°-100°	658.4	4.9
100°-110°	1731.1	12.9
110°-120°	1794.9	13.4
120°-130°	1439.7	10.8
130°-140°	1129.7	8.4
140°-150°	867.1	6.5
150°-160°	624.4	4.7
160°-170°	382.1	2.9
170°-180°	129.1	1.0
0°-30°	1018.6	7.6
0°-40°	1789.5	13.4
0°-60°	3475.4	26.0
0°-90°	4625.4	34.6
90°-120°	4184.4	31.3
90°-150°	7621.0	56.9
90°-180°	8757.0	65.4
0°-180°	13381.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	597	597	597	597	597	
5°	582	624	703	795	824	54
15°	436	805	1356	1644	1696	121
25°	278	912	1615	1686	1688	128
35°	188	872	1521	1607	1671	118
45°	129	695	1344	1540	1609	100
55°	92	442	1141	1325	1362	84
65°	73	234	847	952	966	72
75°	54	144	465	511	513	56
85°	19	44	115	127	129	20
90°	9	25	69	34	34	9
95°	87	341	1134	585	398	97
105°	312	472	1914	2906	2711	331
115°	554	673	1533	3058	3490	547
125°	770	864	1394	2356	2780	684
135°	918	1011	1351	1902	2157	711
145°	1065	1133	1334	1623	1750	667
155°	1204	1237	1334	1464	1507	553
165°	1299	1316	1334	1386	1403	367
175°	1351	1351	1343	1360	1360	128
180°	1351	1351	1351	1351	1351	



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CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	597.2	597.2	597.2	597.2	597.2	597.2	597.2	597.2	597.2	597.2	597.2
2.5°	597.2	597.2	601.1	603.0	606.8	608.7	612.6	616.5	627.9	629.8	633.7
5°	581.9	589.5	614.5	624.1	651.0	687.5	702.8	727.8	779.7	795.1	804.7
7.5°	558.8	576.1	637.6	652.9	720.2	816.2	856.5	910.3	992.8	1033.1	1065.8
10°	522.3	558.8	668.3	704.8	814.3	960.2	1035.1	1110.0	1234.8	1290.5	1311.6
12.5°	482.0	541.6	701.0	750.9	908.3	1121.5	1211.7	1294.3	1436.4	1511.3	1522.9
15°	436.0	516.6	731.7	804.7	1008.1	1255.9	1355.8	1457.6	1590.0	1643.8	1657.3
17.5°	395.6	497.4	760.5	837.3	1085.0	1376.9	1478.7	1563.2	1670.7	1707.2	1716.8
20°	345.6	466.7	779.7	879.6	1165.7	1465.2	1563.2	1628.5	1701.5	1724.5	1728.3
22.5°	309.2	434.0	791.2	894.9	1219.4	1519.0	1601.6	1653.4	1703.4	1711.1	1713.0
25°	278.5	397.5	789.3	912.2	1265.5	1551.7	1615.0	1653.4	1682.3	1686.1	1686.1
27.5°	249.6	357.2	781.6	916.0	1300.1	1559.3	1609.2	1636.2	1649.6	1657.3	1657.3
30°	224.7	318.8	762.4	908.3	1315.4	1551.7	1592.0	1605.4	1618.9	1630.3	1636.2
32.5°	205.5	282.3	733.5	892.9	1317.4	1532.5	1561.3	1568.9	1588.1	1615.0	1624.6
35°	188.2	245.8	701.0	871.8	1305.8	1501.8	1520.9	1528.6	1567.0	1607.4	1620.7
37.5°	170.9	218.9	658.7	835.4	1288.6	1465.2	1478.7	1492.2	1551.7	1599.6	1615.0
40°	153.6	195.8	608.7	795.1	1261.6	1421.0	1432.6	1453.7	1532.5	1588.1	1603.5
42.5°	140.2	176.6	554.9	752.8	1227.1	1371.1	1388.4	1419.1	1509.4	1568.9	1586.3
45°	128.7	157.5	497.4	695.2	1183.0	1319.3	1344.3	1386.5	1482.5	1540.1	1555.5
47.5°	117.2	144.0	437.9	635.7	1134.9	1267.5	1300.1	1348.1	1446.0	1501.8	1515.1
50°	107.6	130.6	378.3	572.3	1083.1	1211.7	1250.2	1300.1	1399.9	1451.8	1469.1
52.5°	99.9	119.1	322.6	508.9	1023.6	1154.2	1198.3	1250.2	1344.3	1394.2	1405.7
55°	92.2	109.5	274.6	441.7	962.1	1092.6	1140.7	1190.6	1282.8	1325.0	1332.8
57.5°	88.4	101.7	234.3	378.3	896.8	1023.6	1077.3	1123.5	1209.8	1242.5	1250.2
60°	82.6	96.0	203.6	324.5	825.8	958.2	1004.4	1050.4	1123.5	1150.3	1156.0
62.5°	76.8	92.2	180.5	272.7	752.8	881.4	927.5	969.8	1031.2	1050.4	1058.1
65°	73.0	88.4	163.3	234.3	677.9	800.8	846.9	883.3	933.3	952.5	956.3
67.5°	69.1	84.5	149.8	201.6	603.0	720.2	754.7	789.3	827.7	846.9	848.8
70°	63.4	80.6	138.3	178.6	526.2	627.9	656.8	693.2	723.9	733.5	739.3
72.5°	59.5	74.9	130.6	161.3	447.5	539.6	566.5	587.6	614.5	624.1	624.1
75°	53.8	67.2	122.9	144.0	366.8	441.7	464.7	485.9	507.0	510.9	505.0
77.5°	48.0	59.5	105.6	121.0	286.1	349.5	368.7	380.2	397.5	401.4	403.3
80°	40.3	51.8	82.6	94.1	207.4	257.4	270.7	280.3	295.7	295.7	299.6
82.5°	30.7	40.3	59.5	67.2	140.2	176.6	188.2	194.0	203.6	203.6	203.6
85°	19.2	25.0	38.4	44.2	84.5	107.6	115.2	117.2	124.8	126.7	126.7
87.5°	9.6	13.5	25.0	26.8	44.2	55.7	55.7	59.5	59.5	57.7	55.7
90°	9.1	16.4	23.5	25.4	39.9	59.2	68.9	61.2	45.9	34.5	34.5
92.5°	36.2	97.9	159.6	175.0	246.0	340.7	388.0	340.0	244.2	172.3	165.4
95°	87.0	199.8	312.7	340.9	605.3	957.9	1134.1	1012.0	767.8	584.7	564.0
97.5°	150.5	250.0	349.5	374.4	815.3	1403.2	1697.1	1620.0	1465.6	1349.9	1310.4
100°	199.4	289.7	379.9	402.5	891.8	1544.1	1870.3	1875.9	1887.2	1895.7	1848.7
102.5°	241.2	325.4	409.6	430.6	926.8	1588.4	1919.2	2017.5	2214.1	2361.5	2321.2
105°	311.8	383.1	454.5	472.3	952.8	1593.4	1913.8	2134.1	2574.9	2905.5	2883.8
107.5°	384.4	450.9	517.3	533.9	957.6	1522.5	1805.0	2112.4	2727.3	3188.4	3193.6
110°	433.3	493.4	553.4	568.4	950.4	1459.6	1714.3	2058.0	2745.4	3260.9	3283.5



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
112.5°	481.4	538.6	595.7	610.1	950.7	1404.8	1631.8	1983.5	2687.0	3214.7	3249.3
115°	553.9	606.7	659.5	672.7	959.4	1341.8	1533.0	1871.8	2549.5	3057.8	3105.8
117.5°	625.5	673.5	721.4	733.4	977.3	1302.4	1465.0	1770.8	2382.4	2841.1	2894.4
120°	667.3	712.4	757.6	768.8	991.8	1289.2	1437.8	1717.3	2276.1	2695.2	2746.9
122.5°	708.0	753.6	799.1	810.5	1012.6	1282.2	1417.0	1668.6	2171.8	2549.2	2600.3
125°	770.5	812.0	853.6	864.0	1040.7	1276.5	1394.3	1608.1	2035.5	2356.1	2403.1
127.5°	821.3	863.2	905.1	915.6	1068.8	1273.1	1375.2	1558.7	1925.8	2201.1	2240.8
130°	848.6	893.7	938.9	950.1	1089.4	1275.2	1368.0	1531.4	1858.2	2103.2	2139.8
132.5°	876.7	921.8	967.0	978.2	1106.0	1276.5	1361.6	1507.9	1800.4	2019.8	2052.6
135°	918.3	959.4	1000.6	1010.9	1124.1	1275.2	1350.8	1473.3	1718.2	1902.0	1930.2
137.5°	961.0	1001.7	1042.4	1052.5	1151.4	1283.1	1348.9	1452.5	1659.6	1814.9	1838.1
140°	996.3	1033.8	1071.2	1080.6	1167.9	1284.4	1342.6	1432.1	1611.0	1745.2	1766.8
142.5°	1023.5	1058.1	1092.8	1101.5	1181.9	1289.1	1342.6	1421.2	1578.3	1696.1	1714.7
145°	1065.2	1095.5	1125.7	1133.2	1200.0	1289.1	1333.5	1397.8	1526.4	1622.8	1636.8
147.5°	1106.9	1136.3	1165.7	1173.1	1226.6	1297.9	1333.5	1384.1	1485.2	1561.1	1572.8
150°	1134.1	1160.7	1187.2	1193.9	1240.4	1302.5	1333.5	1376.3	1461.6	1525.7	1535.2
152.5°	1162.2	1182.4	1202.5	1207.6	1249.5	1305.5	1333.5	1370.0	1442.9	1497.6	1504.8
155°	1203.9	1218.8	1233.7	1237.4	1269.5	1312.2	1333.5	1362.5	1420.6	1464.1	1468.8
157.5°	1234.7	1249.2	1263.8	1267.4	1289.4	1318.8	1333.5	1356.1	1401.3	1435.1	1438.4
160°	1255.6	1266.9	1278.1	1280.9	1298.5	1321.8	1333.5	1352.9	1391.6	1420.6	1422.5
162.5°	1276.5	1284.9	1293.3	1295.5	1308.1	1325.1	1333.5	1349.8	1382.5	1407.0	1408.8
165°	1299.1	1306.8	1314.4	1316.3	1322.0	1329.7	1333.5	1345.3	1368.6	1386.2	1388.1
167.5°	1320.0	1323.6	1327.2	1328.1	1333.0	1339.4	1342.6	1350.3	1365.6	1377.0	1377.8
170°	1333.5	1337.1	1340.8	1341.7	1342.0	1342.5	1342.6	1350.3	1365.6	1377.0	1377.0
172.5°	1340.8	1341.6	1342.5	1342.6	1342.6	1342.6	1342.6	1348.7	1360.8	1369.8	1369.1
175°	1350.8	1350.8	1350.8	1350.8	1348.1	1344.5	1342.6	1346.4	1354.1	1359.8	1359.8
177.5°	1350.8	1350.8	1350.8	1350.8	1348.7	1345.8	1344.4	1347.4	1353.5	1358.1	1357.3
180°	1350.8	1350.8	1350.8	1350.8	1350.8	1350.8	1350.8	1350.8	1350.8	1350.8	1350.8



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CANDELA DISTRIBUTION (continued):

	80°	90°
0°	597.2	597.2
2.5°	637.6	633.7
5°	820.0	823.8
7.5°	1104.2	1102.3
10°	1373.1	1390.3
12.5°	1568.9	1572.8
15°	1688.0	1695.7
17.5°	1734.1	1736.0
20°	1736.0	1732.2
22.5°	1714.8	1711.1
25°	1689.9	1688.0
27.5°	1666.9	1668.8
30°	1657.3	1663.0
32.5°	1657.3	1666.9
35°	1661.2	1670.7
37.5°	1659.2	1670.7
40°	1651.5	1664.9
42.5°	1630.3	1640.0
45°	1597.8	1609.2
47.5°	1555.5	1563.2
50°	1501.8	1509.4
52.5°	1434.5	1436.4
55°	1353.9	1361.5
57.5°	1267.5	1269.4
60°	1171.4	1177.1
62.5°	1069.7	1069.7
65°	962.1	965.9
67.5°	850.7	860.3
70°	737.4	739.3
72.5°	626.1	626.1
75°	510.9	512.7
77.5°	401.4	401.4
80°	297.7	299.6
82.5°	205.5	209.3
85°	128.7	128.7
87.5°	59.5	53.8
90°	34.5	34.5
92.5°	138.0	110.6
95°	480.9	398.0
97.5°	1152.4	994.5
100°	1660.5	1472.3
102.5°	2160.1	1999.0
105°	2797.2	2710.6
107.5°	3214.6	3235.5
110°	3373.7	3464.0



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CANDELA DISTRIBUTION (continued):

	80°	90°
112.5°	3387.9	3526.5
115°	3298.0	3490.2
117.5°	3107.6	3320.8
120°	2954.1	3161.2
122.5°	2804.6	3008.8
125°	2591.3	2779.5
127.5°	2399.5	2558.4
130°	2286.5	2433.2
132.5°	2183.9	2315.3
135°	2043.5	2156.7
137.5°	1930.8	2023.5
140°	1853.4	1940.0
142.5°	1789.4	1863.9
145°	1693.2	1749.6
147.5°	1619.5	1666.3
150°	1573.1	1611.0
152.5°	1533.3	1562.0
155°	1487.7	1506.7
157.5°	1451.8	1465.0
160°	1430.1	1437.8
162.5°	1416.0	1423.3
165°	1395.7	1403.3
167.5°	1381.1	1384.3
170°	1377.0	1377.0
172.5°	1366.3	1363.5
175°	1359.8	1359.8
177.5°	1354.0	1350.8
180°	1350.8	1350.8



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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	3.93	4.70	5.01	5.77	7.25	17.10	17.86	18.17	18.94	20.41
	3H	4.63	5.31	5.71	6.40	7.89	18.92	19.61	20.01	20.70	22.19
	4H	4.92	5.57	6.02	6.66	8.16	19.56	20.21	20.65	21.30	22.80
	6H	5.17	5.77	6.27	6.86	8.37	19.98	20.58	21.09	21.67	23.18
	8H	5.23	5.80	6.34	6.91	8.41	20.10	20.67	21.20	21.78	23.28
	12H	5.25	5.79	6.36	6.89	8.42	20.16	20.70	21.27	21.80	23.33
4H	2H	11.13	11.78	12.23	12.87	14.36	17.36	18.01	18.46	19.10	20.60
	3H	12.69	13.23	13.79	14.34	15.86	19.39	19.93	20.50	21.05	22.56
	4H	12.78	13.28	13.89	14.38	15.91	20.15	20.65	21.26	21.75	23.29
	6H	12.78	13.21	13.90	14.34	15.86	20.68	21.11	21.80	22.24	23.76
	8H	12.76	13.16	13.88	14.28	15.82	20.84	21.24	21.96	22.36	23.90
	12H	12.71	13.07	13.84	14.20	15.75	20.92	21.29	22.06	22.42	23.96
8H	4H	14.21	14.61	15.33	15.73	17.27	20.20	20.60	21.32	21.72	23.26
	6H	14.45	14.78	15.59	15.94	17.48	20.82	21.15	21.96	22.32	23.85
	8H	14.46	14.75	15.61	15.90	17.45	21.04	21.33	22.19	22.47	24.03
	12H	14.43	14.68	15.58	15.82	17.41	21.18	21.43	22.33	22.57	24.16
12H	4H	14.35	14.71	15.48	15.84	17.39	20.15	20.51	21.29	21.65	23.19
	6H	14.70	14.99	15.85	16.14	17.69	20.81	21.10	21.95	22.24	23.79
	8H	14.77	15.02	15.92	16.16	17.75	21.03	21.28	22.18	22.42	24.01