

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: P937493

Luminaire Tested: SQ4-FB-100U-050D-B2750-1D-UNV-STD-W-8-3000K

Issue Date: 12/17/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P937493  
REPORT IS A COMBINATION OF REPORTS P933581 AND P933786  
Test Lab: INNOVATION CENTER  
Issue Date: 12/17/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ4-FB-100U-050D-B2750-1D-UNV-STD-W-8-3000K  
Description: CORELITE SQ4 SUSPENDED INDIRECT LED LUMINAIRE WITH Batwing Frosted Continuous Roll L  
Light Source: -  
Ballast/Driver: -

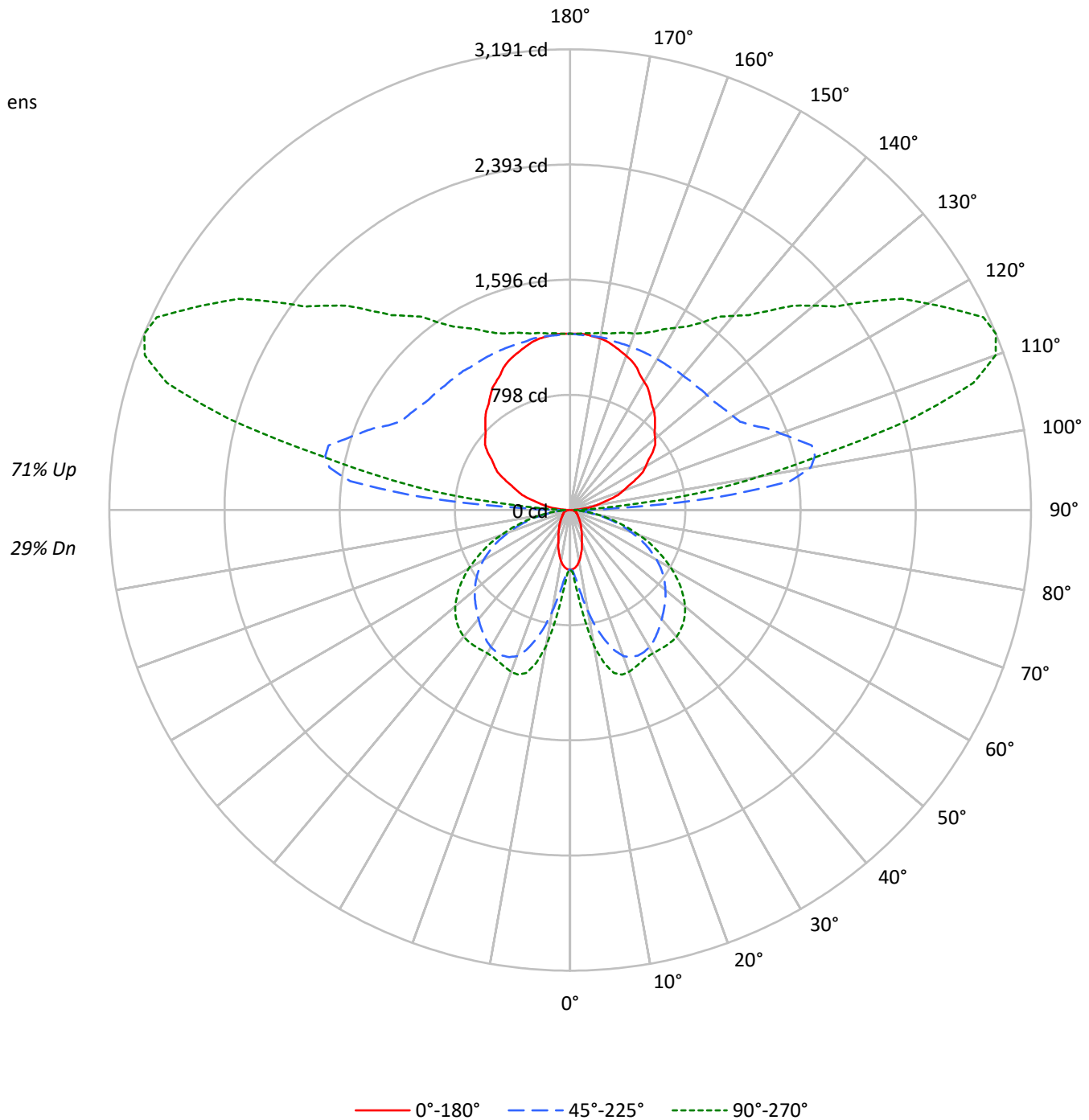
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 11109.3 lumens  
Efficiency: N/A  
Efficacy: 134.8 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): 82.4  
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

TEST NUMBER: P937493  
CATALOG NUMBER: SQ4-FB-100U-050D-B2750-1D-UNV-STD-W-8-3000K

### 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	102	102	102	102	91	91	91	91	71	71	71	53	53	53	37	37	37	37	37	37	29
1	93	88	84	81	83	79	76	73	62	60	58	46	45	44	32	31	30	32	31	30	23
2	84	77	71	66	75	69	64	59	54	50	47	40	38	36	28	26	25	28	26	25	19
3	76	67	60	54	68	60	54	49	47	43	39	35	32	30	24	22	21	24	22	21	16
4	70	59	51	45	62	53	46	41	42	37	33	31	28	25	21	19	18	21	19	18	13
5	64	52	44	38	57	47	40	35	37	32	28	28	24	21	19	17	15	19	17	15	11
6	58	47	39	33	52	42	35	30	33	28	24	25	21	18	17	15	13	17	15	13	10
7	54	42	34	28	48	38	31	26	30	25	21	22	19	16	15	13	11	15	13	11	8
8	50	38	30	25	44	34	27	23	27	22	18	20	17	14	14	12	10	14	12	10	7
9	46	34	27	22	41	31	24	20	24	20	16	18	15	12	13	11	9	13	11	9	7
10	43	31	24	19	38	28	22	18	22	18	14	17	14	11	12	10	8	12	10	8	6

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

	0°	45°	90°
0°	1908	1908	1908
5°	1864	2205	2565
10°	1691	3215	4252
15°	1437	4200	5135
20°	1170	4867	5233
25°	976	5094	5127
30°	823	5126	5117
35°	728	5041	5249
40°	634	4930	5386
45°	574	4849	5407
50°	526	4776	5318
55°	505	4669	5082
60°	517	4465	4710
65°	538	4152	4199
70°	573	3622	3547
75°	635	2953	2768
80°	694	2048	1865
85°	615	1087	954

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 5407 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	53.2	0.5
10°-20°	235.8	2.1
20°-30°	412.5	3.7
30°-40°	530.9	4.8
40°-50°	593.1	5.3
50°-60°	568.0	5.1
60°-70°	450.2	4.1
70°-80°	264.7	2.4
80°-90°	78.2	0.7
90°-100°	595.8	5.4
100°-110°	1566.2	14.1
110°-120°	1624.0	14.6
120°-130°	1302.7	11.7
130°-140°	1022.1	9.2
140°-150°	784.5	7.1
150°-160°	565.0	5.1
160°-170°	345.7	3.1
170°-180°	116.8	1.1
0°-30°	701.5	6.3
0°-40°	1232.4	11.1
0°-60°	2393.5	21.5
0°-90°	3186.5	28.7
90°-120°	3786.0	34.1
90°-150°	6895.3	62.1
90°-180°	7923.0	71.3
0°-180°	11109.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	411	411	411	411	411	
5°	401	430	484	548	567	37
15°	300	554	934	1132	1168	84
25°	192	628	1112	1161	1162	88
35°	130	600	1047	1107	1151	81
45°	89	479	926	1061	1108	69
55°	64	304	786	912	938	58
65°	50	161	583	656	665	50
75°	37	99	320	352	353	39
85°	13	30	79	87	89	14
90°	8	23	62	31	31	8
95°	79	308	1026	529	360	87
105°	282	427	1732	2629	2452	299
115°	501	609	1387	2767	3158	495
125°	697	782	1262	2132	2515	619
135°	831	915	1222	1721	1951	643
145°	964	1025	1207	1468	1583	604
155°	1089	1120	1207	1325	1363	500
165°	1175	1191	1207	1254	1270	332
175°	1222	1222	1215	1230	1230	116
180°	1222	1222	1222	1222	1222	



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**CANDELA DISTRIBUTION (FULL):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	411.3	411.3	411.3	411.3	411.3	411.3	411.3	411.3	411.3	411.3	411.3
2.5°	411.3	411.3	413.9	415.3	417.9	419.2	421.9	424.6	432.5	433.7	436.4
5°	400.7	406.0	423.2	429.8	448.3	473.5	484.0	501.2	537.0	547.5	554.1
7.5°	384.8	396.8	439.1	449.6	496.0	562.0	589.8	626.9	683.7	711.5	734.0
10°	359.7	384.8	460.3	485.4	560.7	661.2	712.9	764.4	850.3	888.7	903.3
12.5°	332.0	372.9	482.7	517.1	625.5	772.3	834.6	891.3	989.3	1040.8	1048.7
15°	300.2	355.7	503.8	554.1	694.3	864.9	933.7	1003.7	1095.1	1132.0	1141.3
17.5°	272.4	342.5	523.8	576.6	747.2	948.2	1018.3	1076.5	1150.6	1175.7	1182.3
20°	238.0	321.3	537.0	605.7	802.8	1009.1	1076.5	1121.5	1171.8	1187.6	1190.3
22.5°	212.9	298.9	544.9	616.2	839.8	1046.1	1102.9	1138.7	1173.0	1178.4	1179.7
25°	191.8	273.7	543.6	628.2	871.5	1068.6	1112.2	1138.7	1158.6	1161.2	1161.2
27.5°	172.0	246.0	538.3	630.8	895.4	1073.9	1108.3	1126.8	1136.1	1141.3	1141.3
30°	154.7	219.6	525.0	625.5	905.9	1068.6	1096.3	1105.6	1114.9	1122.9	1126.8
32.5°	141.5	194.4	505.2	615.0	907.2	1055.3	1075.2	1080.5	1093.7	1112.2	1118.8
35°	129.6	169.3	482.7	600.4	899.3	1034.2	1047.4	1052.8	1079.2	1107.0	1116.2
37.5°	117.7	150.8	453.7	575.3	887.4	1009.1	1018.3	1027.6	1068.6	1101.7	1112.2
40°	105.8	134.9	419.2	547.5	868.9	978.7	986.6	1001.2	1055.3	1093.7	1104.3
42.5°	96.5	121.7	382.2	518.4	845.1	944.3	956.2	977.3	1039.5	1080.5	1092.4
45°	88.6	108.5	342.5	478.7	814.6	908.6	925.8	954.8	1021.0	1060.6	1071.2
47.5°	80.7	99.2	301.5	437.8	781.6	872.9	895.4	928.4	995.9	1034.2	1043.5
50°	74.0	89.9	260.5	394.1	745.9	834.6	861.0	895.4	964.1	999.8	1011.7
52.5°	68.7	82.0	222.1	350.4	704.9	794.8	825.3	861.0	925.8	960.2	968.1
55°	63.5	75.4	189.1	304.2	662.6	752.5	785.5	820.0	883.5	912.5	917.9
57.5°	60.8	70.1	161.3	260.5	617.6	704.9	742.0	773.7	833.2	855.7	861.0
60°	56.9	66.2	140.2	223.5	568.7	659.9	691.7	723.4	773.7	792.2	796.2
62.5°	52.9	63.5	124.3	187.8	518.4	607.1	638.7	667.9	710.2	723.4	728.8
65°	50.3	60.8	112.4	161.3	466.9	551.5	583.2	608.4	642.8	656.0	658.6
67.5°	47.6	58.2	103.1	138.8	415.3	496.0	519.7	543.6	570.0	583.2	584.5
70°	43.7	55.5	95.2	123.0	362.4	432.5	452.3	477.4	498.6	505.2	509.2
72.5°	41.0	51.6	89.9	111.1	308.1	371.6	390.2	404.7	423.2	429.8	429.8
75°	37.1	46.2	84.6	99.2	252.6	304.2	320.1	334.5	349.1	351.8	347.9
77.5°	33.0	41.0	72.8	83.3	197.1	240.7	253.9	261.9	273.7	276.4	277.8
80°	27.8	35.7	56.9	64.8	142.9	177.2	186.5	193.1	203.7	203.7	206.3
82.5°	21.2	27.8	41.0	46.2	96.5	121.7	129.6	133.6	140.2	140.2	140.2
85°	13.2	17.2	26.4	30.4	58.2	74.0	79.4	80.7	86.0	87.3	87.3
87.5°	6.6	9.3	17.2	18.5	30.4	38.4	38.4	41.0	41.0	39.6	38.4
90°	8.2	14.8	21.3	23.0	36.1	53.5	62.3	55.4	41.5	31.2	31.2
92.5°	32.8	88.6	144.4	158.4	222.5	308.2	351.0	307.6	221.0	155.9	149.7
95°	78.8	180.8	282.9	308.4	547.6	866.6	1026.1	915.7	694.7	529.1	510.4
97.5°	136.2	226.2	316.3	338.8	737.7	1269.6	1535.5	1465.7	1326.1	1221.4	1185.7
100°	180.4	262.1	343.8	364.2	806.8	1397.1	1692.2	1697.3	1707.5	1715.1	1672.6
102.5°	218.2	294.3	370.5	389.6	838.5	1437.1	1736.4	1825.4	2003.4	2136.8	2100.3
105°	282.2	346.7	411.2	427.3	862.1	1441.7	1731.5	1930.9	2329.7	2628.9	2609.3
107.5°	347.8	407.9	468.1	483.1	866.5	1377.5	1633.1	1911.3	2467.6	2884.7	2889.5
110°	392.0	446.4	500.7	514.3	859.9	1320.6	1551.1	1862.1	2483.9	2950.4	2970.8



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
112.5°	435.5	487.3	539.1	552.1	860.2	1271.1	1476.4	1794.7	2431.2	2908.6	2940.0
115°	501.2	548.9	596.7	608.7	868.1	1214.1	1387.0	1693.7	2306.8	2766.7	2810.2
117.5°	566.0	609.3	652.7	663.6	884.2	1178.4	1325.5	1602.2	2155.6	2570.6	2618.8
120°	603.7	644.5	685.4	695.5	897.4	1166.4	1300.9	1553.7	2059.4	2438.6	2485.4
122.5°	640.6	681.8	723.0	733.3	916.2	1160.0	1282.0	1509.7	1965.0	2306.5	2352.8
125°	697.2	734.8	772.3	781.7	941.6	1154.9	1261.5	1454.9	1841.7	2131.8	2174.4
127.5°	743.1	781.0	819.0	828.4	967.1	1151.9	1244.3	1410.4	1742.5	1991.5	2027.4
130°	767.7	808.5	849.3	859.6	985.6	1153.7	1237.7	1385.5	1681.2	1903.0	1936.1
132.5°	793.1	834.0	874.8	885.0	1000.7	1154.9	1232.0	1364.3	1629.0	1827.5	1857.1
135°	830.9	868.1	905.3	914.6	1017.2	1153.8	1222.1	1333.0	1554.6	1720.9	1746.5
137.5°	869.5	906.2	943.1	952.3	1041.7	1160.9	1220.5	1314.1	1501.6	1642.1	1663.1
140°	901.4	935.3	969.2	977.7	1056.7	1162.1	1214.8	1295.7	1457.6	1579.0	1598.6
142.5°	926.1	957.4	988.8	996.6	1069.3	1166.2	1214.8	1285.8	1428.0	1534.7	1551.6
145°	963.8	991.1	1018.5	1025.3	1085.8	1166.3	1206.6	1264.7	1381.0	1468.3	1481.0
147.5°	1001.5	1028.1	1054.7	1061.4	1109.8	1174.3	1206.6	1252.3	1343.8	1412.4	1423.0
150°	1026.1	1050.2	1074.2	1080.3	1122.4	1178.5	1206.6	1245.2	1322.5	1380.5	1389.1
152.5°	1051.6	1069.8	1088.1	1092.6	1130.5	1181.2	1206.6	1239.6	1305.6	1355.1	1361.6
155°	1089.2	1102.7	1116.3	1119.6	1148.6	1187.2	1206.6	1232.8	1285.3	1324.7	1328.9
157.5°	1117.1	1130.3	1143.5	1146.7	1166.6	1193.3	1206.6	1227.0	1267.8	1298.5	1301.4
160°	1136.1	1146.3	1156.5	1159.0	1174.9	1196.0	1206.6	1224.1	1259.1	1285.3	1287.1
162.5°	1154.9	1162.6	1170.3	1172.2	1183.6	1198.9	1206.6	1221.4	1250.8	1273.0	1274.7
165°	1175.4	1182.3	1189.2	1191.0	1196.2	1203.1	1206.6	1217.1	1238.3	1254.2	1256.0
167.5°	1194.2	1197.5	1200.8	1201.6	1206.0	1211.8	1214.8	1221.7	1235.6	1245.9	1246.6
170°	1206.6	1209.8	1213.2	1214.0	1214.3	1214.6	1214.8	1221.7	1235.6	1245.9	1245.9
172.5°	1213.2	1213.9	1214.6	1214.8	1214.8	1214.8	1214.8	1220.3	1231.2	1239.4	1238.8
175°	1222.1	1222.1	1222.1	1222.1	1219.7	1216.4	1214.8	1218.2	1225.1	1230.3	1230.3
177.5°	1222.1	1222.1	1222.1	1222.1	1220.3	1217.7	1216.4	1219.2	1224.6	1228.8	1228.1
180°	1222.1	1222.1	1222.1	1222.1	1222.1	1222.1	1222.1	1222.1	1222.1	1222.1	1222.1



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**CANDELA DISTRIBUTION (continued):**

	80°	90°
0°	411.3	411.3
2.5°	439.1	436.4
5°	564.7	567.3
7.5°	760.4	759.1
10°	945.6	957.5
12.5°	1080.5	1083.1
15°	1162.5	1167.8
17.5°	1194.2	1195.5
20°	1195.5	1192.9
22.5°	1181.0	1178.4
25°	1163.8	1162.5
27.5°	1147.9	1149.3
30°	1141.3	1145.3
32.5°	1141.3	1147.9
35°	1144.0	1150.6
37.5°	1142.7	1150.6
40°	1137.4	1146.6
42.5°	1122.9	1129.5
45°	1100.4	1108.3
47.5°	1071.2	1076.5
50°	1034.2	1039.5
52.5°	987.9	989.3
55°	932.4	937.7
57.5°	872.9	874.2
60°	806.7	810.7
62.5°	736.6	736.6
65°	662.6	665.3
67.5°	585.9	592.5
70°	507.9	509.2
72.5°	431.2	431.2
75°	351.8	353.1
77.5°	276.4	276.4
80°	205.0	206.3
82.5°	141.5	144.2
85°	88.6	88.6
87.5°	41.0	37.1
90°	31.2	31.2
92.5°	124.9	100.1
95°	435.2	360.1
97.5°	1042.7	899.8
100°	1502.4	1332.1
102.5°	1954.4	1808.6
105°	2530.9	2452.5
107.5°	2908.5	2927.4
110°	3052.5	3134.1





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**CANDELA DISTRIBUTION (continued):**

	80°	90°
112.5°	3065.3	3190.7
115°	2984.0	3158.0
117.5°	2811.7	3004.5
120°	2672.8	2860.2
122.5°	2537.6	2722.3
125°	2344.6	2514.9
127.5°	2171.1	2314.7
130°	2068.8	2201.5
132.5°	1976.0	2094.9
135°	1848.9	1951.4
137.5°	1746.9	1830.8
140°	1676.9	1755.3
142.5°	1619.0	1686.5
145°	1532.0	1583.0
147.5°	1465.3	1507.6
150°	1423.3	1457.6
152.5°	1387.4	1413.2
155°	1346.1	1363.2
157.5°	1313.5	1325.5
160°	1294.0	1300.9
162.5°	1281.2	1287.8
165°	1262.9	1269.8
167.5°	1249.6	1252.5
170°	1245.9	1245.9
172.5°	1236.2	1233.7
175°	1230.3	1230.3
177.5°	1225.1	1222.1
180°	1222.1	1222.1



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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	0.88	1.59	1.99	2.71	4.25	14.06	14.77	15.17	15.89	17.43
	3H	1.57	2.21	2.69	3.33	4.89	15.88	16.53	17.01	17.65	19.21
	4H	1.86	2.47	2.99	3.59	5.16	16.52	17.13	17.66	18.26	19.82
	6H	2.10	2.67	3.25	3.79	5.37	16.95	17.51	18.09	18.63	20.21
	8H	2.17	2.70	3.31	3.84	5.41	17.06	17.60	18.21	18.74	20.31
	12H	2.18	2.69	3.33	3.82	5.42	17.12	17.63	18.27	18.77	20.36
4H	2H	8.07	8.69	9.22	9.81	11.37	14.31	14.92	15.45	16.05	17.61
	3H	9.63	10.14	10.78	11.29	12.87	16.34	16.86	17.49	18.00	19.58
	4H	9.72	10.19	10.87	11.32	12.92	17.10	17.58	18.25	18.71	20.31
	6H	9.72	10.12	10.87	11.28	12.87	17.64	18.04	18.79	19.20	20.79
	8H	9.69	10.07	10.85	11.22	12.82	17.79	18.17	18.95	19.32	20.93
	12H	9.64	9.98	10.81	11.15	12.76	17.88	18.22	19.05	19.38	20.99
8H	4H	11.15	11.53	12.30	12.68	14.28	17.15	17.53	18.31	18.68	20.29
	6H	11.38	11.70	12.56	12.89	14.49	17.77	18.09	18.95	19.28	20.88
	8H	11.40	11.67	12.58	12.84	14.47	17.99	18.26	19.17	19.44	21.06
	12H	11.36	11.60	12.55	12.77	14.42	18.13	18.37	19.32	19.54	21.19
12H	4H	11.28	11.63	12.46	12.79	14.40	17.10	17.44	18.27	18.60	20.21
	6H	11.64	11.91	12.82	13.09	14.71	17.76	18.03	18.94	19.20	20.82
	8H	11.70	11.94	12.89	13.11	14.77	17.98	18.22	19.16	19.39	21.04