

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: P937468

Luminaire Tested: SQ4-FB-100U-050D-93050-1D-UNV-STD-W-8-5000K

Issue Date: 12/17/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P937468  
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-93050-1D-UNV-STD-W-8-5000K  
Description: CORELITE SQ4 SUSPENDED INDIRECT LED LUMINAIRE WITH Batwing Frosted Continuous Roll L  
Light Source: -  
Ballast/Driver: -

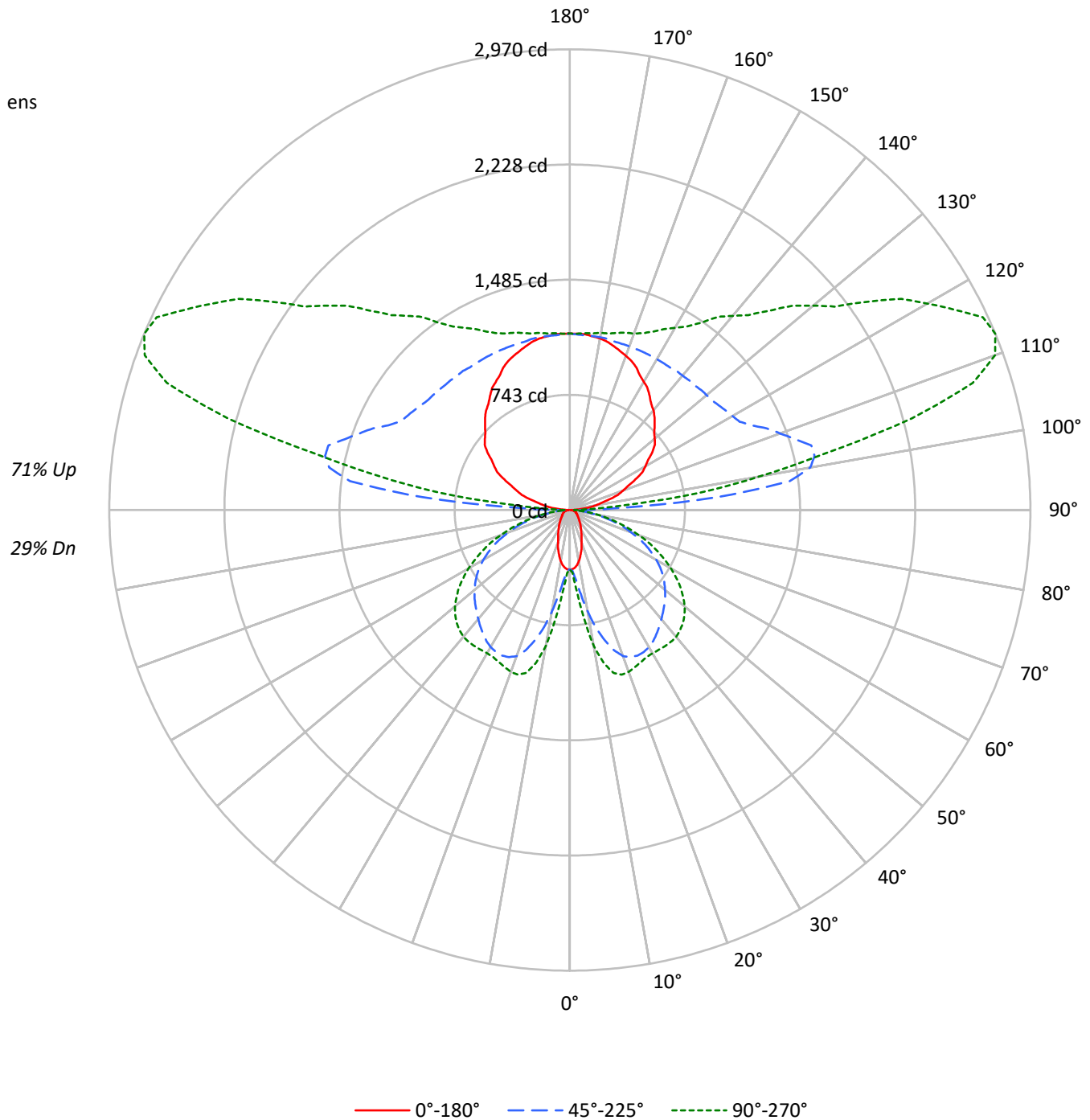
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 10339.7 lumens  
Efficiency: N/A  
Efficacy: 125.5 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 (Ain): 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	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	29																												
1	93	88	84	81	83	79	76	73	62	60	58	46	45	44	32	31	30	23																												
2	84	77	71	66	75	69	64	59	54	50	47	40	38	36	28	26	25	19																												
3	76	67	60	54	68	60	54	49	47	43	39	35	32	30	24	22	21	16																												
4	70	59	51	45	62	53	46	41	42	37	33	31	28	25	21	19	18	13																												
5	64	52	44	38	57	47	40	35	37	32	28	28	24	21	19	17	15	11																												
6	58	47	39	33	52	42	35	30	33	28	24	25	21	18	17	15	13	10																												
7	54	42	34	28	48	38	31	26	30	25	21	22	19	16	15	13	11	8																												
8	50	38	30	25	44	34	27	23	27	22	18	20	17	14	14	12	10	7																												
9	46	34	27	22	41	31	24	20	24	20	16	18	15	12	13	11	9	7																												
10	43	31	24	19	38	28	22	18	22	18	14	17	14	11	12	10	8	6																												

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

	0°	45°	90°
0°	1776	1776	1776
5°	1735	2053	2387
10°	1574	2993	3958
15°	1338	3910	4779
20°	1089	4530	4870
25°	908	4741	4772
30°	766	4771	4763
35°	677	4692	4886
40°	590	4588	5013
45°	535	4513	5033
50°	490	4445	4949
55°	470	4346	4730
60°	481	4155	4383
65°	500	3865	3908
70°	534	3370	3301
75°	591	2748	2576
80°	646	1905	1736
85°	573	1012	889

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 5033 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	49.5	0.5
10°-20°	219.5	2.1
20°-30°	383.9	3.7
30°-40°	494.2	4.8
40°-50°	552.0	5.3
50°-60°	528.7	5.1
60°-70°	419.0	4.1
70°-80°	246.4	2.4
80°-90°	72.8	0.7
90°-100°	554.5	5.4
100°-110°	1457.7	14.1
110°-120°	1511.5	14.6
120°-130°	1212.4	11.7
130°-140°	951.3	9.2
140°-150°	730.2	7.1
150°-160°	525.8	5.1
160°-170°	321.7	3.1
170°-180°	108.7	1.1
0°-30°	652.9	6.3
0°-40°	1147.0	11.1
0°-60°	2227.7	21.5
0°-90°	2965.7	28.7
90°-120°	3523.7	34.1
90°-150°	6417.7	62.1
90°-180°	7374.0	71.3
0°-180°	10339.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	383	383	383	383	383	
5°	373	400	450	510	528	34
15°	279	516	869	1054	1087	78
25°	178	585	1035	1081	1082	82
35°	121	559	975	1030	1071	75
45°	82	446	862	987	1032	64
55°	59	283	731	849	873	54
65°	47	150	543	610	619	46
75°	34	92	298	327	329	36
85°	12	28	74	81	82	13
90°	8	21	58	29	29	7
95°	73	287	955	492	335	81
105°	263	398	1612	2447	2283	278
115°	466	566	1291	2575	2939	461
125°	649	728	1174	1984	2341	576
135°	773	851	1138	1602	1816	598
145°	897	954	1123	1366	1473	562
155°	1014	1042	1123	1233	1269	466
165°	1094	1108	1123	1167	1182	309
175°	1138	1138	1131	1145	1145	108
180°	1138	1138	1138	1138	1138	



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**CANDELA DISTRIBUTION (FULL):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	382.8	382.8	382.8	382.8	382.8	382.8	382.8	382.8	382.8	382.8	382.8
2.5°	382.8	382.8	385.2	386.5	388.9	390.2	392.7	395.2	402.5	403.7	406.2
5°	373.0	377.9	393.9	400.0	417.3	440.7	450.5	466.5	499.8	509.6	515.7
7.5°	358.2	369.3	408.6	418.5	461.6	523.1	549.0	583.5	636.3	662.2	683.1
10°	334.8	358.2	428.4	451.8	521.9	615.4	663.5	711.5	791.4	827.1	840.7
12.5°	309.0	347.1	449.3	481.2	582.2	718.8	776.7	829.6	920.7	968.7	976.1
15°	279.4	331.1	468.9	515.7	646.2	805.0	869.1	934.2	1019.2	1053.6	1062.2
17.5°	253.6	318.8	487.5	536.7	695.4	882.5	947.8	1001.9	1070.9	1094.3	1100.4
20°	221.5	299.1	499.8	563.7	747.2	939.2	1001.9	1043.8	1090.6	1105.4	1107.8
22.5°	198.1	278.2	507.1	573.6	781.6	973.7	1026.5	1059.8	1091.8	1096.7	1097.9
25°	178.5	254.8	505.9	584.7	811.2	994.6	1035.2	1059.8	1078.3	1080.8	1080.8
27.5°	160.0	229.0	501.0	587.1	833.4	999.5	1031.5	1048.7	1057.4	1062.2	1062.2
30°	144.0	204.4	488.7	582.2	843.2	994.6	1020.4	1029.0	1037.6	1045.1	1048.7
32.5°	131.7	181.0	470.2	572.4	844.4	982.2	1000.7	1005.6	1017.9	1035.2	1041.3
35°	120.6	157.6	449.3	558.8	837.0	962.6	974.9	979.8	1004.4	1030.3	1038.8
37.5°	109.6	140.3	422.2	535.5	825.9	939.2	947.8	956.4	994.6	1025.3	1035.2
40°	98.5	125.5	390.2	509.6	808.7	910.9	918.2	931.8	982.2	1017.9	1027.8
42.5°	89.8	113.2	355.7	482.5	786.6	878.9	890.0	909.6	967.5	1005.6	1016.7
45°	82.5	100.9	318.8	445.5	758.2	845.7	861.6	888.7	950.3	987.2	997.0
47.5°	75.1	92.3	280.6	407.5	727.5	812.4	833.4	864.1	926.9	962.6	971.2
50°	68.9	83.7	242.5	366.8	694.2	776.7	801.3	833.4	897.3	930.5	941.6
52.5°	64.0	76.4	206.8	326.1	656.1	739.8	768.1	801.3	861.6	893.7	901.0
55°	59.1	70.2	176.0	283.1	616.7	700.4	731.1	763.2	822.3	849.3	854.3
57.5°	56.6	65.2	150.1	242.5	574.8	656.1	690.6	720.1	775.5	796.4	801.3
60°	53.0	61.6	130.5	208.0	529.3	614.2	643.8	673.3	720.1	737.3	741.0
62.5°	49.3	59.1	115.7	174.8	482.5	565.0	594.5	621.6	661.0	673.3	678.3
65°	46.8	56.6	104.6	150.1	434.5	513.3	542.8	566.2	598.2	610.5	613.0
67.5°	44.3	54.1	96.0	129.2	386.5	461.6	483.7	505.9	530.5	542.8	544.0
70°	40.7	51.7	88.6	114.4	337.3	402.5	420.9	444.3	464.1	470.2	473.9
72.5°	38.2	48.0	83.7	103.4	286.8	345.9	363.1	376.6	393.9	400.0	400.0
75°	34.5	43.0	78.7	92.3	235.1	283.1	297.9	311.4	325.0	327.4	323.8
77.5°	30.7	38.2	67.7	77.5	183.4	224.0	236.3	243.7	254.8	257.2	258.5
80°	25.9	33.2	53.0	60.3	133.0	164.9	173.5	179.7	189.6	189.6	192.0
82.5°	19.7	25.9	38.2	43.0	89.8	113.2	120.6	124.3	130.5	130.5	130.5
85°	12.3	16.0	24.6	28.3	54.1	68.9	73.9	75.1	80.0	81.2	81.2
87.5°	6.1	8.6	16.0	17.3	28.3	35.7	35.7	38.2	38.2	36.9	35.7
90°	7.6	13.8	19.8	21.4	33.6	49.8	58.0	51.6	38.6	29.0	29.0
92.5°	30.6	82.5	134.4	147.4	207.1	286.9	326.7	286.3	205.7	145.1	139.3
95°	73.3	168.3	263.3	287.1	509.7	806.6	955.0	852.3	646.6	492.4	475.0
97.5°	126.7	210.5	294.4	315.3	686.6	1181.6	1429.1	1364.2	1234.2	1136.7	1103.5
100°	167.9	243.9	320.0	339.0	750.9	1300.3	1574.9	1579.7	1589.2	1596.3	1556.7
102.5°	203.1	273.9	344.9	362.6	780.4	1337.5	1616.2	1698.9	1864.6	1988.7	1954.8
105°	262.6	322.7	382.7	397.7	802.3	1341.9	1611.6	1797.1	2168.3	2446.8	2428.5
107.5°	323.7	379.7	435.6	449.7	806.5	1282.1	1520.0	1778.9	2296.6	2684.9	2689.3
110°	364.9	415.4	466.0	478.7	800.3	1229.2	1443.6	1733.1	2311.9	2746.0	2765.0



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
112.5°	405.3	453.5	501.8	513.8	800.6	1183.0	1374.2	1670.4	2262.8	2707.1	2736.3
115°	466.5	510.9	555.4	566.5	807.9	1130.0	1290.9	1576.3	2147.0	2575.1	2615.5
117.5°	526.8	567.1	607.5	617.6	823.0	1096.7	1233.7	1491.2	2006.3	2392.5	2437.4
120°	561.9	599.9	637.9	647.3	835.2	1085.6	1210.8	1446.1	1916.7	2269.6	2313.2
122.5°	596.2	634.6	672.9	682.5	852.7	1079.7	1193.2	1405.1	1828.9	2146.8	2189.8
125°	648.9	683.9	718.8	727.5	876.4	1074.9	1174.1	1354.2	1714.2	1984.1	2023.8
127.5°	691.7	726.9	762.2	771.0	900.1	1072.1	1158.1	1312.7	1621.8	1853.6	1887.0
130°	714.5	752.5	790.5	800.0	917.3	1073.8	1152.0	1289.5	1564.8	1771.2	1802.0
132.5°	738.2	776.2	814.2	823.7	931.4	1074.9	1146.7	1269.8	1516.1	1700.9	1728.5
135°	773.3	807.9	842.6	851.3	946.7	1073.9	1137.5	1240.6	1446.9	1601.7	1625.5
137.5°	809.2	843.5	877.8	886.3	969.5	1080.5	1135.9	1223.1	1397.6	1528.3	1547.9
140°	839.0	870.5	902.1	910.0	983.5	1081.6	1130.6	1205.9	1356.6	1469.6	1487.9
142.5°	861.9	891.1	920.3	927.5	995.2	1085.4	1130.6	1196.8	1329.1	1428.4	1444.1
145°	897.0	922.5	948.0	954.3	1010.6	1085.5	1123.0	1177.1	1285.3	1366.5	1378.4
147.5°	932.1	956.9	981.7	987.9	1033.0	1093.0	1123.0	1165.6	1250.7	1314.6	1324.4
150°	955.0	977.4	999.8	1005.4	1044.6	1096.8	1123.0	1159.0	1230.9	1284.9	1292.8
152.5°	978.7	995.7	1012.7	1016.9	1052.2	1099.4	1123.0	1153.7	1215.1	1261.2	1267.2
155°	1013.8	1026.4	1038.9	1042.0	1069.0	1105.0	1123.0	1147.4	1196.3	1232.9	1236.9
157.5°	1039.7	1052.0	1064.3	1067.3	1085.8	1110.6	1123.0	1142.0	1180.0	1208.5	1211.3
160°	1057.4	1066.9	1076.4	1078.8	1093.5	1113.2	1123.0	1139.3	1171.9	1196.3	1198.0
162.5°	1074.9	1082.1	1089.2	1091.0	1101.6	1115.8	1123.0	1136.7	1164.2	1184.8	1186.4
165°	1094.0	1100.4	1106.8	1108.5	1113.3	1119.8	1123.0	1132.8	1152.5	1167.3	1169.0
167.5°	1111.5	1114.5	1117.7	1118.4	1122.4	1127.8	1130.6	1137.0	1150.0	1159.6	1160.2
170°	1123.0	1126.0	1129.1	1129.9	1130.1	1130.4	1130.6	1137.0	1150.0	1159.6	1159.6
172.5°	1129.1	1129.8	1130.4	1130.6	1130.6	1130.6	1130.6	1135.7	1145.9	1153.5	1153.0
175°	1137.5	1137.5	1137.5	1137.5	1135.2	1132.2	1130.6	1133.8	1140.2	1145.1	1145.1
177.5°	1137.5	1137.5	1137.5	1137.5	1135.7	1133.4	1132.2	1134.7	1139.8	1143.6	1143.0
180°	1137.5	1137.5	1137.5	1137.5	1137.5	1137.5	1137.5	1137.5	1137.5	1137.5	1137.5



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**CANDELA DISTRIBUTION (continued):**

	80°	90°
0°	382.8	382.8
2.5°	408.6	406.2
5°	525.6	528.0
7.5°	707.7	706.5
10°	880.1	891.2
12.5°	1005.6	1008.1
15°	1082.0	1086.9
17.5°	1111.5	1112.7
20°	1112.7	1110.2
22.5°	1099.2	1096.7
25°	1083.2	1082.0
27.5°	1068.4	1069.7
30°	1062.2	1066.0
32.5°	1062.2	1068.4
35°	1064.7	1070.9
37.5°	1063.5	1070.9
40°	1058.6	1067.2
42.5°	1045.1	1051.2
45°	1024.1	1031.5
47.5°	997.0	1001.9
50°	962.6	967.5
52.5°	919.4	920.7
55°	867.8	872.7
57.5°	812.4	813.6
60°	750.9	754.5
62.5°	685.6	685.6
65°	616.7	619.2
67.5°	545.3	551.4
70°	472.7	473.9
72.5°	401.3	401.3
75°	327.4	328.6
77.5°	257.2	257.2
80°	190.8	192.0
82.5°	131.7	134.2
85°	82.5	82.5
87.5°	38.2	34.5
90°	29.0	29.0
92.5°	116.3	93.1
95°	405.1	335.1
97.5°	970.5	837.5
100°	1398.3	1239.8
102.5°	1819.1	1683.3
105°	2355.5	2282.6
107.5°	2707.0	2724.6
110°	2841.0	2917.0





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**CANDELA DISTRIBUTION (continued):**

	80°	90°
112.5°	2852.9	2969.7
115°	2777.3	2939.2
117.5°	2616.9	2796.4
120°	2487.7	2662.0
122.5°	2361.8	2533.8
125°	2182.2	2340.7
127.5°	2020.7	2154.4
130°	1925.5	2049.0
132.5°	1839.2	1949.7
135°	1720.9	1816.2
137.5°	1625.9	1704.0
140°	1560.7	1633.7
142.5°	1506.9	1569.6
145°	1425.9	1473.4
147.5°	1363.8	1403.2
150°	1324.7	1356.6
152.5°	1291.3	1315.3
155°	1252.8	1268.8
157.5°	1222.5	1233.7
160°	1204.4	1210.8
162.5°	1192.5	1198.6
165°	1175.4	1181.8
167.5°	1163.0	1165.7
170°	1159.6	1159.6
172.5°	1150.6	1148.2
175°	1145.1	1145.1
177.5°	1140.2	1137.5
180°	1137.5	1137.5



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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	0.63	1.34	1.74	2.45	4.00	13.81	14.52	14.92	15.64	17.18
	3H	1.32	1.96	2.44	3.08	4.64	15.63	16.28	16.76	17.40	18.96
	4H	1.61	2.22	2.74	3.34	4.91	16.27	16.88	17.41	18.01	19.57
	6H	1.85	2.42	3.00	3.54	5.12	16.70	17.26	17.84	18.38	19.96
	8H	1.92	2.45	3.06	3.59	5.16	16.81	17.35	17.96	18.49	20.06
	12H	1.93	2.44	3.08	3.57	5.17	16.88	17.38	18.02	18.52	20.11
4H	2H	7.82	8.44	8.97	9.56	11.12	14.06	14.67	15.20	15.80	17.36
	3H	9.38	9.89	10.53	11.04	12.62	16.09	16.61	17.24	17.75	19.33
	4H	9.47	9.94	10.62	11.07	12.67	16.85	17.33	18.01	18.46	20.06
	6H	9.47	9.87	10.62	11.03	12.62	17.39	17.79	18.54	18.95	20.54
	8H	9.44	9.82	10.60	10.97	12.58	17.54	17.92	18.70	19.07	20.68
	12H	9.39	9.73	10.56	10.90	12.51	17.63	17.97	18.80	19.13	20.74
8H	4H	10.90	11.28	12.05	12.43	14.03	16.90	17.28	18.06	18.43	20.04
	6H	11.13	11.45	12.31	12.64	14.24	17.52	17.84	18.70	19.03	20.63
	8H	11.15	11.42	12.33	12.59	14.22	17.74	18.01	18.92	19.19	20.81
	12H	11.11	11.35	12.30	12.52	14.17	17.88	18.12	19.07	19.29	20.94
12H	4H	11.04	11.38	12.21	12.54	14.15	16.85	17.19	18.02	18.35	19.96
	6H	11.39	11.66	12.57	12.84	14.46	17.51	17.78	18.69	18.95	20.57
	8H	11.45	11.69	12.64	12.86	14.52	17.73	17.97	18.92	19.14	20.79