

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: P937508

Luminaire Tested: SQ4-FB-100U-050D-B50-1D-UNV-STD-W-8

Issue Date: 12/17/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P937508  
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-B50-1D-UNV-STD-W-8  
Description: CORELITE SQ4 SUSPENDED INDIRECT LED LUMINAIRE WITH Batwing Frosted Continuous Roll L  
Light Source: -  
Ballast/Driver: -

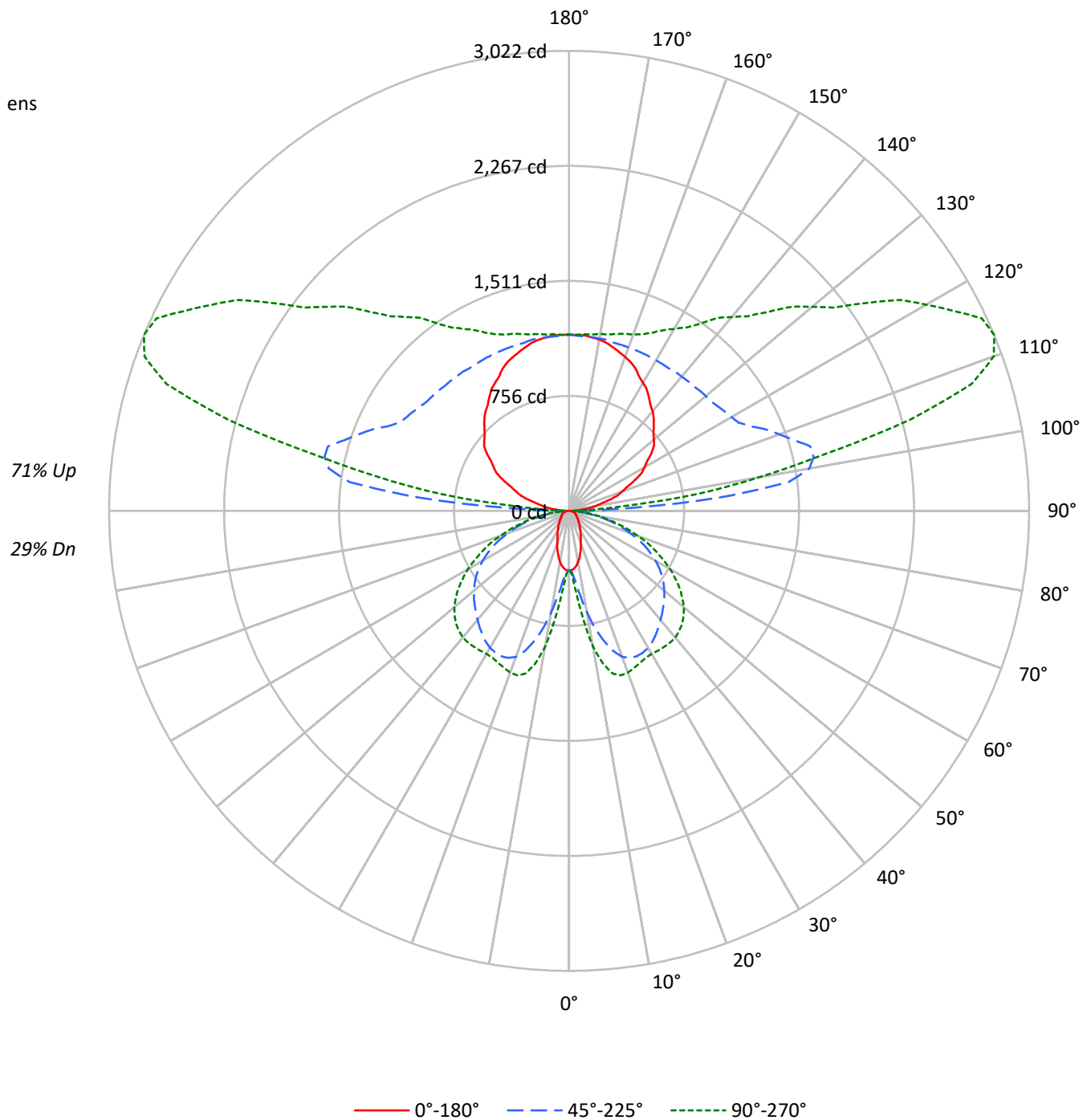
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 10523.4 lumens  
Efficiency: N/A  
Efficacy: 127.7 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

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

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

	0°	45°	90°
0°	1808	1808	1808
5°	1766	2089	2430
10°	1602	3046	4028
15°	1361	3979	4864
20°	1108	4611	4957
25°	925	4825	4856
30°	779	4855	4847
35°	689	4775	4973
40°	601	4670	5102
45°	544	4593	5122
50°	499	4525	5037
55°	478	4423	4814
60°	490	4229	4461
65°	509	3934	3977
70°	543	3430	3360
75°	601	2797	2622
80°	656	1939	1766
85°	582	1030	905

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 5122 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	50.4	0.5
10°-20°	223.4	2.1
20°-30°	390.7	3.7
30°-40°	502.9	4.8
40°-50°	561.8	5.3
50°-60°	538.1	5.1
60°-70°	426.4	4.1
70°-80°	250.7	2.4
80°-90°	74.1	0.7
90°-100°	564.3	5.4
100°-110°	1483.6	14.1
110°-120°	1538.4	14.6
120°-130°	1234.0	11.7
130°-140°	968.2	9.2
140°-150°	743.1	7.1
150°-160°	535.2	5.1
160°-170°	327.5	3.1
170°-180°	110.6	1.1
0°-30°	664.5	6.3
0°-40°	1167.4	11.1
0°-60°	2267.2	21.5
0°-90°	3018.5	28.7
90°-120°	3586.3	34.1
90°-150°	6531.7	62.1
90°-180°	7505.0	71.3
0°-180°	10523.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	390	390	390	390	390	
5°	380	407	458	519	537	35
15°	284	525	884	1072	1106	79
25°	182	595	1054	1100	1101	84
35°	123	569	992	1049	1090	77
45°	84	454	877	1005	1050	65
55°	60	288	744	864	888	55
65°	48	153	552	621	630	47
75°	35	94	303	333	334	37
85°	12	29	75	83	84	13
90°	8	22	59	30	30	7
95°	75	292	972	501	341	83
105°	267	405	1640	2490	2323	283
115°	475	577	1314	2621	2991	469
125°	660	740	1195	2019	2382	586
135°	787	866	1158	1630	1848	609
145°	913	971	1143	1391	1500	572
155°	1032	1061	1143	1255	1291	474
165°	1113	1128	1143	1188	1203	314
175°	1158	1158	1151	1165	1165	110
180°	1158	1158	1158	1158	1158	



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**CANDELA DISTRIBUTION (FULL):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	389.6	389.6	389.6	389.6	389.6	389.6	389.6	389.6	389.6	389.6	389.6
2.5°	389.6	389.6	392.1	393.4	395.8	397.1	399.7	402.2	409.7	410.9	413.4
5°	379.6	384.6	400.9	407.1	424.7	448.5	458.5	474.8	508.7	518.7	524.9
7.5°	364.5	375.8	415.9	425.9	469.8	532.4	558.7	593.8	647.6	674.0	695.3
10°	340.7	364.5	436.0	459.8	531.2	626.3	675.3	724.1	805.5	841.8	855.6
12.5°	314.5	353.2	457.3	489.8	592.5	731.6	790.5	844.3	937.1	985.9	993.4
15°	284.4	337.0	477.3	524.9	657.7	819.3	884.5	950.8	1037.3	1072.3	1081.1
17.5°	258.1	324.5	496.1	546.2	707.8	898.2	964.6	1019.7	1089.9	1113.7	1120.0
20°	225.5	304.4	508.7	573.8	760.5	955.9	1019.7	1062.3	1110.0	1125.0	1127.5
22.5°	201.7	283.1	516.1	583.8	795.5	991.0	1044.8	1078.7	1111.2	1116.2	1117.4
25°	181.7	259.3	514.9	595.1	825.6	1012.3	1053.6	1078.7	1097.4	1100.0	1100.0
27.5°	162.9	233.0	509.9	597.6	848.2	1017.2	1049.8	1067.4	1076.2	1081.1	1081.1
30°	146.5	208.0	497.4	592.5	858.2	1012.3	1038.5	1047.3	1056.1	1063.6	1067.4
32.5°	134.0	184.2	478.6	582.5	859.4	999.7	1018.5	1023.5	1036.0	1053.6	1059.8
35°	122.7	160.4	457.3	568.7	851.9	979.7	992.2	997.2	1022.3	1048.6	1057.3
37.5°	111.5	142.8	429.7	545.0	840.6	955.9	964.6	973.4	1012.3	1043.6	1053.6
40°	100.2	127.8	397.1	518.7	823.0	927.1	934.6	948.4	999.7	1036.0	1046.1
42.5°	91.4	115.3	362.0	491.1	800.5	894.5	905.8	925.8	984.7	1023.5	1034.8
45°	84.0	102.7	324.5	453.5	771.7	860.7	876.9	904.5	967.2	1004.7	1014.7
47.5°	76.4	94.0	285.6	414.7	740.4	826.9	848.2	879.5	943.3	979.7	988.5
50°	70.1	85.2	246.8	373.3	706.6	790.5	815.6	848.2	913.3	947.1	958.4
52.5°	65.1	77.7	210.4	331.9	667.7	752.9	781.8	815.6	876.9	909.5	917.0
55°	60.1	71.5	179.1	288.1	627.6	712.8	744.1	776.7	836.9	864.4	869.5
57.5°	57.6	66.4	152.8	246.8	585.1	667.7	702.8	732.9	789.2	810.5	815.6
60°	53.9	62.7	132.8	211.7	538.7	625.1	655.2	685.3	732.9	750.4	754.2
62.5°	50.2	60.1	117.8	177.9	491.1	575.1	605.0	632.7	672.8	685.3	690.3
65°	47.6	57.6	106.5	152.8	442.2	522.4	552.5	576.3	608.9	621.4	623.9
67.5°	45.1	55.1	97.7	131.5	393.4	469.8	492.3	514.9	539.9	552.5	553.7
70°	41.4	52.6	90.2	116.5	343.2	409.7	428.4	452.2	472.3	478.6	482.3
72.5°	38.9	48.8	85.2	105.3	291.9	352.0	369.6	383.3	400.9	407.1	407.1
75°	35.1	43.8	80.1	94.0	239.3	288.1	303.2	316.9	330.7	333.3	329.5
77.5°	31.3	38.9	68.9	78.9	186.7	228.0	240.5	248.1	259.3	261.8	263.1
80°	26.3	33.8	53.9	61.4	135.3	167.8	176.6	182.9	193.0	193.0	195.4
82.5°	20.1	26.3	38.9	43.8	91.4	115.3	122.7	126.6	132.8	132.8	132.8
85°	12.5	16.3	25.0	28.8	55.1	70.1	75.2	76.4	81.4	82.7	82.7
87.5°	6.3	8.8	16.3	17.6	28.8	36.3	36.3	38.9	38.9	37.5	36.3
90°	7.8	14.0	20.2	21.8	34.2	50.7	59.0	52.5	39.3	29.5	29.5
92.5°	31.1	84.0	136.8	150.0	210.8	292.0	332.5	291.4	209.3	147.7	141.8
95°	74.6	171.3	268.0	292.2	518.7	820.9	972.0	867.4	658.1	501.2	483.4
97.5°	129.0	214.3	299.6	320.9	698.8	1202.6	1454.5	1388.4	1256.1	1156.9	1123.1
100°	170.9	248.3	325.7	345.0	764.3	1323.4	1602.9	1607.8	1617.4	1624.7	1584.3
102.5°	206.7	278.8	351.0	369.0	794.3	1361.3	1644.9	1729.1	1897.7	2024.1	1989.5
105°	267.3	328.4	389.5	404.8	816.6	1365.7	1640.2	1829.1	2206.9	2490.2	2471.6
107.5°	329.4	386.4	443.4	457.7	820.8	1304.9	1547.0	1810.5	2337.4	2732.6	2737.1
110°	371.4	422.8	474.3	487.2	814.5	1251.0	1469.3	1763.9	2352.9	2794.8	2814.1



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
112.5°	412.5	461.6	510.7	522.9	814.8	1204.0	1398.6	1700.1	2303.0	2755.2	2784.9
115°	474.8	520.0	565.3	576.6	822.3	1150.0	1313.9	1604.3	2185.2	2620.8	2662.0
117.5°	536.1	577.2	618.3	628.6	837.6	1116.2	1255.6	1517.7	2041.9	2435.0	2480.7
120°	571.9	610.6	649.2	658.8	850.0	1104.9	1232.3	1471.8	1950.8	2310.0	2354.3
122.5°	606.8	645.9	684.9	694.6	867.9	1098.9	1214.4	1430.0	1861.4	2184.9	2228.7
125°	660.4	696.0	731.6	740.5	892.0	1094.0	1195.0	1378.2	1744.6	2019.4	2059.8
127.5°	704.0	739.8	775.8	784.7	916.1	1091.2	1178.7	1336.0	1650.6	1886.5	1920.5
130°	727.2	765.9	804.5	814.3	933.6	1092.9	1172.5	1312.5	1592.6	1802.6	1834.0
132.5°	751.3	790.0	828.6	838.4	947.9	1094.0	1167.0	1292.4	1543.1	1731.1	1759.2
135°	787.1	822.3	857.6	866.4	963.5	1093.0	1157.7	1262.7	1472.6	1630.1	1654.4
137.5°	823.6	858.4	893.4	902.1	986.8	1099.7	1156.1	1244.8	1422.4	1555.5	1575.4
140°	853.9	886.0	918.1	926.2	1001.0	1100.8	1150.7	1227.4	1380.7	1495.7	1514.3
142.5°	877.2	906.9	936.6	944.0	1012.9	1104.7	1150.7	1218.0	1352.7	1453.8	1469.7
145°	913.0	938.9	964.8	971.3	1028.5	1104.8	1142.9	1198.0	1308.2	1390.8	1402.9
147.5°	948.7	973.9	999.1	1005.5	1051.3	1112.4	1142.9	1186.3	1272.9	1338.0	1347.9
150°	972.0	994.8	1017.6	1023.3	1063.2	1116.3	1142.9	1179.5	1252.8	1307.7	1315.8
152.5°	996.1	1013.4	1030.7	1035.0	1070.9	1118.9	1142.9	1174.2	1236.7	1283.6	1289.8
155°	1031.8	1044.6	1057.4	1060.6	1088.0	1124.6	1142.9	1167.8	1217.6	1254.8	1258.8
157.5°	1058.2	1070.6	1083.2	1086.2	1105.1	1130.3	1142.9	1162.3	1200.9	1230.0	1232.8
160°	1076.2	1085.9	1095.5	1097.9	1113.0	1132.9	1142.9	1159.6	1192.7	1217.6	1219.2
162.5°	1094.0	1101.3	1108.6	1110.3	1121.2	1135.7	1142.9	1156.9	1184.9	1205.9	1207.5
165°	1113.4	1120.0	1126.5	1128.2	1133.1	1139.7	1142.9	1152.9	1173.0	1188.0	1189.7
167.5°	1131.3	1134.3	1137.5	1138.3	1142.4	1147.9	1150.7	1157.2	1170.4	1180.2	1180.9
170°	1142.9	1146.0	1149.2	1149.9	1150.2	1150.5	1150.7	1157.2	1170.4	1180.2	1180.2
172.5°	1149.2	1149.8	1150.5	1150.7	1150.7	1150.7	1150.7	1155.9	1166.3	1174.0	1173.5
175°	1157.7	1157.7	1157.7	1157.7	1155.4	1152.3	1150.7	1154.0	1160.5	1165.4	1165.4
177.5°	1157.7	1157.7	1157.7	1157.7	1155.9	1153.5	1152.3	1154.9	1160.0	1164.0	1163.3
180°	1157.7	1157.7	1157.7	1157.7	1157.7	1157.7	1157.7	1157.7	1157.7	1157.7	1157.7



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**CANDELA DISTRIBUTION (continued):**

	80°	90°
0°	389.6	389.6
2.5°	415.9	413.4
5°	534.9	537.4
7.5°	720.3	719.1
10°	895.7	907.0
12.5°	1023.5	1026.0
15°	1101.2	1106.2
17.5°	1131.3	1132.5
20°	1132.5	1130.0
22.5°	1118.7	1116.2
25°	1102.4	1101.2
27.5°	1087.4	1088.7
30°	1081.1	1084.9
32.5°	1081.1	1087.4
35°	1083.6	1089.9
37.5°	1082.4	1089.9
40°	1077.4	1086.1
42.5°	1063.6	1069.9
45°	1042.3	1049.8
47.5°	1014.7	1019.7
50°	979.7	984.7
52.5°	935.8	937.1
55°	883.2	888.2
57.5°	826.9	828.1
60°	764.2	767.9
62.5°	697.8	697.8
65°	627.6	630.2
67.5°	555.0	561.2
70°	481.1	482.3
72.5°	408.4	408.4
75°	333.3	334.5
77.5°	261.8	261.8
80°	194.2	195.4
82.5°	134.0	136.6
85°	84.0	84.0
87.5°	38.9	35.1
90°	29.5	29.5
92.5°	118.3	94.8
95°	412.3	341.1
97.5°	987.7	852.4
100°	1423.1	1261.8
102.5°	1851.4	1713.2
105°	2397.4	2323.1
107.5°	2755.1	2773.0
110°	2891.5	2968.8





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**CANDELA DISTRIBUTION (continued):**

	80°	90°
112.5°	2903.6	3022.4
115°	2826.7	2991.4
117.5°	2663.4	2846.1
120°	2531.9	2709.3
122.5°	2403.7	2578.8
125°	2221.0	2382.3
127.5°	2056.6	2192.7
130°	1959.7	2085.4
132.5°	1871.8	1984.4
135°	1751.4	1848.5
137.5°	1654.8	1734.3
140°	1588.5	1662.7
142.5°	1533.6	1597.5
145°	1451.2	1499.5
147.5°	1388.0	1428.1
150°	1348.2	1380.7
152.5°	1314.2	1338.7
155°	1275.1	1291.3
157.5°	1244.2	1255.6
160°	1225.8	1232.3
162.5°	1213.6	1219.9
165°	1196.3	1202.8
167.5°	1183.7	1186.5
170°	1180.2	1180.2
172.5°	1171.0	1168.6
175°	1165.4	1165.4
177.5°	1160.5	1157.7
180°	1157.7	1157.7



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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	0.69	1.40	1.80	2.52	4.06	13.87	14.58	14.98	15.70	17.24
	3H	1.38	2.02	2.51	3.15	4.71	15.70	16.34	16.82	17.46	19.02
	4H	1.67	2.28	2.81	3.41	4.97	16.33	16.95	17.47	18.07	19.63
	6H	1.92	2.48	3.06	3.60	5.18	16.76	17.32	17.90	18.44	20.02
	8H	1.98	2.52	3.12	3.66	5.23	16.87	17.41	18.02	18.55	20.12
	12H	1.99	2.50	3.14	3.64	5.23	16.94	17.45	18.09	18.58	20.17
4H	2H	7.89	8.50	9.03	9.62	11.19	14.12	14.74	15.27	15.86	17.42
	3H	9.44	9.95	10.59	11.10	12.68	16.16	16.67	17.30	17.82	19.39
	4H	9.53	10.00	10.68	11.14	12.73	16.92	17.39	18.07	18.52	20.12
	6H	9.53	9.93	10.69	11.09	12.68	17.45	17.85	18.60	19.01	20.60
	8H	9.50	9.88	10.66	11.03	12.64	17.61	17.98	18.76	19.13	20.74
	12H	9.45	9.79	10.62	10.96	12.57	17.69	18.03	18.86	19.20	20.81
8H	4H	10.96	11.34	12.12	12.49	14.09	16.96	17.34	18.12	18.49	20.10
	6H	11.20	11.51	12.37	12.70	14.30	17.59	17.90	18.76	19.09	20.69
	8H	11.21	11.48	12.39	12.66	14.28	17.80	18.08	18.99	19.25	20.87
	12H	11.17	11.41	12.36	12.58	14.24	17.94	18.18	19.13	19.35	21.01
12H	4H	11.10	11.44	12.27	12.60	14.21	16.91	17.25	18.08	18.41	20.02
	6H	11.45	11.72	12.63	12.90	14.52	17.57	17.84	18.75	19.01	20.63
	8H	11.51	11.75	12.70	12.92	14.58	17.79	18.03	18.98	19.20	20.85