

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: P936856

Luminaire Tested: SQ4-FB-050U-100D-93050-1D-UNV-STD-W-12-5000K

Issue Date: 12/17/2024

**Test Information**

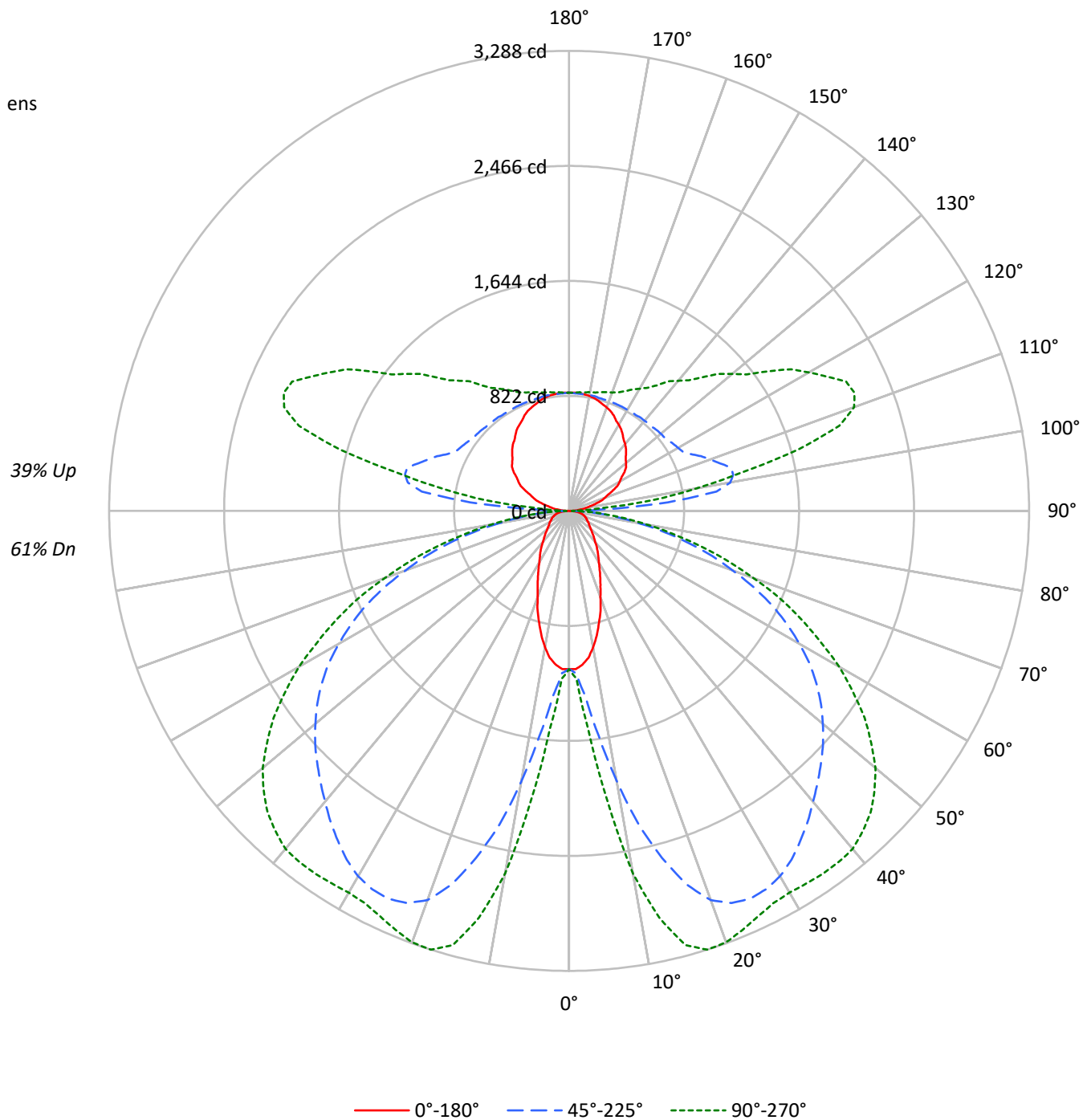
Test Method: LM-79-2019  
Report Number: P936856  
REPORT IS A COMBINATION OF REPORTS P933463 AND P933786  
Test Lab: INNOVATION CENTER  
Issue Date: 12/17/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ4-FB-050U-100D-93050-1D-UNV-STD-W-12-5000K  
Description: CORELITE SQ4 SUSPENDED INDIRECT LED LUMINAIRE WITH Batwing Frosted Continuous Roll L  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 14235.2 lumens  
Efficiency: N/A  
Efficacy: 105.0 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: Semi-Direct  
  
Input Watts (W): 135.6  
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	110	110	110	110	103	103	103	103	90	90	90	78	78	78	67	67	67	61
1	100	95	91	87	93	89	85	82	78	75	72	67	65	63	58	56	55	50
2	90	82	75	70	84	77	71	66	67	63	59	58	55	52	50	48	45	41
3	82	72	64	57	76	67	60	54	59	53	49	51	47	43	44	40	38	34
4	74	63	54	48	69	59	51	45	52	46	41	45	40	36	39	35	32	28
5	68	56	47	41	63	52	44	39	46	40	35	40	35	31	34	30	27	24
6	63	50	41	35	58	47	39	33	41	35	30	36	31	27	31	27	23	21
7	58	45	36	30	54	42	34	29	37	31	26	32	27	23	28	24	21	18
8	53	40	32	26	50	38	30	25	34	27	23	29	24	20	25	21	18	16
9	50	37	29	23	46	35	27	22	31	24	20	27	22	18	23	19	16	14
10	46	33	26	21	43	32	25	20	28	22	18	25	20	16	21	17	14	12

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

	0°	45°	90°
0°	3499	3499	3499
5°	3420	4045	4703
10°	3103	5898	7797
15°	2638	7707	9415
20°	2148	8934	9595
25°	1793	9351	9400
30°	1512	9413	9383
35°	1338	9259	9625
40°	1167	9058	9876
45°	1057	8912	9914
50°	971	8781	9750
55°	930	8588	9318
60°	954	8215	8636
65°	994	7645	7698
70°	1061	6672	6503
75°	1181	5445	5075
80°	1299	3781	3419
85°	1176	2009	1750

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 9914 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	146.3	1.0
10°-20°	648.5	4.6
20°-30°	1134.4	8.0
30°-40°	1460.3	10.3
40°-50°	1631.1	11.5
50°-60°	1562.2	11.0
60°-70°	1238.1	8.7
70°-80°	728.0	5.1
80°-90°	205.5	1.4
90°-100°	412.1	2.9
100°-110°	1083.5	7.6
110°-120°	1123.5	7.9
120°-130°	901.2	6.3
130°-140°	707.1	5.0
140°-150°	542.7	3.8
150°-160°	390.9	2.7
160°-170°	239.1	1.7
170°-180°	80.8	0.6
0°-30°	1929.2	13.6
0°-40°	3389.5	23.8
0°-60°	6582.8	46.2
0°-90°	8754.4	61.5
90°-120°	2619.1	18.4
90°-150°	4770.1	33.5
90°-180°	5481.0	38.5
0°-180°	14235.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1131	1131	1131	1131	1131	
5°	1102	1182	1331	1506	1560	102
15°	826	1524	2568	3114	3212	230
25°	527	1728	3059	3194	3197	243
35°	356	1651	2881	3044	3164	223
45°	244	1317	2546	2917	3048	189
55°	175	837	2161	2510	2579	159
65°	138	444	1604	1804	1830	137
75°	102	273	880	968	971	107
85°	36	84	218	240	244	39
90°	6	16	43	22	22	7
95°	54	213	710	366	249	60
105°	195	296	1198	1819	1697	207
115°	347	421	960	1914	2185	342
125°	482	541	873	1475	1740	428
135°	575	633	846	1190	1350	445
145°	667	709	835	1016	1095	418
155°	754	774	835	916	943	346
165°	813	824	835	868	878	229
175°	846	846	840	851	851	80
180°	846	846	846	846	846	



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**CANDELA DISTRIBUTION (FULL):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	1131.2	1131.2	1131.2	1131.2	1131.2	1131.2	1131.2	1131.2	1131.2	1131.2	1131.2
2.5°	1131.2	1131.2	1138.5	1142.2	1149.4	1153.1	1160.3	1167.6	1189.4	1193.1	1200.3
5°	1102.2	1116.7	1164.0	1182.2	1233.1	1302.2	1331.3	1378.6	1476.8	1505.8	1524.0
7.5°	1058.5	1091.2	1207.6	1236.7	1364.0	1545.9	1622.3	1724.1	1880.5	1956.9	2018.7
10°	989.4	1058.5	1265.8	1334.9	1542.3	1818.7	1960.6	2102.4	2338.8	2444.3	2484.3
12.5°	913.0	1025.7	1327.6	1422.2	1720.5	2124.2	2295.2	2451.6	2720.8	2862.7	2884.4
15°	825.7	978.4	1385.8	1524.0	1909.6	2378.8	2568.0	2760.8	3011.8	3113.6	3139.1
17.5°	749.3	942.1	1440.4	1585.9	2055.1	2608.0	2800.8	2960.9	3164.5	3233.6	3251.9
20°	654.7	883.9	1476.8	1665.9	2207.9	2775.3	2960.9	3084.5	3222.7	3266.4	3273.6
22.5°	585.6	822.1	1498.6	1695.0	2309.7	2877.2	3033.5	3131.8	3226.3	3240.9	3244.5
25°	527.4	753.0	1494.9	1727.7	2397.0	2939.0	3059.0	3131.8	3186.3	3193.6	3193.6
27.5°	472.9	676.5	1480.4	1735.0	2462.5	2953.5	3048.1	3099.1	3124.5	3139.1	3139.1
30°	425.5	603.8	1444.0	1720.5	2491.6	2939.0	3015.4	3040.9	3066.3	3088.1	3099.1
32.5°	389.2	534.6	1389.5	1691.4	2495.2	2902.7	2957.2	2971.8	3008.1	3059.0	3077.2
35°	356.4	465.5	1327.6	1651.4	2473.4	2844.4	2880.8	2895.3	2968.1	3044.5	3070.0
37.5°	323.8	414.7	1247.6	1582.3	2440.7	2775.3	2800.8	2826.2	2939.0	3030.0	3059.0
40°	291.0	371.0	1153.1	1505.8	2389.8	2691.7	2713.4	2753.5	2902.7	3008.1	3037.2
42.5°	265.5	334.7	1051.2	1425.8	2324.2	2597.1	2629.8	2688.0	2859.0	2971.8	3004.4
45°	243.7	298.3	942.1	1316.7	2240.6	2498.9	2546.1	2626.2	2808.1	2917.2	2946.3
47.5°	221.9	272.8	829.3	1204.0	2149.7	2400.7	2462.5	2553.4	2739.0	2844.4	2869.9
50°	203.7	247.3	716.5	1084.0	2051.5	2295.2	2367.9	2462.5	2651.7	2749.9	2782.6
52.5°	189.1	225.5	611.1	963.9	1938.7	2186.0	2269.7	2367.9	2546.1	2640.8	2662.6
55°	174.6	207.3	520.1	836.6	1822.4	2069.7	2160.6	2255.1	2429.8	2509.8	2524.3
57.5°	167.3	192.8	443.8	716.5	1698.7	1938.7	2040.6	2127.9	2291.6	2353.3	2367.9
60°	156.4	181.9	385.5	614.7	1564.0	1815.0	1902.4	1989.7	2127.9	2178.8	2189.7
62.5°	145.5	174.6	341.9	516.5	1425.8	1669.6	1756.8	1836.9	1953.3	1989.7	2004.2
65°	138.2	167.3	309.2	443.8	1284.0	1516.8	1604.0	1673.2	1767.8	1804.1	1811.4
67.5°	131.0	160.0	283.8	381.9	1142.2	1364.0	1429.5	1494.9	1567.7	1604.0	1607.7
70°	120.0	152.8	261.9	338.3	996.6	1189.4	1244.0	1313.1	1371.3	1389.5	1400.4
72.5°	112.8	141.9	247.3	305.5	847.5	1022.1	1073.1	1113.1	1164.0	1182.2	1182.2
75°	101.9	127.3	232.8	272.8	694.7	836.6	880.3	920.3	960.3	967.5	956.6
77.5°	90.9	112.8	200.1	229.1	542.0	662.0	698.4	720.2	753.0	760.2	763.9
80°	76.4	98.2	156.4	178.2	392.9	487.4	512.9	531.1	560.2	560.2	567.4
82.5°	58.2	76.4	112.8	127.3	265.5	334.7	356.4	367.4	385.5	385.5	385.5
85°	36.3	47.3	72.8	83.7	160.0	203.7	218.2	221.9	236.4	240.1	240.1
87.5°	18.2	25.4	47.3	50.9	83.7	105.4	105.4	112.8	112.8	109.1	105.4
90°	5.7	10.2	14.8	15.9	25.0	37.1	43.1	38.4	28.7	21.6	21.6
92.5°	22.7	61.2	99.8	109.5	153.9	213.2	242.8	212.8	152.8	107.8	103.5
95°	54.5	125.1	195.7	213.4	378.8	599.5	709.8	633.4	480.6	366.0	352.9
97.5°	94.2	156.5	218.8	234.4	510.3	878.2	1062.2	1014.0	917.3	844.9	820.2
100°	124.8	181.3	237.8	251.9	558.1	966.4	1170.6	1174.1	1181.2	1186.5	1157.0
102.5°	151.0	203.6	256.3	269.5	580.1	994.2	1201.3	1262.7	1385.8	1478.1	1452.9
105°	195.2	239.8	284.4	295.6	596.3	997.4	1197.9	1335.8	1611.7	1818.6	1805.0
107.5°	240.6	282.2	323.9	334.2	599.4	953.0	1129.8	1322.2	1707.1	1995.7	1999.0
110°	271.3	308.8	346.4	355.8	594.8	913.7	1073.1	1288.2	1718.4	2041.0	2055.2



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
112.5°	301.3	337.1	372.9	381.9	595.0	879.2	1021.4	1241.5	1681.9	2012.1	2033.8
115°	346.7	379.7	412.8	421.0	600.5	839.9	959.5	1171.6	1595.8	1913.9	1944.0
117.5°	391.5	421.5	451.5	459.0	611.6	815.2	917.0	1108.4	1491.2	1778.3	1811.6
120°	417.6	445.9	474.1	481.1	620.7	806.9	900.0	1074.9	1424.6	1687.0	1719.4
122.5°	443.2	471.7	500.1	507.3	633.9	802.5	886.9	1044.3	1359.4	1595.6	1627.5
125°	482.3	508.3	534.3	540.8	651.5	798.9	872.7	1006.5	1274.0	1474.7	1504.2
127.5°	514.1	540.3	566.6	573.1	669.0	796.8	860.8	975.7	1205.4	1377.7	1402.6
130°	531.2	559.4	587.6	594.7	681.8	798.1	856.3	958.5	1163.1	1316.4	1339.4
132.5°	548.7	577.0	605.2	612.3	692.3	798.9	852.3	943.8	1126.9	1264.2	1284.8
135°	574.8	600.5	626.2	632.7	703.6	798.2	845.5	922.2	1075.5	1190.5	1208.2
137.5°	601.5	627.0	652.5	658.8	720.7	803.2	844.4	909.2	1038.8	1136.0	1150.5
140°	623.6	647.1	670.5	676.3	731.0	803.9	840.3	896.3	1008.4	1092.3	1105.9
142.5°	640.6	662.3	684.0	689.5	739.8	806.8	840.3	889.5	987.9	1061.7	1073.3
145°	666.7	685.6	704.5	709.3	751.1	806.8	834.7	874.9	955.4	1015.7	1024.5
147.5°	692.9	711.2	729.7	734.2	767.7	812.4	834.7	866.4	929.7	977.2	984.5
150°	709.8	726.4	743.1	747.3	776.5	815.3	834.7	861.4	914.9	955.0	960.9
152.5°	727.5	740.0	752.7	755.8	782.2	817.2	834.7	857.6	903.2	937.4	941.9
155°	753.5	762.9	772.2	774.5	794.6	821.3	834.7	852.9	889.2	916.4	919.3
157.5°	772.9	782.0	791.0	793.3	807.1	825.6	834.7	848.9	877.0	898.2	900.4
160°	785.9	793.0	800.0	801.8	812.8	827.4	834.7	846.8	871.0	889.2	890.3
162.5°	798.9	804.3	809.6	810.9	818.9	829.4	834.7	844.9	865.3	880.6	881.7
165°	813.2	817.9	822.7	823.9	827.5	832.3	834.7	842.1	856.7	867.6	868.8
167.5°	826.2	828.4	830.7	831.2	834.3	838.3	840.3	845.1	854.7	861.9	862.4
170°	834.7	836.9	839.2	839.8	840.0	840.2	840.3	845.1	854.7	861.9	861.9
172.5°	839.2	839.7	840.2	840.3	840.3	840.3	840.3	844.1	851.7	857.4	856.9
175°	845.5	845.5	845.5	845.5	843.7	841.4	840.3	842.7	847.6	851.2	851.2
177.5°	845.5	845.5	845.5	845.5	844.2	842.4	841.5	843.5	847.2	850.1	849.5
180°	845.5	845.5	845.5	845.5	845.5	845.5	845.5	845.5	845.5	845.5	845.5



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**CANDELA DISTRIBUTION (continued):**

	80°	90°
0°	1131.2	1131.2
2.5°	1207.6	1200.3
5°	1553.2	1560.4
7.5°	2091.5	2087.8
10°	2600.7	2633.4
12.5°	2971.8	2979.0
15°	3197.2	3211.8
17.5°	3284.5	3288.2
20°	3288.2	3280.9
22.5°	3248.2	3240.9
25°	3200.9	3197.2
27.5°	3157.2	3160.9
30°	3139.1	3150.0
32.5°	3139.1	3157.2
35°	3146.3	3164.5
37.5°	3142.6	3164.5
40°	3128.1	3153.6
42.5°	3088.1	3106.3
45°	3026.3	3048.1
47.5°	2946.3	2960.9
50°	2844.4	2859.0
52.5°	2717.1	2720.8
55°	2564.3	2578.9
57.5°	2400.7	2404.3
60°	2218.8	2229.7
62.5°	2026.0	2026.0
65°	1822.4	1829.6
67.5°	1611.4	1629.6
70°	1396.7	1400.4
72.5°	1185.8	1185.8
75°	967.5	971.2
77.5°	760.2	760.2
80°	563.8	567.4
82.5°	389.2	396.4
85°	243.7	243.7
87.5°	112.8	101.9
90°	21.6	21.6
92.5°	86.4	69.2
95°	301.0	249.1
97.5°	721.3	622.5
100°	1039.3	921.5
102.5°	1352.0	1251.2
105°	1750.9	1696.6
107.5°	2012.0	2025.2
110°	2111.6	2168.1





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**CANDELA DISTRIBUTION (continued):**

	80°	90°
112.5°	2120.6	2207.3
115°	2064.4	2184.7
117.5°	1945.1	2078.5
120°	1849.1	1978.6
122.5°	1755.5	1883.3
125°	1621.9	1739.8
127.5°	1501.9	1601.3
130°	1431.2	1523.0
132.5°	1367.0	1449.2
135°	1279.1	1349.9
137.5°	1208.5	1266.5
140°	1160.1	1214.3
142.5°	1120.0	1166.7
145°	1059.8	1095.2
147.5°	1013.7	1043.0
150°	984.6	1008.4
152.5°	959.8	977.7
155°	931.3	943.1
157.5°	908.6	917.0
160°	895.2	900.0
162.5°	886.3	890.9
165°	873.6	878.4
167.5°	864.5	866.5
170°	861.9	861.9
172.5°	855.2	853.5
175°	851.2	851.2
177.5°	847.5	845.5
180°	845.5	845.5



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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	6.35	7.37	7.19	8.24	9.34	19.54	20.56	20.38	21.43	22.53
	3H	7.06	7.99	7.92	8.87	9.99	21.39	22.32	22.25	23.20	24.32
	4H	7.37	8.24	8.24	9.13	10.26	22.05	22.92	22.92	23.81	24.94
	6H	7.63	8.43	8.51	9.33	10.47	22.49	23.30	23.38	24.19	25.34
	8H	7.70	8.47	8.59	9.38	10.53	22.62	23.39	23.51	24.30	25.45
	12H	7.72	8.46	8.62	9.36	10.53	22.70	23.43	23.60	24.34	25.51
4H	2H	13.59	14.46	14.46	15.35	16.48	19.83	20.70	20.71	21.59	22.72
	3H	15.17	15.90	16.06	16.82	17.97	21.90	22.63	22.78	23.55	24.69
	4H	15.27	15.94	16.17	16.86	18.03	22.67	23.34	23.57	24.26	25.43
	6H	15.29	15.87	16.21	16.81	17.98	23.23	23.81	24.14	24.75	25.92
	8H	15.27	15.82	16.19	16.75	17.94	23.40	23.94	24.31	24.87	26.06
	12H	15.24	15.73	16.18	16.68	17.87	23.50	23.99	24.44	24.94	26.14
8H	4H	16.73	17.28	17.65	18.21	19.40	22.75	23.29	23.67	24.22	25.41
	6H	16.98	17.43	17.93	18.41	19.59	23.39	23.84	24.33	24.81	26.00
	8H	17.00	17.40	17.96	18.37	19.57	23.61	24.01	24.57	24.98	26.18
	12H	16.98	17.33	17.94	18.29	19.54	23.77	24.12	24.73	25.08	26.33
12H	4H	16.89	17.38	17.83	18.33	19.52	22.71	23.20	23.65	24.15	25.34
	6H	17.25	17.65	18.20	18.61	19.81	23.37	23.77	24.33	24.74	25.94
	8H	17.32	17.68	18.28	18.63	19.89	23.62	23.97	24.57	24.93	26.18