

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: P937619

Luminaire Tested: SQ4-FB-100U-100D-840-1D-UNV-STD-W-6

Issue Date: 12/17/2024

**Test Information**

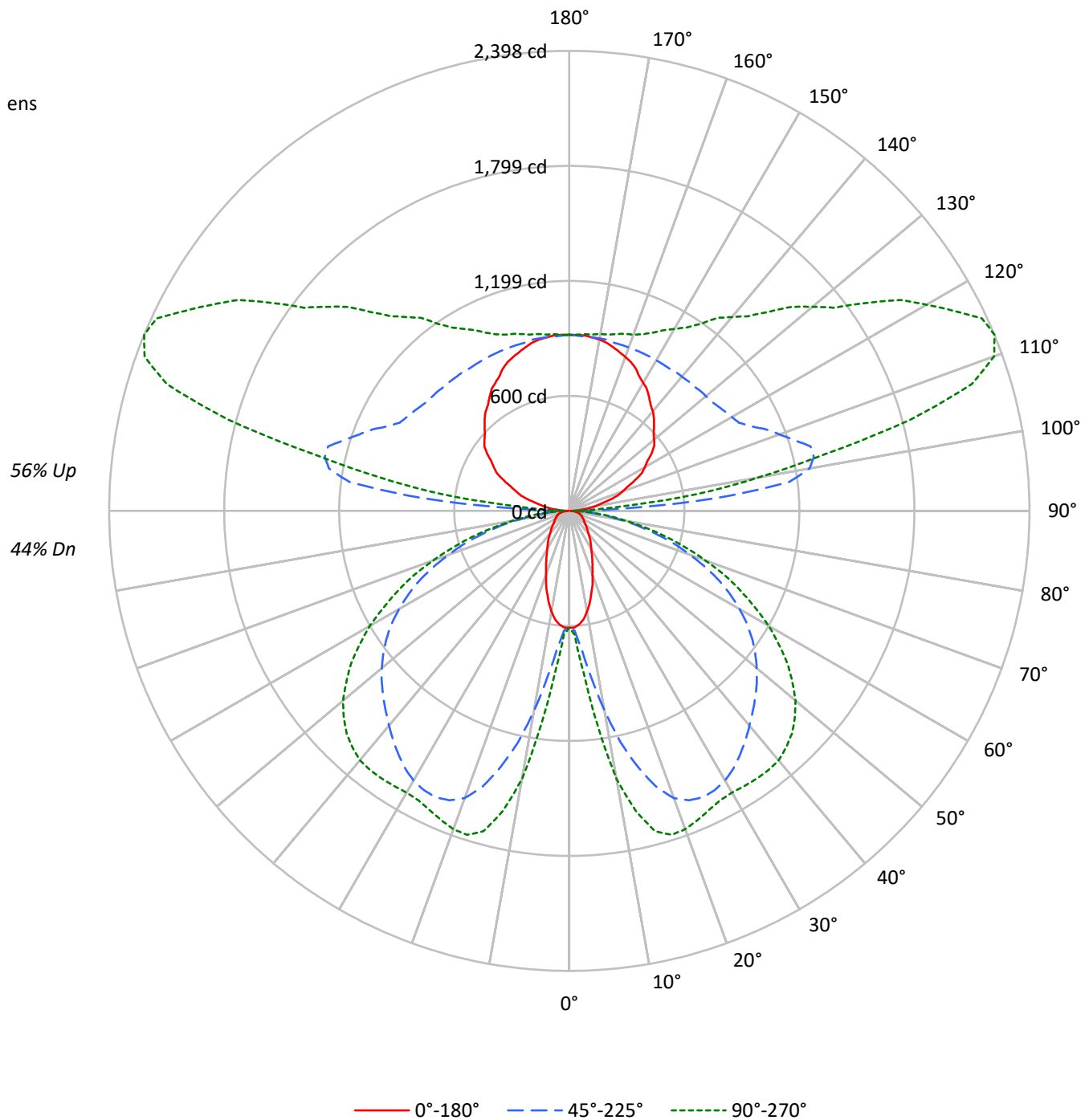
Test Method: LM-79-2019  
Report Number: P937619  
REPORT IS A COMBINATION OF REPORTS P933575 AND P933786  
Test Lab: INNOVATION CENTER  
Issue Date: 12/17/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ4-FB-100U-100D-840-1D-UNV-STD-W-6  
Description: CORELITE SQ4 SUSPENDED INDIRECT LED LUMINAIRE WITH Batwing Frosted Continuous Roll L  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 10668.4 lumens  
Efficiency: N/A  
Efficacy: 122.6 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: General Diffuse  
  
Input Watts (W): 87  
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

TEST NUMBER: P937619  
CATALOG NUMBER: SQ4-FB-100U-100D-840-1D-UNV-STD-W-6

### Luminous Intensity Polar Plot





TEST NUMBER: P937619

CATALOG NUMBER: SQ4-FB-100U-100D-840-1D-UNV-STD-W-6

**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	0		
RCR																										
0	106	106	106	106	97	97	97	97	80	80	80	65	65	65	51	51	51	44								
1	96	91	87	84	88	84	80	77	69	67	65	56	55	53	44	43	42	36								
2	87	79	73	68	79	73	67	63	60	56	53	49	46	43	38	36	34	30								
3	79	69	62	56	72	63	57	52	53	48	44	43	39	36	33	31	29	24								
4	72	61	53	46	65	56	49	43	46	41	37	38	34	30	29	27	24	20								
5	66	54	46	39	60	49	42	37	41	36	31	33	29	26	26	23	21	17								
6	60	48	40	34	55	44	37	31	37	31	27	30	26	22	24	20	18	15								
7	56	43	35	29	51	40	32	27	33	27	23	27	23	19	21	18	16	13								
8	51	39	31	26	47	36	29	24	30	24	20	25	20	17	19	16	14	11								
9	48	35	28	23	44	33	26	21	27	22	18	22	18	15	18	15	12	10								
10	44	32	25	20	41	30	23	19	25	20	16	21	16	14	16	13	11	9								

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

	0°	45°	90°
0°	3767	3767	3767
5°	3679	4353	5063
10°	3335	6344	8394
15°	2834	8286	10136
20°	2306	9599	10330
25°	1924	10043	10120
30°	1621	10104	10101
35°	1432	9934	10363
40°	1247	9713	10632
45°	1129	9550	10674
50°	1035	9403	10497
55°	990	9190	10032
60°	1013	8782	9297
65°	1051	8164	8287
70°	1117	7116	7001
75°	1233	5796	5464
80°	1338	4014	3682
85°	1169	2127	1885

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 10674 cd/sqm



TEST NUMBER: P937619

CATALOG NUMBER: SQ4-FB-100U-100D-840-1D-UNV-STD-W-6

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	78.8	0.7
10°-20°	349.1	3.3
20°-30°	610.6	5.7
30°-40°	786.1	7.4
40°-50°	878.0	8.2
50°-60°	840.9	7.9
60°-70°	666.5	6.2
70°-80°	391.9	3.7
80°-90°	112.4	1.1
90°-100°	447.7	4.2
100°-110°	1177.1	11.0
110°-120°	1220.5	11.4
120°-130°	979.0	9.2
130°-140°	768.2	7.2
140°-150°	589.6	5.5
150°-160°	424.6	4.0
160°-170°	259.8	2.4
170°-180°	87.8	0.8
0°-30°	1038.5	9.7
0°-40°	1824.6	17.1
0°-60°	3543.6	33.2
0°-90°	4714.3	44.2
90°-120°	2845.2	26.7
90°-150°	5182.0	48.6
90°-180°	5954.0	55.8
0°-180°	10668.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	609	609	609	609	609	
5°	593	636	717	811	840	55
15°	444	820	1382	1676	1729	124
25°	284	930	1647	1719	1721	131
35°	192	889	1551	1639	1704	120
45°	131	709	1371	1570	1641	101
55°	94	450	1163	1351	1388	86
65°	74	239	864	971	985	74
75°	55	147	474	521	523	57
85°	20	45	118	129	131	21
90°	6	17	47	23	23	6
95°	59	232	771	398	271	66
105°	212	321	1301	1976	1843	225
115°	377	457	1042	2079	2373	372
125°	524	588	948	1602	1890	465
135°	624	687	918	1293	1466	483
145°	724	770	907	1103	1190	454
155°	819	841	907	996	1024	376
165°	883	895	907	943	954	249
175°	918	918	913	925	925	87
180°	918	918	918	918	918	



TEST NUMBER: P937619

CATALOG NUMBER: SQ4-FB-100U-100D-840-1D-UNV-STD-W-6

**CANDELA DISTRIBUTION (FULL):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	608.9	608.9	608.9	608.9	608.9	608.9	608.9	608.9	608.9	608.9	608.9
2.5°	608.9	608.9	612.9	614.8	618.7	620.7	624.6	628.6	640.2	642.2	646.2
5°	593.3	601.1	626.6	636.4	663.7	701.0	716.6	742.1	794.9	810.7	820.4
7.5°	569.8	587.4	650.1	665.7	734.3	832.2	873.3	928.1	1012.3	1053.4	1086.7
10°	532.5	569.8	681.4	718.6	830.2	979.0	1055.4	1131.8	1259.0	1315.8	1337.4
12.5°	491.4	552.2	714.7	765.6	926.2	1143.5	1235.5	1319.7	1464.6	1541.0	1552.7
15°	444.5	526.7	746.0	820.4	1027.9	1280.5	1382.4	1486.1	1621.2	1676.0	1689.8
17.5°	403.4	507.1	775.4	853.7	1106.3	1403.9	1507.7	1593.8	1703.5	1740.7	1750.4
20°	352.4	475.8	794.9	896.8	1188.6	1494.0	1593.8	1660.4	1734.8	1758.3	1762.2
22.5°	315.3	442.5	806.7	912.4	1243.3	1548.8	1633.0	1685.8	1736.8	1744.6	1746.6
25°	284.0	405.3	804.7	930.1	1290.3	1582.1	1646.7	1685.8	1715.3	1719.1	1719.1
27.5°	254.5	364.2	796.9	934.0	1325.6	1589.9	1640.8	1668.2	1682.0	1689.8	1689.8
30°	229.1	325.1	777.4	926.2	1341.2	1582.1	1623.2	1636.9	1650.7	1662.3	1668.2
32.5°	209.6	287.8	747.9	910.4	1343.2	1562.5	1591.9	1599.7	1619.2	1646.7	1656.5
35°	191.9	250.7	714.7	888.9	1331.4	1531.2	1550.8	1558.6	1597.7	1638.9	1652.5
37.5°	174.3	223.2	671.6	851.8	1313.8	1494.0	1507.7	1521.4	1582.1	1631.0	1646.7
40°	156.6	199.7	620.7	810.7	1286.4	1448.9	1460.7	1482.2	1562.5	1619.2	1634.9
42.5°	143.0	180.1	565.8	767.6	1251.2	1398.0	1415.6	1446.9	1539.0	1599.7	1617.4
45°	131.2	160.6	507.1	708.8	1206.2	1345.2	1370.7	1413.7	1511.5	1570.3	1586.0
47.5°	119.4	146.8	446.5	648.1	1157.1	1292.3	1325.6	1374.5	1474.4	1531.2	1544.8
50°	109.7	133.2	385.7	583.5	1104.3	1235.5	1274.7	1325.6	1427.4	1480.2	1497.9
52.5°	101.9	121.4	328.9	518.9	1043.6	1176.8	1221.8	1274.7	1370.7	1421.5	1433.3
55°	94.0	111.6	280.0	450.3	981.0	1114.1	1163.1	1214.0	1307.9	1351.0	1358.9
57.5°	90.1	103.7	238.9	385.7	914.4	1043.6	1098.5	1145.5	1233.5	1266.8	1274.7
60°	84.2	97.9	207.6	330.9	842.0	977.0	1024.1	1071.0	1145.5	1172.9	1178.7
62.5°	78.3	94.0	184.1	278.0	767.6	898.7	945.7	988.8	1051.4	1071.0	1078.9
65°	74.4	90.1	166.5	238.9	691.2	816.5	863.5	900.7	951.6	971.2	975.1
67.5°	70.4	86.2	152.7	205.6	614.8	734.3	769.5	804.7	843.9	863.5	865.5
70°	64.6	82.2	141.0	182.1	536.5	640.2	669.7	706.8	738.1	747.9	753.8
72.5°	60.7	76.4	133.2	164.5	456.3	550.2	577.6	599.1	626.6	636.4	636.4
75°	54.8	68.6	125.3	146.8	374.0	450.3	473.8	495.4	516.9	520.9	514.9
77.5°	48.9	60.7	107.7	123.4	291.8	356.4	375.9	387.7	405.3	409.2	411.2
80°	41.1	52.9	84.2	95.9	211.4	262.4	276.0	285.8	301.5	301.5	305.5
82.5°	31.3	41.1	60.7	68.6	143.0	180.1	191.9	197.8	207.6	207.6	207.6
85°	19.6	25.5	39.1	45.1	86.2	109.7	117.5	119.4	127.3	129.2	129.2
87.5°	9.8	13.7	25.5	27.4	45.1	56.8	56.8	60.7	60.7	58.8	56.8
90°	6.1	11.1	16.0	17.3	27.2	40.3	46.8	41.6	31.2	23.4	23.4
92.5°	24.7	66.6	108.5	119.0	167.3	231.6	263.8	231.2	166.0	117.1	112.4
95°	59.2	135.8	212.6	231.8	411.6	651.3	771.1	688.1	522.1	397.6	383.4
97.5°	102.4	170.0	237.7	254.6	554.4	954.1	1154.0	1101.5	996.6	917.9	891.0
100°	135.7	197.0	258.4	273.7	606.3	1049.8	1271.7	1275.5	1283.2	1288.9	1256.9
102.5°	164.0	221.3	278.5	292.8	630.2	1080.1	1305.0	1371.8	1505.5	1605.8	1578.4
105°	212.0	260.5	309.0	321.2	647.9	1083.5	1301.3	1451.2	1750.8	1975.6	1960.9
107.5°	261.3	306.6	351.8	363.1	651.2	1035.2	1227.3	1436.4	1854.4	2168.0	2171.5
110°	294.6	335.4	376.3	386.5	646.3	992.5	1165.6	1399.3	1866.7	2217.3	2232.6



TEST NUMBER: P937619

CATALOG NUMBER: SQ4-FB-100U-100D-840-1D-UNV-STD-W-6

**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
112.5°	327.3	366.3	405.2	414.9	646.4	955.2	1109.5	1348.7	1827.1	2185.9	2209.4
115°	376.6	412.5	448.4	457.3	652.4	912.3	1042.3	1272.7	1733.6	2079.2	2111.9
117.5°	425.3	457.9	490.5	498.6	664.4	885.5	996.1	1204.1	1619.9	1931.8	1968.1
120°	453.7	484.4	515.0	522.8	674.4	876.6	977.6	1167.6	1547.6	1832.6	1867.8
122.5°	481.5	512.4	543.4	551.1	688.5	871.8	963.5	1134.6	1476.8	1733.3	1768.1
125°	523.9	552.2	580.4	587.5	707.7	868.0	948.1	1093.4	1384.1	1602.1	1634.2
127.5°	558.5	587.0	615.5	622.6	726.8	865.7	935.1	1059.9	1309.5	1496.7	1523.7
130°	577.0	607.7	638.3	646.1	740.8	867.1	930.2	1041.3	1263.5	1430.1	1455.0
132.5°	596.1	626.8	657.4	665.1	752.1	868.0	925.9	1025.3	1224.2	1373.4	1395.7
135°	624.4	652.4	680.3	687.4	764.4	867.1	918.4	1001.7	1168.3	1293.3	1312.6
137.5°	653.4	681.0	708.8	715.7	782.9	872.5	917.3	987.7	1128.5	1234.1	1249.8
140°	677.5	703.0	728.5	734.8	794.2	873.3	912.9	973.8	1095.4	1186.6	1201.3
142.5°	695.9	719.6	743.1	749.0	803.6	876.5	912.9	966.4	1073.2	1153.3	1165.9
145°	724.3	744.9	765.4	770.5	816.0	876.6	906.8	950.5	1037.9	1103.4	1113.0
147.5°	752.7	772.6	792.6	797.6	834.0	882.5	906.8	941.2	1009.9	1061.5	1069.4
150°	771.1	789.2	807.3	811.8	843.5	885.6	906.8	935.8	993.8	1037.4	1043.8
152.5°	790.3	804.0	817.7	821.1	849.7	887.7	906.8	931.6	981.2	1018.3	1023.2
155°	818.7	828.7	838.8	841.4	863.2	892.3	906.8	926.5	966.0	995.5	998.8
157.5°	839.6	849.5	859.3	861.7	876.8	896.8	906.8	922.1	952.8	975.8	978.1
160°	853.7	861.4	869.1	871.0	883.0	898.9	906.8	919.9	946.2	966.0	967.3
162.5°	868.0	873.7	879.4	880.9	889.5	901.1	906.8	917.9	940.1	956.7	957.9
165°	883.4	888.5	893.7	895.0	899.0	904.2	906.8	914.7	930.6	942.6	943.8
167.5°	897.5	900.0	902.4	903.0	906.3	910.7	912.9	918.1	928.5	936.3	936.9
170°	906.8	909.3	911.7	912.3	912.5	912.8	912.9	918.1	928.5	936.3	936.3
172.5°	911.7	912.2	912.8	912.9	912.9	912.9	912.9	917.1	925.3	931.4	930.9
175°	918.4	918.4	918.4	918.4	916.6	914.1	912.9	915.5	920.7	924.7	924.7
177.5°	918.4	918.4	918.4	918.4	917.1	915.2	914.2	916.3	920.3	923.4	922.8
180°	918.4	918.4	918.4	918.4	918.4	918.4	918.4	918.4	918.4	918.4	918.4



TEST NUMBER: P937619

CATALOG NUMBER: SQ4-FB-100U-100D-840-1D-UNV-STD-W-6

**CANDELA DISTRIBUTION (continued):**

	80°	90°
0°	608.9	608.9
2.5°	650.1	646.2
5°	836.0	840.0
7.5°	1125.8	1123.9
10°	1400.0	1417.6
12.5°	1599.7	1603.6
15°	1721.1	1728.9
17.5°	1768.1	1770.0
20°	1770.0	1766.1
22.5°	1748.5	1744.6
25°	1723.1	1721.1
27.5°	1699.6	1701.5
30°	1689.8	1695.6
32.5°	1689.8	1699.6
35°	1693.7	1703.5
37.5°	1691.8	1703.5
40°	1683.8	1697.6
42.5°	1662.3	1672.2
45°	1629.1	1640.8
47.5°	1586.0	1593.8
50°	1531.2	1539.0
52.5°	1462.6	1464.6
55°	1380.4	1388.2
57.5°	1292.3	1294.3
60°	1194.4	1200.2
62.5°	1090.7	1090.7
65°	981.0	984.8
67.5°	867.4	877.1
70°	751.9	753.8
72.5°	638.3	638.3
75°	520.9	522.8
77.5°	409.2	409.2
80°	303.5	305.5
82.5°	209.6	213.4
85°	131.2	131.2
87.5°	60.7	54.8
90°	23.4	23.4
92.5°	93.8	75.2
95°	327.0	270.6
97.5°	783.6	676.2
100°	1129.0	1001.0
102.5°	1468.8	1359.2
105°	1902.0	1843.1
107.5°	2185.9	2200.1
110°	2294.0	2355.4





TEST NUMBER: P937619  
CATALOG NUMBER: SQ4-FB-100U-100D-840-1D-UNV-STD-W-6

**CANDELA DISTRIBUTION (continued):**

	80°	90°
112.5°	2303.6	2397.9
115°	2242.6	2373.3
117.5°	2113.0	2258.0
120°	2008.7	2149.5
122.5°	1907.0	2046.0
125°	1762.0	1889.9
127.5°	1631.7	1739.6
130°	1554.8	1654.5
132.5°	1485.1	1574.4
135°	1389.5	1466.5
137.5°	1312.9	1375.9
140°	1260.3	1319.2
142.5°	1216.7	1267.4
145°	1151.4	1189.7
147.5°	1101.2	1133.0
150°	1069.6	1095.4
152.5°	1042.6	1062.1
155°	1011.6	1024.5
157.5°	987.1	996.1
160°	972.5	977.6
162.5°	962.8	967.7
165°	949.1	954.2
167.5°	939.1	941.3
170°	936.3	936.3
172.5°	929.0	927.1
175°	924.7	924.7
177.5°	920.6	918.4
180°	918.4	918.4



TEST NUMBER: P937619  
 CATALOG NUMBER: SQ4-FB-100U-100D-840-1D-UNV-STD-W-6

**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	5.05	5.90	6.05	6.91	8.26	18.22	19.06	19.22	20.08	21.43
	3H	5.76	6.52	6.77	7.54	8.91	20.05	20.81	21.06	21.83	23.20
	4H	6.06	6.78	7.08	7.80	9.18	20.69	21.41	21.71	22.44	23.81
	6H	6.31	6.97	7.34	8.00	9.39	21.12	21.78	22.15	22.81	24.20
	8H	6.37	7.01	7.41	8.05	9.44	21.24	21.87	22.27	22.92	24.30
	12H	6.39	6.99	7.43	8.03	9.44	21.30	21.90	22.34	22.94	24.35
4H	2H	12.26	12.98	13.29	14.00	15.38	18.49	19.21	19.52	20.24	21.61
	3H	13.83	14.43	14.86	15.48	16.87	20.53	21.13	21.57	22.19	23.58
	4H	13.92	14.47	14.96	15.52	16.93	21.29	21.85	22.34	22.89	24.30
	6H	13.93	14.41	14.98	15.47	16.88	21.83	22.30	22.88	23.37	24.78
	8H	13.91	14.35	14.96	15.41	16.84	21.99	22.43	23.04	23.49	24.92
	12H	13.86	14.26	14.94	15.34	16.77	22.08	22.48	23.15	23.55	24.98
8H	4H	15.36	15.80	16.41	16.87	18.29	21.35	21.80	22.41	22.86	24.28
	6H	15.60	15.97	16.68	17.07	18.49	21.98	22.35	23.06	23.45	24.87
	8H	15.62	15.94	16.70	17.03	18.47	22.19	22.52	23.28	23.60	25.04
	12H	15.59	15.87	16.68	16.95	18.43	22.33	22.62	23.42	23.70	25.18
12H	4H	15.50	15.90	16.57	16.98	18.41	21.30	21.71	22.38	22.78	24.21
	6H	15.86	16.18	16.94	17.27	18.71	21.96	22.28	23.05	23.37	24.81
	8H	15.93	16.21	17.02	17.29	18.77	22.19	22.47	23.28	23.55	25.03