

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: P936829

Luminaire Tested: SQ4-FB-050U-100D-92765-1D-UNV-STD-W-12-5000K

Issue Date: 12/17/2024

**Test Information**

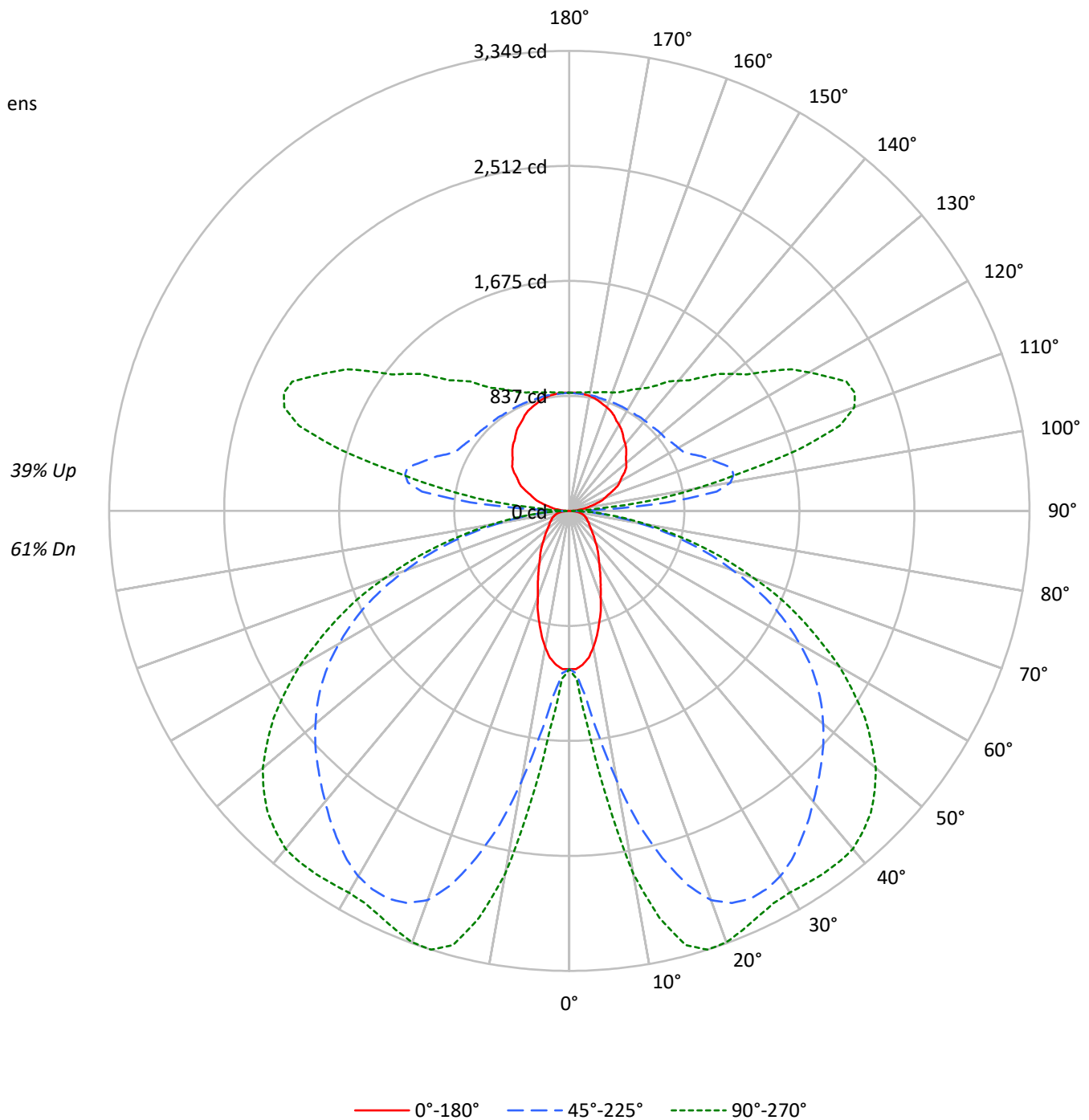
Test Method: LM-79-2019  
Report Number: P936829  
REPORT IS A COMBINATION OF REPORTS P933463 AND P933786  
Test Lab: INNOVATION CENTER  
Issue Date: 12/17/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ4-FB-050U-100D-92765-1D-UNV-STD-W-12-5000K  
Description: CORELITE SQ4 SUSPENDED INDIRECT LED LUMINAIRE WITH Batwing Frosted Continuous Roll L  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 14499.1 lumens  
Efficiency: N/A  
Efficacy: 106.9 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	50	30	10
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°	3564	3564	3564
5°	3483	4120	4790
10°	3160	6007	7941
15°	2687	7850	9590
20°	2188	9099	9773
25°	1826	9524	9574
30°	1541	9587	9556
35°	1363	9430	9803
40°	1188	9226	10059
45°	1077	9077	10098
50°	989	8944	9931
55°	948	8748	9491
60°	971	8367	8796
65°	1012	7787	7841
70°	1081	6796	6624
75°	1203	5546	5169
80°	1323	3851	3483
85°	1199	2047	1783

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 10098 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	149.0	1.0
10°-20°	660.6	4.6
20°-30°	1155.4	8.0
30°-40°	1487.4	10.3
40°-50°	1661.3	11.5
50°-60°	1591.2	11.0
60°-70°	1261.0	8.7
70°-80°	741.5	5.1
80°-90°	209.3	1.4
90°-100°	419.8	2.9
100°-110°	1103.6	7.6
110°-120°	1144.3	7.9
120°-130°	917.9	6.3
130°-140°	720.2	5.0
140°-150°	552.8	3.8
150°-160°	398.1	2.7
160°-170°	243.6	1.7
170°-180°	82.3	0.6
0°-30°	1965.0	13.6
0°-40°	3452.4	23.8
0°-60°	6704.9	46.2
0°-90°	8916.7	61.5
90°-120°	2667.6	18.4
90°-150°	4858.5	33.5
90°-180°	5582.0	38.5
0°-180°	14499.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1152	1152	1152	1152	1152	
5°	1123	1204	1356	1534	1589	104
15°	841	1552	2616	3171	3271	234
25°	537	1760	3116	3253	3256	247
35°	363	1682	2934	3101	3223	227
45°	248	1341	2593	2971	3105	192
55°	178	852	2201	2556	2627	162
65°	141	452	1634	1838	1864	140
75°	104	278	897	986	989	109
85°	37	85	222	244	248	39
90°	6	16	44	22	22	7
95°	56	217	723	373	254	62
105°	199	301	1220	1852	1728	211
115°	353	429	977	1949	2225	349
125°	491	551	889	1502	1772	436
135°	586	644	861	1213	1375	453
145°	679	722	850	1034	1116	425
155°	768	789	850	933	961	353
165°	828	839	850	884	895	234
175°	861	861	856	867	867	82
180°	861	861	861	861	861	



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**CANDELA DISTRIBUTION (FULL):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	1152.2	1152.2	1152.2	1152.2	1152.2	1152.2	1152.2	1152.2	1152.2	1152.2	1152.2
2.5°	1152.2	1152.2	1159.6	1163.3	1170.7	1174.5	1181.8	1189.2	1211.5	1215.2	1222.6
5°	1122.6	1137.4	1185.6	1204.1	1256.0	1326.3	1356.0	1404.1	1504.1	1533.8	1552.3
7.5°	1078.1	1111.5	1230.0	1259.6	1389.3	1574.5	1652.4	1756.0	1915.4	1993.2	2056.2
10°	1007.7	1078.1	1289.2	1359.6	1570.9	1852.4	1996.9	2141.4	2382.2	2489.6	2530.3
12.5°	929.9	1044.7	1352.2	1448.6	1752.4	2163.6	2337.7	2497.1	2771.2	2915.7	2937.9
15°	841.0	996.6	1411.5	1552.3	1945.0	2422.9	2615.6	2812.0	3067.6	3171.3	3197.3
17.5°	763.2	959.6	1467.1	1615.3	2093.2	2656.3	2852.7	3015.7	3223.1	3293.5	3312.1
20°	666.8	900.3	1504.1	1696.8	2248.8	2826.7	3015.7	3141.6	3282.4	3326.9	3334.3
22.5°	596.4	837.3	1526.4	1726.4	2352.6	2930.5	3089.8	3189.9	3286.1	3301.0	3304.7
25°	537.2	766.9	1522.6	1759.8	2441.5	2993.5	3115.7	3189.9	3245.4	3252.8	3252.8
27.5°	481.7	689.1	1507.9	1767.2	2508.2	3008.3	3104.6	3156.5	3182.4	3197.3	3197.3
30°	433.4	615.0	1470.8	1752.4	2537.8	2993.5	3071.3	3097.2	3123.1	3145.4	3156.5
32.5°	396.4	544.6	1415.2	1722.8	2541.5	2956.5	3012.0	3026.9	3063.9	3115.7	3134.3
35°	363.0	474.2	1352.2	1682.0	2519.2	2897.1	2934.2	2949.0	3023.1	3100.9	3126.9
37.5°	329.8	422.4	1270.7	1611.6	2485.9	2826.7	2852.7	2878.6	2993.5	3086.1	3115.7
40°	296.4	377.9	1174.5	1533.8	2434.1	2741.6	2763.7	2804.5	2956.5	3063.9	3093.5
42.5°	270.4	340.9	1070.7	1452.3	2367.3	2645.2	2678.6	2737.8	2912.0	3026.9	3060.1
45°	248.3	303.8	959.6	1341.1	2282.2	2545.2	2593.3	2674.8	2860.1	2971.2	3000.9
47.5°	226.0	277.9	844.7	1226.3	2189.5	2445.2	2508.2	2600.7	2789.7	2897.1	2923.1
50°	207.5	251.9	729.8	1104.1	2089.5	2337.7	2411.8	2508.2	2700.8	2800.8	2834.2
52.5°	192.6	229.7	622.4	981.8	1974.7	2226.6	2311.8	2411.8	2593.3	2689.7	2712.0
55°	177.9	211.2	529.8	852.1	1856.1	2108.0	2200.7	2296.9	2474.8	2556.3	2571.1
57.5°	170.4	196.4	452.0	729.8	1730.1	1974.7	2078.4	2167.3	2334.1	2397.0	2411.8
60°	159.3	185.3	392.7	626.1	1593.0	1848.7	1937.6	2026.5	2167.3	2219.2	2230.3
62.5°	148.2	177.9	348.3	526.1	1452.3	1700.5	1789.4	1870.9	1989.5	2026.5	2041.3
65°	140.8	170.4	314.9	452.0	1307.8	1544.9	1633.8	1704.2	1800.5	1837.5	1845.0
67.5°	133.4	163.0	289.0	389.0	1163.3	1389.3	1456.0	1522.6	1596.8	1633.8	1637.5
70°	122.3	155.6	266.8	344.5	1015.1	1211.5	1267.1	1337.5	1396.7	1415.2	1426.4
72.5°	114.9	144.5	251.9	311.2	863.2	1041.1	1093.0	1133.7	1185.6	1204.1	1204.1
75°	103.8	129.6	237.1	277.9	707.6	852.1	896.6	937.3	978.1	985.5	974.3
77.5°	92.6	114.9	203.8	233.4	552.0	674.3	711.3	733.6	766.9	774.3	778.0
80°	77.8	100.0	159.3	181.5	400.1	496.4	522.4	540.9	570.5	570.5	577.9
82.5°	59.3	77.8	114.9	129.6	270.4	340.9	363.0	374.2	392.7	392.7	392.7
85°	37.0	48.1	74.1	85.2	163.0	207.5	222.3	226.0	240.8	244.5	244.5
87.5°	18.5	25.9	48.1	51.9	85.2	107.4	107.4	114.9	114.9	111.1	107.4
90°	5.8	10.4	15.0	16.2	25.4	37.8	43.9	39.1	29.3	22.0	22.0
92.5°	23.1	62.3	101.7	111.5	156.8	217.1	247.3	216.8	155.6	109.8	105.4
95°	55.5	127.4	199.4	217.3	385.8	610.6	723.0	645.1	489.5	372.8	359.5
97.5°	95.9	159.4	222.8	238.7	519.8	894.5	1081.9	1032.8	934.3	860.6	835.4
100°	127.1	184.7	242.2	256.6	568.5	984.3	1192.3	1195.9	1203.1	1208.5	1178.5
102.5°	153.8	207.4	261.1	274.5	590.8	1012.7	1223.5	1286.2	1411.5	1505.5	1479.8
105°	198.8	244.2	289.7	301.1	607.4	1015.8	1220.1	1360.6	1641.5	1852.3	1838.5
107.5°	245.1	287.4	329.9	340.4	610.5	970.7	1150.7	1346.7	1738.7	2032.7	2036.1
110°	276.3	314.5	352.9	362.4	605.9	930.6	1093.0	1312.0	1750.2	2078.9	2093.3



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
112.5°	306.9	343.3	379.8	388.9	606.1	895.5	1040.3	1264.6	1713.0	2049.4	2071.5
115°	353.1	386.8	420.4	428.8	611.7	855.4	977.3	1193.3	1625.4	1949.4	1980.1
117.5°	398.7	429.3	459.9	467.5	623.0	830.3	934.0	1128.9	1518.8	1811.3	1845.2
120°	425.4	454.2	482.9	490.1	632.2	821.9	916.7	1094.8	1451.0	1718.3	1751.3
122.5°	451.4	480.4	509.4	516.7	645.6	817.4	903.3	1063.7	1384.6	1625.2	1657.7
125°	491.3	517.7	544.2	550.8	663.5	813.8	888.9	1025.2	1297.7	1502.1	1532.1
127.5°	523.6	550.4	577.1	583.7	681.4	811.6	876.8	993.8	1227.7	1403.3	1428.6
130°	541.0	569.8	598.5	605.7	694.5	812.9	872.2	976.3	1184.6	1340.8	1364.2
132.5°	558.9	587.6	616.4	623.6	705.1	813.8	868.1	961.3	1147.8	1287.7	1308.6
135°	585.5	611.7	637.8	644.4	716.6	813.0	861.1	939.3	1095.5	1212.6	1230.6
137.5°	612.6	638.6	664.6	671.0	734.0	818.1	860.0	926.0	1058.1	1157.1	1171.8
140°	635.1	659.1	682.9	688.9	744.6	818.8	855.9	912.9	1027.1	1112.6	1126.4
142.5°	652.5	674.6	696.7	702.2	753.5	821.8	855.9	906.0	1006.2	1081.4	1093.2
145°	679.1	698.3	717.6	722.4	765.1	821.8	850.2	891.1	973.1	1034.5	1043.5
147.5°	705.7	724.4	743.2	747.9	782.0	827.5	850.2	882.5	947.0	995.3	1002.8
150°	723.0	739.9	756.9	761.1	790.9	830.4	850.2	877.4	931.8	972.7	978.7
152.5°	740.9	753.7	766.6	769.8	796.6	832.4	850.2	873.5	919.9	954.8	959.4
155°	767.5	777.0	786.6	788.9	809.4	836.6	850.2	868.7	905.6	933.4	936.4
157.5°	787.2	796.5	805.6	808.0	822.1	840.9	850.2	864.6	893.3	914.9	917.0
160°	800.5	807.7	814.9	816.7	827.9	842.7	850.2	862.5	887.1	905.6	906.9
162.5°	813.8	819.2	824.6	825.9	834.0	844.8	850.2	860.6	881.3	896.9	898.1
165°	828.2	833.1	838.0	839.2	842.8	847.8	850.2	857.7	872.5	883.7	884.9
167.5°	841.5	843.8	846.1	846.7	849.7	853.9	855.9	860.8	870.6	877.9	878.4
170°	850.2	852.5	854.8	855.3	855.5	855.8	855.9	860.8	870.6	877.9	877.9
172.5°	854.8	855.3	855.8	855.9	855.9	855.9	855.9	859.7	867.5	873.3	872.8
175°	861.1	861.1	861.1	861.1	859.4	857.0	855.9	858.3	863.3	866.9	866.9
177.5°	861.1	861.1	861.1	861.1	859.8	858.1	857.1	859.1	862.9	865.8	865.3
180°	861.1	861.1	861.1	861.1	861.1	861.1	861.1	861.1	861.1	861.1	861.1



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**CANDELA DISTRIBUTION (continued):**

	80°	90°
0°	1152.2	1152.2
2.5°	1230.0	1222.6
5°	1582.0	1589.4
7.5°	2130.3	2126.5
10°	2649.0	2682.2
12.5°	3026.9	3034.2
15°	3256.5	3271.4
17.5°	3345.4	3349.1
20°	3349.1	3341.8
22.5°	3308.4	3301.0
25°	3260.3	3256.5
27.5°	3215.8	3219.5
30°	3197.3	3208.4
32.5°	3197.3	3215.8
35°	3204.6	3223.1
37.5°	3200.9	3223.1
40°	3186.1	3212.0
42.5°	3145.4	3163.9
45°	3082.4	3104.6
47.5°	3000.9	3015.7
50°	2897.1	2912.0
52.5°	2767.5	2771.2
55°	2611.8	2626.7
57.5°	2445.2	2448.8
60°	2259.9	2271.1
62.5°	2063.6	2063.6
65°	1856.1	1863.5
67.5°	1641.3	1659.8
70°	1422.6	1426.4
72.5°	1207.7	1207.7
75°	985.5	989.2
77.5°	774.3	774.3
80°	574.3	577.9
82.5°	396.4	403.8
85°	248.3	248.3
87.5°	114.9	103.8
90°	22.0	22.0
92.5°	88.0	70.5
95°	306.6	253.7
97.5°	734.7	634.0
100°	1058.6	938.6
102.5°	1377.1	1274.4
105°	1783.3	1728.1
107.5°	2049.3	2062.7
110°	2150.8	2208.3





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**CANDELA DISTRIBUTION (continued):**

	80°	90°
112.5°	2159.9	2248.2
115°	2102.6	2225.2
117.5°	1981.1	2117.0
120°	1883.3	2015.3
122.5°	1788.0	1918.2
125°	1652.0	1772.0
127.5°	1529.7	1631.0
130°	1457.8	1551.2
132.5°	1392.3	1476.1
135°	1302.8	1375.0
137.5°	1230.9	1290.0
140°	1181.6	1236.8
142.5°	1140.8	1188.3
145°	1079.5	1115.5
147.5°	1032.5	1062.3
150°	1002.8	1027.1
152.5°	977.6	995.8
155°	948.5	960.6
157.5°	925.5	934.0
160°	911.8	916.7
162.5°	902.7	907.4
165°	889.8	894.7
167.5°	880.5	882.5
170°	877.9	877.9
172.5°	871.1	869.3
175°	866.9	866.9
177.5°	863.2	861.1
180°	861.1	861.1



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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	6.41	7.43	7.25	8.31	9.40	19.60	20.63	20.44	21.50	22.59
	3H	7.13	8.05	7.98	8.93	10.05	21.46	22.38	22.31	23.26	24.38
	4H	7.43	8.31	8.30	9.19	10.32	22.11	22.99	22.99	23.88	25.00
	6H	7.69	8.50	8.57	9.39	10.54	22.56	23.36	23.44	24.26	25.40
	8H	7.76	8.53	8.66	9.45	10.59	22.69	23.46	23.58	24.37	25.51
	12H	7.79	8.52	8.69	9.43	10.60	22.76	23.50	23.66	24.40	25.57
4H	2H	13.65	14.53	14.53	15.41	16.54	19.89	20.77	20.77	21.66	22.78
	3H	15.23	15.97	16.12	16.89	18.03	21.96	22.69	22.85	23.61	24.76
	4H	15.34	16.00	16.24	16.92	18.09	22.74	23.41	23.64	24.32	25.49
	6H	15.36	15.94	16.27	16.87	18.05	23.29	23.87	24.21	24.81	25.98
	8H	15.34	15.88	16.25	16.81	18.00	23.46	24.00	24.38	24.94	26.12
	12H	15.30	15.79	16.24	16.74	17.94	23.56	24.05	24.50	25.01	26.20
8H	4H	16.80	17.34	17.72	18.27	19.46	22.81	23.35	23.73	24.29	25.47
	6H	17.05	17.50	17.99	18.47	19.66	23.45	23.90	24.40	24.88	26.06
	8H	17.07	17.47	18.02	18.43	19.64	23.68	24.08	24.63	25.04	26.25
	12H	17.04	17.40	18.00	18.35	19.61	23.83	24.19	24.79	25.14	26.40
12H	4H	16.95	17.44	17.89	18.39	19.59	22.77	23.26	23.71	24.21	25.41
	6H	17.31	17.71	18.26	18.67	19.88	23.44	23.84	24.39	24.80	26.01
	8H	17.39	17.74	18.35	18.70	19.95	23.68	24.03	24.64	24.99	26.24