

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: P936853

Luminaire Tested: SQ4-FB-050U-100D-93050-1D-UNV-STD-W-12-3000K

Issue Date: 12/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P936853
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-12-3000K
Description: CORELITE SQ4 SUSPENDED INDIRECT LED LUMINAIRE WITH Batwing Frosted Continuous Roll L
Light Source: -
Ballast/Driver: -

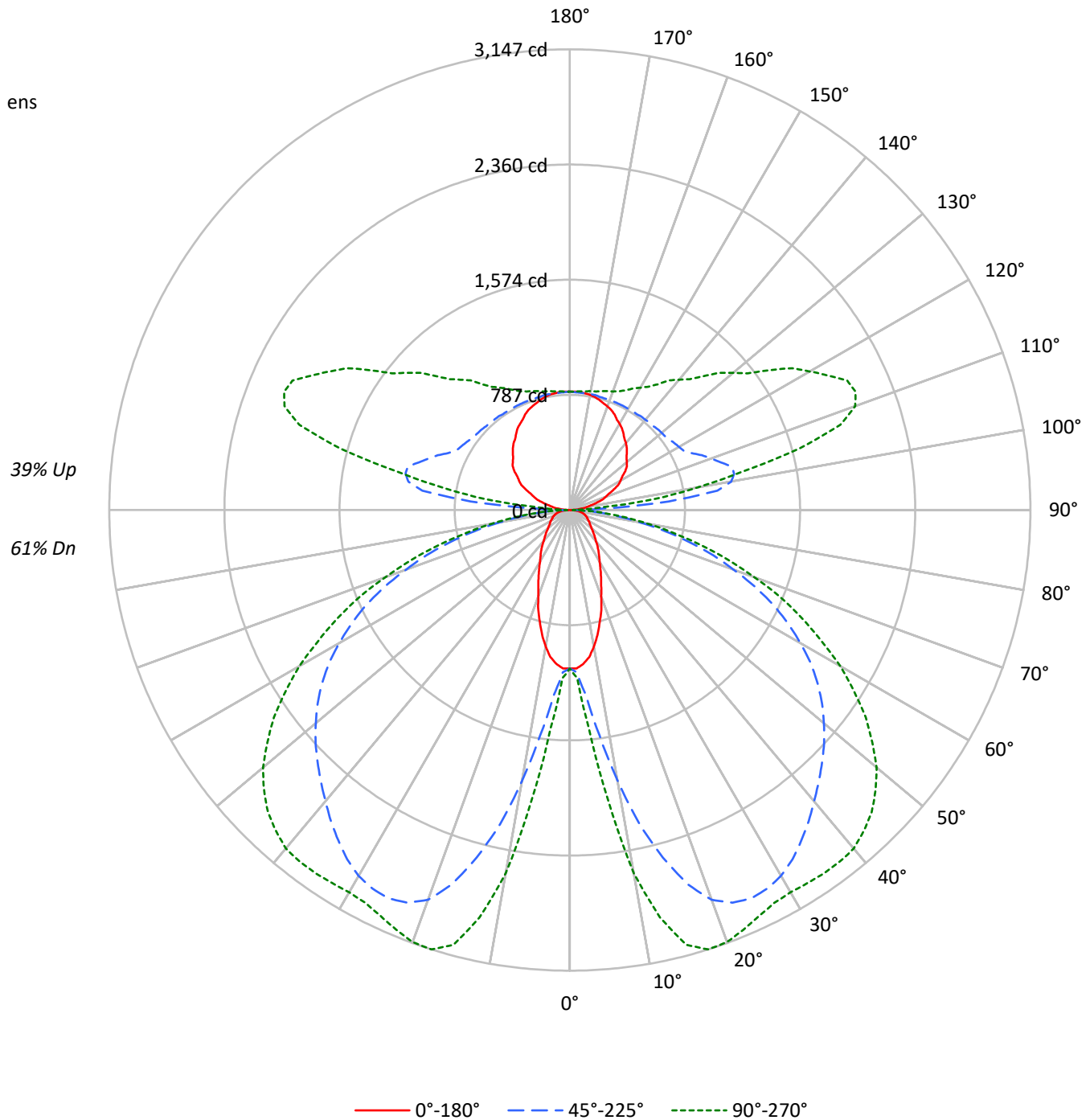
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13624.2 lumens
Efficiency: N/A
Efficacy: 100.5 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_{in}): 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°	3349	3349	3349
5°	3273	3872	4501
10°	2970	5645	7462
15°	2525	7376	9011
20°	2056	8551	9183
25°	1716	8950	8997
30°	1448	9008	8980
35°	1281	8862	9212
40°	1117	8669	9452
45°	1012	8529	9489
50°	929	8404	9332
55°	891	8220	8918
60°	913	7862	8265
65°	951	7317	7368
70°	1016	6386	6224
75°	1130	5212	4857
80°	1243	3619	3273
85°	1128	1923	1676

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 9489 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	140.0	1.0
10°-20°	620.7	4.6
20°-30°	1085.7	8.0
30°-40°	1397.6	10.3
40°-50°	1561.1	11.5
50°-60°	1495.1	11.0
60°-70°	1184.9	8.7
70°-80°	696.8	5.1
80°-90°	196.6	1.4
90°-100°	394.4	2.9
100°-110°	1037.0	7.6
110°-120°	1075.3	7.9
120°-130°	862.5	6.3
130°-140°	676.7	5.0
140°-150°	519.4	3.8
150°-160°	374.1	2.7
160°-170°	228.9	1.7
170°-180°	77.3	0.6
0°-30°	1846.4	13.6
0°-40°	3244.0	23.8
0°-60°	6300.2	46.2
0°-90°	8378.6	61.5
90°-120°	2506.7	18.4
90°-150°	4565.3	33.5
90°-180°	5246.0	38.5
0°-180°	13624.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1083	1083	1083	1083	1083	
5°	1055	1131	1274	1441	1494	97
15°	790	1459	2458	2980	3074	220
25°	505	1654	2928	3056	3060	233
35°	341	1580	2757	2914	3029	213
45°	233	1260	2437	2792	2917	180
55°	167	801	2068	2402	2468	152
65°	132	425	1535	1727	1751	131
75°	98	261	842	926	930	102
85°	35	80	209	230	233	37
90°	5	15	41	21	21	7
95°	52	204	679	350	238	58
105°	187	283	1146	1740	1624	198
115°	332	403	918	1832	2091	328
125°	462	518	835	1411	1665	410
135°	550	606	809	1139	1292	426
145°	638	679	799	972	1048	400
155°	721	741	799	877	903	331
165°	778	788	799	830	841	220
175°	809	809	804	815	815	77
180°	809	809	809	809	809	



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CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	1082.7	1082.7	1082.7	1082.7	1082.7	1082.7	1082.7	1082.7	1082.7	1082.7	1082.7
2.5°	1082.7	1082.7	1089.6	1093.1	1100.1	1103.6	1110.5	1117.5	1138.4	1141.9	1148.8
5°	1054.8	1068.7	1114.0	1131.4	1180.2	1246.3	1274.2	1319.4	1413.4	1441.2	1458.6
7.5°	1013.0	1044.4	1155.8	1183.6	1305.4	1479.5	1552.7	1650.1	1799.8	1872.9	1932.1
10°	946.9	1013.0	1211.4	1277.6	1476.1	1740.6	1876.4	2012.2	2238.4	2339.4	2377.6
12.5°	873.8	981.7	1270.6	1361.2	1646.6	2033.0	2196.6	2346.4	2604.0	2739.8	2760.6
15°	790.2	936.4	1326.3	1458.6	1827.7	2276.7	2457.7	2642.3	2882.5	2979.9	3004.3
17.5°	717.1	901.7	1378.6	1517.8	1966.9	2496.0	2680.6	2833.8	3028.6	3094.8	3112.3
20°	626.6	846.0	1413.4	1594.4	2113.1	2656.2	2833.8	2952.1	3084.3	3126.1	3133.1
22.5°	560.4	786.8	1434.3	1622.2	2210.6	2753.6	2903.3	2997.4	3087.8	3101.8	3105.2
25°	504.8	720.6	1430.8	1653.6	2294.1	2812.8	2927.7	2997.4	3049.5	3056.5	3056.5
27.5°	452.6	647.5	1416.9	1660.5	2356.8	2826.7	2917.3	2966.0	2990.4	3004.3	3004.3
30°	407.3	577.9	1382.0	1646.6	2384.7	2812.8	2885.9	2910.3	2934.7	2955.6	2966.0
32.5°	372.5	511.7	1329.8	1618.8	2388.1	2778.1	2830.2	2844.2	2879.0	2927.7	2945.1
35°	341.1	445.6	1270.6	1580.5	2367.2	2722.3	2757.2	2771.0	2840.7	2913.8	2938.2
37.5°	309.9	396.9	1194.1	1514.4	2335.9	2656.2	2680.6	2704.9	2812.8	2899.9	2927.7
40°	278.5	355.1	1103.6	1441.2	2287.2	2576.1	2597.0	2635.3	2778.1	2879.0	2906.8
42.5°	254.1	320.3	1006.1	1364.6	2224.5	2485.6	2516.9	2572.6	2736.3	2844.2	2875.5
45°	233.3	285.4	901.7	1260.2	2144.5	2391.6	2436.8	2513.4	2687.5	2791.9	2819.8
47.5°	212.4	261.1	793.7	1152.3	2057.4	2297.6	2356.8	2443.8	2621.4	2722.3	2746.7
50°	195.0	236.7	685.8	1037.4	1963.4	2196.6	2266.3	2356.8	2537.9	2631.8	2663.2
52.5°	181.0	215.8	584.9	922.6	1855.5	2092.2	2172.3	2266.3	2436.8	2527.4	2548.3
55°	167.1	198.4	497.8	800.7	1744.1	1980.8	2067.9	2158.3	2325.5	2402.1	2415.9
57.5°	160.1	184.5	424.7	685.8	1625.7	1855.5	1953.0	2036.5	2193.2	2252.3	2266.3
60°	149.7	174.1	369.0	588.3	1496.9	1737.1	1820.7	1904.2	2036.5	2085.3	2095.7
62.5°	139.2	167.1	327.3	494.3	1364.6	1597.9	1681.4	1758.0	1869.5	1904.2	1918.1
65°	132.3	160.1	295.9	424.7	1228.9	1451.7	1535.2	1601.4	1691.9	1726.7	1733.7
67.5°	125.3	153.2	271.6	365.5	1093.1	1305.4	1368.1	1430.8	1500.4	1535.2	1538.7
70°	114.9	146.2	250.7	323.7	953.8	1138.4	1190.6	1256.8	1312.4	1329.8	1340.3
72.5°	107.9	135.8	236.7	292.4	811.1	978.3	1027.0	1065.3	1114.0	1131.4	1131.4
75°	97.5	121.8	222.8	261.1	664.9	800.7	842.5	880.8	919.1	926.0	915.5
77.5°	87.0	107.9	191.5	219.3	518.7	633.6	668.4	689.3	720.6	727.6	731.1
80°	73.1	94.0	149.7	170.6	376.0	466.5	490.9	508.3	536.1	536.1	543.1
82.5°	55.7	73.1	107.9	121.8	254.1	320.3	341.1	351.6	369.0	369.0	369.0
85°	34.8	45.2	69.6	80.1	153.2	195.0	208.9	212.4	226.3	229.8	229.8
87.5°	17.4	24.3	45.2	48.7	80.1	100.9	100.9	107.9	107.9	104.4	100.9
90°	5.4	9.7	14.1	15.2	23.9	35.5	41.3	36.7	27.5	20.6	20.6
92.5°	21.7	58.6	95.6	104.8	147.3	204.0	232.4	203.7	146.2	103.2	99.1
95°	52.2	119.7	187.3	204.2	362.6	573.8	679.4	606.2	460.0	350.3	337.8
97.5°	90.1	149.8	209.4	224.3	488.4	840.5	1016.6	970.4	877.9	808.7	785.0
100°	119.4	173.6	227.6	241.1	534.2	924.9	1120.4	1123.7	1130.5	1135.6	1107.4
102.5°	144.5	194.9	245.3	258.0	555.2	951.6	1149.7	1208.5	1326.3	1414.7	1390.5
105°	186.8	229.5	272.2	282.9	570.7	954.5	1146.4	1278.5	1542.5	1740.5	1727.5
107.5°	230.3	270.1	310.0	319.9	573.7	912.1	1081.3	1265.5	1633.8	1910.0	1913.2
110°	259.6	295.5	331.6	340.5	569.3	874.4	1027.0	1232.9	1644.6	1953.4	1967.0



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
112.5°	288.3	322.6	356.9	365.5	569.5	841.5	977.5	1188.3	1609.7	1925.8	1946.5
115°	331.8	363.4	395.1	403.0	574.8	803.8	918.4	1121.3	1527.3	1831.8	1860.6
117.5°	374.7	403.4	432.1	439.3	585.4	780.2	877.6	1060.8	1427.2	1702.0	1733.9
120°	399.7	426.8	453.7	460.5	594.1	772.3	861.3	1028.8	1363.5	1614.6	1645.6
122.5°	424.1	451.4	478.7	485.5	606.6	768.1	848.8	999.5	1301.0	1527.1	1557.7
125°	461.6	486.5	511.3	517.6	623.5	764.6	835.3	963.3	1219.3	1411.4	1439.6
127.5°	492.0	517.1	542.3	548.5	640.3	762.6	823.8	933.8	1153.6	1318.6	1342.4
130°	508.4	535.4	562.4	569.1	652.6	763.9	819.5	917.4	1113.2	1259.9	1281.9
132.5°	525.1	552.2	579.2	586.0	662.6	764.6	815.7	903.3	1078.6	1209.9	1229.6
135°	550.2	574.8	599.4	605.5	673.4	763.9	809.2	882.6	1029.4	1139.4	1156.4
137.5°	575.6	600.1	624.5	630.5	689.7	768.7	808.1	870.1	994.2	1087.2	1101.1
140°	596.8	619.3	641.7	647.3	699.7	769.4	804.3	857.8	965.1	1045.4	1058.4
142.5°	613.1	633.9	654.7	659.9	708.0	772.2	804.3	851.3	945.5	1016.1	1027.3
145°	638.1	656.2	674.3	678.8	718.9	772.2	798.9	837.4	914.4	972.1	980.5
147.5°	663.1	680.7	698.3	702.7	734.8	777.6	798.9	829.2	889.8	935.2	942.2
150°	679.4	695.3	711.2	715.2	743.1	780.3	798.9	824.5	875.6	914.0	919.7
152.5°	696.2	708.3	720.4	723.4	748.6	782.1	798.9	820.8	864.4	897.2	901.5
155°	721.2	730.1	739.1	741.3	760.5	786.1	798.9	816.3	851.0	877.1	879.9
157.5°	739.7	748.4	757.0	759.2	772.5	790.1	798.9	812.4	839.4	859.7	861.7
160°	752.2	758.9	765.7	767.4	777.9	791.9	798.9	810.5	833.6	851.0	852.1
162.5°	764.6	769.7	774.8	776.1	783.7	793.8	798.9	808.7	828.2	842.8	843.9
165°	778.3	782.8	787.4	788.5	792.0	796.6	798.9	805.9	819.9	830.3	831.5
167.5°	790.7	792.8	795.0	795.6	798.5	802.3	804.3	808.8	818.0	824.9	825.4
170°	798.9	801.0	803.2	803.7	803.9	804.2	804.3	808.8	818.0	824.9	824.9
172.5°	803.2	803.6	804.2	804.3	804.3	804.3	804.3	807.9	815.2	820.6	820.2
175°	809.2	809.2	809.2	809.2	807.5	805.3	804.3	806.5	811.2	814.6	814.6
177.5°	809.2	809.2	809.2	809.2	807.9	806.3	805.4	807.2	810.8	813.6	813.0
180°	809.2	809.2	809.2	809.2	809.2	809.2	809.2	809.2	809.2	809.2	809.2



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CANDELA DISTRIBUTION (continued):

	80°	90°
0°	1082.7	1082.7
2.5°	1155.8	1148.8
5°	1486.5	1493.5
7.5°	2001.7	1998.2
10°	2489.1	2520.4
12.5°	2844.2	2851.1
15°	3060.0	3074.0
17.5°	3143.5	3147.0
20°	3147.0	3140.1
22.5°	3108.7	3101.8
25°	3063.5	3060.0
27.5°	3021.7	3025.2
30°	3004.3	3014.8
32.5°	3004.3	3021.7
35°	3011.3	3028.6
37.5°	3007.7	3028.6
40°	2993.9	3018.2
42.5°	2955.6	2973.0
45°	2896.4	2917.3
47.5°	2819.8	2833.8
50°	2722.3	2736.3
52.5°	2600.5	2604.0
55°	2454.2	2468.2
57.5°	2297.6	2301.1
60°	2123.6	2134.0
62.5°	1939.0	1939.0
65°	1744.1	1751.1
67.5°	1542.2	1559.6
70°	1336.8	1340.3
72.5°	1134.9	1134.9
75°	926.0	929.5
77.5°	727.6	727.6
80°	539.6	543.1
82.5°	372.5	379.4
85°	233.3	233.3
87.5°	107.9	97.5
90°	20.6	20.6
92.5°	82.6	66.2
95°	288.1	238.4
97.5°	690.3	595.8
100°	994.7	882.0
102.5°	1294.0	1197.5
105°	1675.7	1623.8
107.5°	1925.7	1938.2
110°	2021.0	2075.1



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CANDELA DISTRIBUTION (continued):

	80°	90°
112.5°	2029.6	2112.6
115°	1975.7	2090.9
117.5°	1861.6	1989.3
120°	1769.7	1893.7
122.5°	1680.1	1802.4
125°	1552.3	1665.1
127.5°	1437.4	1532.5
130°	1369.8	1457.6
132.5°	1308.3	1387.0
135°	1224.2	1292.0
137.5°	1156.6	1212.1
140°	1110.3	1162.2
142.5°	1072.0	1116.6
145°	1014.3	1048.2
147.5°	970.2	998.2
150°	942.3	965.1
152.5°	918.6	935.7
155°	891.3	902.6
157.5°	869.6	877.6
160°	856.8	861.3
162.5°	848.3	852.7
165°	836.1	840.7
167.5°	827.4	829.3
170°	824.9	824.9
172.5°	818.5	816.8
175°	814.6	814.6
177.5°	811.1	809.2
180°	809.2	809.2



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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	6.19	7.22	7.03	8.09	9.18	19.38	20.41	20.23	21.28	22.37
	3H	6.91	7.83	7.76	8.71	9.83	21.24	22.16	22.10	23.05	24.17
	4H	7.22	8.09	8.09	8.98	10.11	21.90	22.77	22.77	23.66	24.79
	6H	7.47	8.28	8.36	9.18	10.32	22.34	23.15	23.23	24.04	25.19
	8H	7.55	8.32	8.44	9.23	10.37	22.47	23.24	23.36	24.15	25.30
	12H	7.57	8.30	8.47	9.21	10.38	22.55	23.28	23.44	24.19	25.36
4H	2H	13.44	14.31	14.31	15.20	16.33	19.68	20.55	20.55	21.44	22.57
	3H	15.02	15.75	15.91	16.67	17.81	21.74	22.48	22.63	23.40	24.54
	4H	15.12	15.79	16.02	16.70	17.87	22.52	23.19	23.42	24.11	25.28
	6H	15.14	15.72	16.05	16.66	17.83	23.07	23.65	23.99	24.59	25.77
	8H	15.12	15.66	16.04	16.60	17.78	23.24	23.79	24.16	24.72	25.91
	12H	15.09	15.58	16.02	16.53	17.72	23.35	23.84	24.29	24.79	25.98
8H	4H	16.58	17.12	17.50	18.06	19.24	22.60	23.14	23.51	24.07	25.26
	6H	16.83	17.28	17.78	18.26	19.44	23.24	23.69	24.18	24.66	25.85
	8H	16.85	17.25	17.81	18.22	19.42	23.46	23.86	24.42	24.83	26.03
	12H	16.83	17.18	17.79	18.14	19.39	23.62	23.97	24.58	24.93	26.18
12H	4H	16.73	17.22	17.67	18.18	19.37	22.56	23.05	23.49	24.00	25.19
	6H	17.09	17.49	18.05	18.46	19.66	23.22	23.62	24.18	24.59	25.79
	8H	17.17	17.52	18.13	18.48	19.73	23.46	23.81	24.42	24.77	26.03