

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: P936854

Luminaire Tested: SQ4-FB-050U-100D-93050-1D-UNV-STD-W-12-3500K

Issue Date: 12/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P936854
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-12-3500K
Description: CORELITE SQ4 SUSPENDED INDIRECT LED LUMINAIRE WITH Batwing Frosted Continuous Roll L
Light Source: -
Ballast/Driver: -

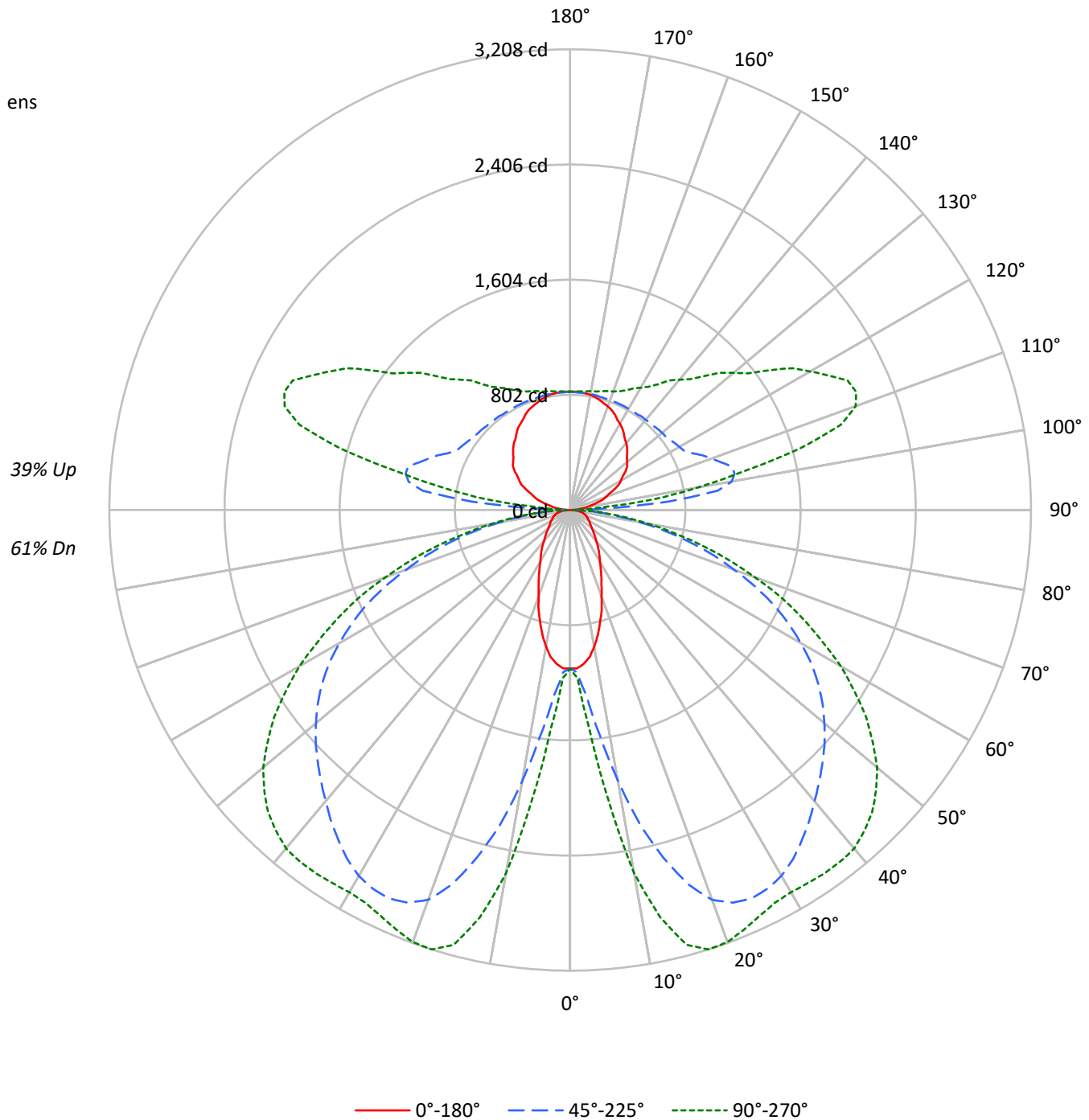
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13888.1 lumens
Efficiency: N/A
Efficacy: 102.4 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°	3414	3414	3414
5°	3336	3946	4588
10°	3027	5754	7607
15°	2574	7520	9185
20°	2096	8716	9361
25°	1749	9123	9171
30°	1476	9183	9154
35°	1305	9033	9390
40°	1138	8837	9635
45°	1032	8694	9673
50°	947	8567	9513
55°	908	8379	9091
60°	931	8015	8425
65°	969	7459	7510
70°	1035	6510	6344
75°	1152	5312	4951
80°	1267	3689	3336
85°	1150	1960	1708

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 9673 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	142.8	1.0
10°-20°	632.7	4.6
20°-30°	1106.7	8.0
30°-40°	1424.7	10.3
40°-50°	1591.3	11.5
50°-60°	1524.1	11.0
60°-70°	1207.9	8.7
70°-80°	710.3	5.1
80°-90°	200.5	1.4
90°-100°	402.1	2.9
100°-110°	1057.1	7.6
110°-120°	1096.1	7.9
120°-130°	879.2	6.3
130°-140°	689.9	5.0
140°-150°	529.5	3.8
150°-160°	381.3	2.7
160°-170°	233.3	1.7
170°-180°	78.8	0.6
0°-30°	1882.2	13.6
0°-40°	3306.9	23.8
0°-60°	6422.3	46.2
0°-90°	8540.9	61.5
90°-120°	2555.2	18.4
90°-150°	4653.8	33.5
90°-180°	5347.0	38.5
0°-180°	13888.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1104	1104	1104	1104	1104	
5°	1075	1153	1299	1469	1522	99
15°	806	1487	2505	3038	3134	224
25°	514	1686	2984	3116	3119	237
35°	348	1611	2811	2970	3087	217
45°	238	1285	2484	2846	2974	184
55°	170	816	2108	2449	2516	155
65°	135	433	1565	1760	1785	134
75°	99	266	859	944	948	104
85°	36	82	213	234	238	38
90°	6	16	42	21	21	7
95°	53	208	692	357	243	59
105°	190	288	1169	1774	1655	202
115°	338	411	936	1867	2131	334
125°	471	528	851	1439	1697	418
135°	561	617	825	1162	1317	434
145°	650	692	814	991	1068	408
155°	735	756	814	894	920	338
165°	793	804	814	846	857	224
175°	825	825	820	830	830	78
180°	825	825	825	825	825	



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CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	1103.7	1103.7	1103.7	1103.7	1103.7	1103.7	1103.7	1103.7	1103.7	1103.7	1103.7
2.5°	1103.7	1103.7	1110.7	1114.3	1121.4	1125.0	1132.0	1139.1	1160.4	1164.0	1171.1
5°	1075.3	1089.4	1135.6	1153.3	1203.0	1270.4	1298.8	1344.9	1440.7	1469.1	1486.8
7.5°	1032.7	1064.6	1178.1	1206.5	1330.7	1508.2	1582.7	1682.0	1834.7	1909.2	1969.5
10°	965.2	1032.7	1234.9	1302.3	1504.7	1774.3	1912.7	2051.2	2281.8	2384.7	2423.7
12.5°	890.7	1000.7	1295.2	1387.6	1678.5	2072.4	2239.2	2391.8	2654.4	2792.8	2814.1
15°	805.5	954.6	1352.0	1486.8	1863.1	2320.8	2505.4	2693.5	2938.3	3037.6	3062.5
17.5°	731.0	919.1	1405.3	1547.2	2005.0	2544.4	2732.5	2888.6	3087.3	3154.7	3172.5
20°	638.7	862.4	1440.7	1625.3	2154.0	2707.6	2888.6	3009.2	3144.1	3186.7	3193.8
22.5°	571.3	802.0	1462.0	1653.6	2253.4	2807.0	2959.5	3055.4	3147.6	3161.9	3165.4
25°	514.5	734.6	1458.5	1685.6	2338.6	2867.3	2984.4	3055.4	3108.6	3115.7	3115.7
27.5°	461.4	660.0	1444.3	1692.7	2402.5	2881.5	2973.8	3023.5	3048.3	3062.5	3062.5
30°	415.2	589.1	1408.8	1678.5	2430.9	2867.3	2941.8	2966.7	2991.5	3012.8	3023.5
32.5°	379.7	521.6	1355.6	1650.1	2434.4	2831.9	2885.1	2899.3	2934.7	2984.4	3002.2
35°	347.7	454.2	1295.2	1611.1	2413.0	2775.0	2810.6	2824.7	2895.7	2970.2	2995.1
37.5°	315.9	404.6	1217.2	1543.7	2381.2	2707.6	2732.5	2757.3	2867.3	2956.1	2984.4
40°	283.9	362.0	1125.0	1469.1	2331.5	2626.0	2647.3	2686.3	2831.9	2934.7	2963.1
42.5°	259.0	326.5	1025.6	1391.0	2267.6	2533.7	2565.7	2622.5	2789.3	2899.3	2931.2
45°	237.8	291.0	919.1	1284.6	2186.0	2437.9	2484.0	2562.1	2739.6	2846.0	2874.4
47.5°	216.5	266.2	809.1	1174.6	2097.3	2342.1	2402.5	2491.1	2672.1	2775.0	2799.9
50°	198.8	241.3	699.1	1057.5	2001.5	2239.2	2310.2	2402.5	2587.0	2682.8	2714.8
52.5°	184.5	220.0	596.2	940.4	1891.4	2132.7	2214.4	2310.2	2484.0	2576.3	2597.7
55°	170.4	202.3	507.5	816.2	1777.9	2019.2	2107.9	2200.1	2370.5	2448.6	2462.7
57.5°	163.2	188.1	433.0	699.1	1657.2	1891.4	1990.8	2076.0	2235.7	2295.9	2310.2
60°	152.6	177.5	376.1	599.7	1525.9	1770.7	1856.0	1941.1	2076.0	2125.6	2136.3
62.5°	141.9	170.4	333.6	503.9	1391.0	1628.8	1714.0	1792.1	1905.7	1941.1	1955.3
65°	134.8	163.2	301.6	433.0	1252.7	1479.8	1564.9	1632.4	1724.6	1760.1	1767.3
67.5°	127.8	156.1	276.8	372.6	1114.3	1330.7	1394.6	1458.5	1529.5	1564.9	1568.5
70°	117.1	149.1	255.5	330.0	972.3	1160.4	1213.7	1281.1	1337.9	1355.6	1366.2
72.5°	110.0	138.4	241.3	298.0	826.8	997.2	1046.9	1085.9	1135.6	1153.3	1153.3
75°	99.4	124.2	227.1	266.2	677.8	816.2	858.8	897.8	936.9	943.9	933.3
77.5°	88.7	110.0	195.2	223.6	528.8	645.9	681.3	702.6	734.6	741.7	745.3
80°	74.5	95.8	152.6	173.9	383.3	475.5	500.4	518.1	546.5	546.5	553.6
82.5°	56.8	74.5	110.0	124.2	259.0	326.5	347.7	358.4	376.1	376.1	376.1
85°	35.5	46.1	71.0	81.7	156.1	198.8	212.9	216.5	230.6	234.2	234.2
87.5°	17.7	24.8	46.1	49.7	81.7	102.9	102.9	110.0	110.0	106.5	102.9
90°	5.6	9.9	14.4	15.5	24.4	36.2	42.1	37.4	28.0	21.0	21.0
92.5°	22.1	59.7	97.4	106.8	150.1	208.0	236.9	207.6	149.1	105.2	101.0
95°	53.2	122.0	191.0	208.2	369.6	584.9	692.5	617.9	468.9	357.1	344.3
97.5°	91.9	152.7	213.4	228.7	497.9	856.8	1036.3	989.2	895.0	824.3	800.2
100°	121.8	176.9	232.0	245.8	544.5	942.9	1142.1	1145.5	1152.4	1157.5	1128.8
102.5°	147.3	198.7	250.1	263.0	565.9	970.0	1172.0	1231.9	1352.0	1442.1	1417.5
105°	190.4	233.9	277.5	288.4	581.8	973.0	1168.7	1303.2	1572.3	1774.2	1761.0
107.5°	234.8	275.3	316.0	326.1	584.8	929.8	1102.2	1290.0	1665.5	1947.0	1950.3
110°	264.7	301.3	338.0	347.1	580.3	891.4	1046.9	1256.7	1676.5	1991.3	2005.1



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
112.5°	293.9	328.8	363.8	372.5	580.5	857.8	996.5	1211.3	1640.8	1963.1	1984.2
115°	338.2	370.5	402.7	410.8	585.9	819.4	936.1	1143.0	1556.9	1867.3	1896.6
117.5°	381.9	411.2	440.5	447.8	596.7	795.3	894.6	1081.4	1454.8	1734.9	1767.4
120°	407.5	435.0	462.5	469.4	605.6	787.2	878.0	1048.7	1389.9	1645.9	1677.5
122.5°	432.3	460.2	487.9	494.9	618.4	783.0	865.2	1018.9	1326.2	1556.7	1587.8
125°	470.6	495.9	521.3	527.6	635.6	779.5	851.4	982.0	1243.0	1438.8	1467.5
127.5°	501.6	527.2	552.8	559.1	652.7	777.4	839.8	951.9	1176.0	1344.1	1368.4
130°	518.2	545.8	573.3	580.2	665.2	778.7	835.4	935.2	1134.7	1284.3	1306.7
132.5°	535.3	562.9	590.5	597.4	675.4	779.5	831.5	920.8	1099.4	1233.4	1253.4
135°	560.8	585.9	611.0	617.2	686.4	778.7	824.9	899.7	1049.3	1161.5	1178.8
137.5°	586.8	611.7	636.6	642.7	703.1	783.6	823.8	887.0	1013.5	1108.3	1122.5
140°	608.4	631.3	654.1	659.8	713.2	784.3	819.8	874.5	983.8	1065.7	1078.9
142.5°	625.0	646.1	667.4	672.6	721.7	787.2	819.8	867.8	963.8	1035.8	1047.2
145°	650.4	668.9	687.3	692.0	732.8	787.2	814.4	853.6	932.1	990.9	999.5
147.5°	676.0	693.9	711.9	716.3	749.0	792.6	814.4	845.3	907.0	953.3	960.5
150°	692.5	708.7	725.0	729.1	757.5	795.4	814.4	840.4	892.5	931.7	937.5
152.5°	709.7	722.0	734.3	737.4	763.1	797.3	814.4	836.7	881.2	914.6	918.9
155°	735.1	744.3	753.4	755.6	775.3	801.3	814.4	832.1	867.5	894.1	896.9
157.5°	754.0	762.9	771.7	773.9	787.4	805.4	814.4	828.2	855.6	876.3	878.4
160°	766.7	773.6	780.5	782.2	793.0	807.2	814.4	826.2	849.7	867.5	868.6
162.5°	779.5	784.7	789.8	791.1	798.9	809.2	814.4	824.3	844.2	859.1	860.2
165°	793.3	798.0	802.6	803.8	807.3	812.0	814.4	821.5	835.8	846.4	847.6
167.5°	806.0	808.2	810.4	811.0	813.9	817.9	819.8	824.5	833.9	840.9	841.4
170°	814.4	816.5	818.8	819.3	819.5	819.7	819.8	824.5	833.9	840.9	840.9
172.5°	818.8	819.2	819.7	819.8	819.8	819.8	819.8	823.5	830.9	836.5	836.0
175°	824.9	824.9	824.9	824.9	823.1	820.9	819.8	822.2	826.9	830.4	830.4
177.5°	824.9	824.9	824.9	824.9	823.6	821.9	821.0	822.9	826.6	829.3	828.8
180°	824.9	824.9	824.9	824.9	824.9	824.9	824.9	824.9	824.9	824.9	824.9



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CANDELA DISTRIBUTION (continued):

	80°	90°
0°	1103.7	1103.7
2.5°	1178.1	1171.1
5°	1515.3	1522.4
7.5°	2040.5	2036.9
10°	2537.3	2569.2
12.5°	2899.3	2906.4
15°	3119.3	3133.5
17.5°	3204.4	3208.0
20°	3208.0	3200.9
22.5°	3169.0	3161.9
25°	3122.8	3119.3
27.5°	3080.2	3083.8
30°	3062.5	3073.2
32.5°	3062.5	3080.2
35°	3069.6	3087.3
37.5°	3066.0	3087.3
40°	3051.9	3076.7
42.5°	3012.8	3030.5
45°	2952.5	2973.8
47.5°	2874.4	2888.6
50°	2775.0	2789.3
52.5°	2650.8	2654.4
55°	2501.8	2516.0
57.5°	2342.1	2345.6
60°	2164.7	2175.3
62.5°	1976.6	1976.6
65°	1777.9	1785.0
67.5°	1572.1	1589.8
70°	1362.7	1366.2
72.5°	1156.8	1156.8
75°	943.9	947.5
77.5°	741.7	741.7
80°	550.1	553.6
82.5°	379.7	386.8
85°	237.8	237.8
87.5°	110.0	99.4
90°	21.0	21.0
92.5°	84.2	67.5
95°	293.7	243.0
97.5°	703.7	607.3
100°	1013.9	899.1
102.5°	1319.1	1220.7
105°	1708.2	1655.3
107.5°	1963.0	1975.8
110°	2060.1	2115.3



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CANDELA DISTRIBUTION (continued):

	80°	90°
112.5°	2068.9	2153.5
115°	2014.0	2131.4
117.5°	1897.6	2027.8
120°	1804.0	1930.4
122.5°	1712.6	1837.4
125°	1582.4	1697.3
127.5°	1465.3	1562.2
130°	1396.3	1485.9
132.5°	1333.7	1413.9
135°	1247.9	1317.0
137.5°	1179.0	1235.6
140°	1131.8	1184.7
142.5°	1092.7	1138.2
145°	1034.0	1068.5
147.5°	989.0	1017.5
150°	960.6	983.8
152.5°	936.4	953.9
155°	908.6	920.1
157.5°	886.4	894.6
160°	873.4	878.0
162.5°	864.7	869.2
165°	852.3	857.0
167.5°	843.4	845.4
170°	840.9	840.9
172.5°	834.3	832.6
175°	830.4	830.4
177.5°	826.8	824.9
180°	824.9	824.9



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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	6.26	7.28	7.10	8.16	9.25	19.45	20.48	20.29	21.35	22.44
	3H	6.98	7.90	7.83	8.78	9.90	21.31	22.23	22.16	23.11	24.23
	4H	7.28	8.16	8.15	9.04	10.17	21.96	22.84	22.84	23.73	24.86
	6H	7.54	8.35	8.43	9.24	10.39	22.41	23.22	23.29	24.11	25.25
	8H	7.61	8.38	8.51	9.30	10.44	22.54	23.31	23.43	24.22	25.36
	12H	7.64	8.37	8.54	9.28	10.45	22.61	23.35	23.51	24.25	25.42
4H	2H	13.50	14.38	14.38	15.26	16.39	19.74	20.62	20.62	21.51	22.64
	3H	15.08	15.82	15.97	16.74	17.88	21.81	22.54	22.70	23.46	24.61
	4H	15.19	15.86	16.09	16.77	17.94	22.59	23.26	23.49	24.17	25.34
	6H	15.21	15.79	16.12	16.73	17.90	23.14	23.72	24.06	24.66	25.83
	8H	15.19	15.73	16.10	16.66	17.85	23.31	23.85	24.23	24.79	25.97
	12H	15.15	15.64	16.09	16.59	17.79	23.42	23.91	24.35	24.86	26.05
8H	4H	16.65	17.19	17.57	18.12	19.31	22.66	23.20	23.58	24.14	25.32
	6H	16.90	17.35	17.84	18.32	19.51	23.30	23.75	24.25	24.73	25.91
	8H	16.92	17.32	17.87	18.28	19.49	23.53	23.93	24.48	24.89	26.10
	12H	16.89	17.25	17.85	18.21	19.46	23.68	24.04	24.64	24.99	26.25
12H	4H	16.80	17.29	17.74	18.24	19.44	22.62	23.11	23.56	24.06	25.26
	6H	17.16	17.56	18.11	18.53	19.73	23.29	23.69	24.24	24.65	25.86
	8H	17.24	17.59	18.20	18.55	19.80	23.53	23.88	24.49	24.84	26.09