

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: P936855

Luminaire Tested: SQ4-FB-050U-100D-93050-1D-UNV-STD-W-12-4000K

Issue Date: 12/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P936855
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-12-4000K
Description: CORELITE SQ4 SUSPENDED INDIRECT LED LUMINAIRE WITH Batwing Frosted Continuous Roll L
Light Source: -
Ballast/Driver: -

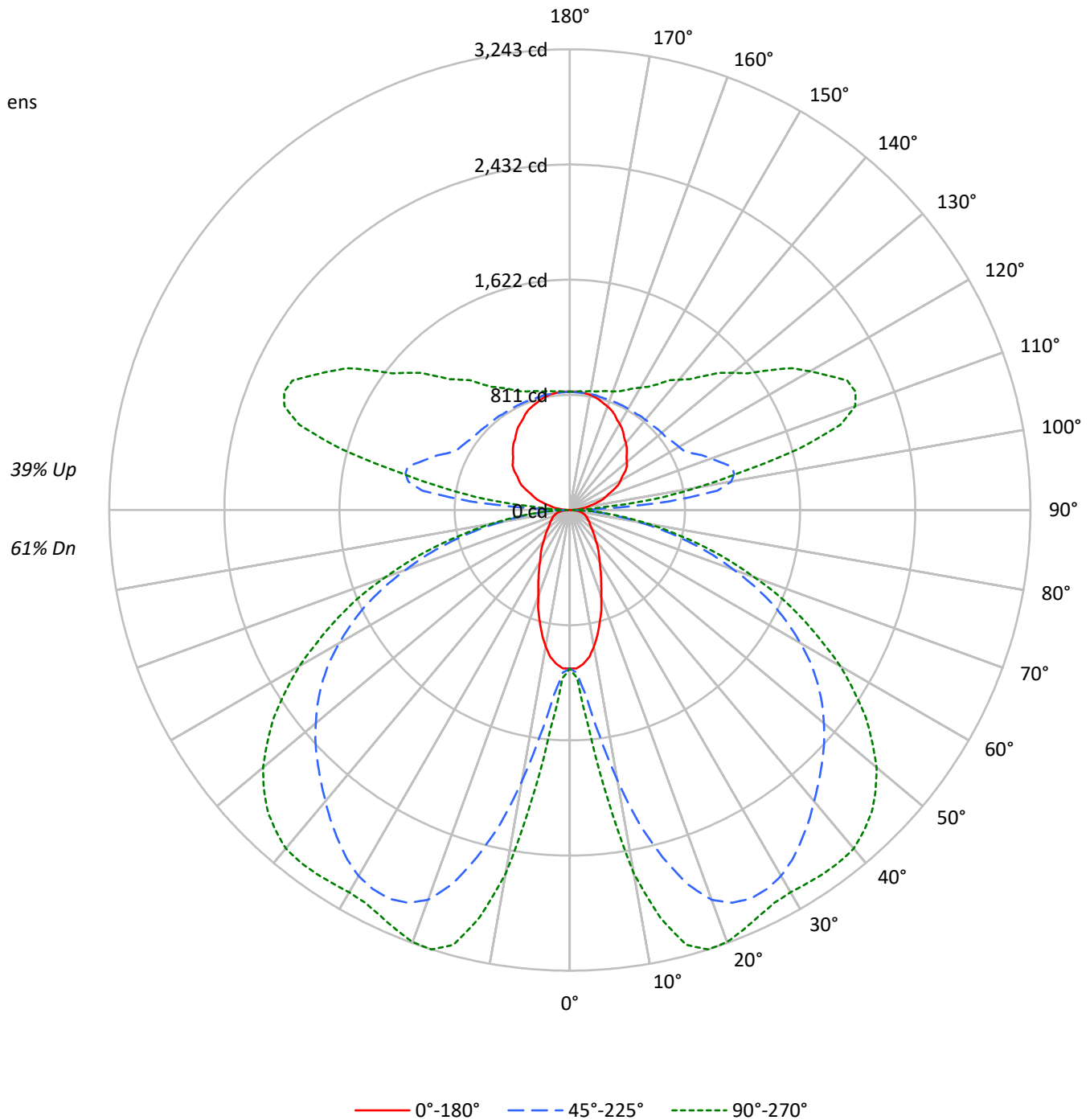
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14040.8 lumens
Efficiency: N/A
Efficacy: 103.5 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 (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

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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°	3451	3451	3451
5°	3373	3990	4639
10°	3061	5818	7691
15°	2602	7602	9287
20°	2119	8812	9464
25°	1768	9223	9272
30°	1492	9284	9254
35°	1320	9132	9494
40°	1151	8934	9741
45°	1043	8790	9779
50°	957	8661	9617
55°	918	8471	9191
60°	940	8103	8518
65°	980	7541	7593
70°	1047	6581	6415
75°	1165	5370	5006
80°	1281	3729	3373
85°	1160	1981	1727

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 9779 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	144.3	1.0
10°-20°	639.7	4.6
20°-30°	1118.9	8.0
30°-40°	1440.3	10.3
40°-50°	1608.8	11.5
50°-60°	1540.9	11.0
60°-70°	1221.1	8.7
70°-80°	718.1	5.1
80°-90°	202.7	1.4
90°-100°	406.5	2.9
100°-110°	1068.7	7.6
110°-120°	1108.1	7.9
120°-130°	888.9	6.3
130°-140°	697.4	5.0
140°-150°	535.3	3.8
150°-160°	385.5	2.7
160°-170°	235.9	1.7
170°-180°	79.7	0.6
0°-30°	1902.9	13.6
0°-40°	3343.2	23.8
0°-60°	6492.9	46.2
0°-90°	8634.8	61.5
90°-120°	2583.3	18.4
90°-150°	4704.9	33.5
90°-180°	5406.0	38.5
0°-180°	14040.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1116	1116	1116	1116	1116	
5°	1087	1166	1313	1485	1539	100
15°	814	1503	2533	3071	3168	227
25°	520	1704	3017	3150	3154	240
35°	352	1629	2842	3003	3121	220
45°	240	1299	2511	2877	3006	186
55°	172	825	2131	2476	2544	157
65°	136	438	1582	1780	1805	135
75°	100	269	868	954	958	105
85°	36	83	215	237	240	38
90°	6	16	42	21	21	7
95°	54	210	700	361	246	60
105°	192	292	1182	1794	1674	204
115°	342	415	946	1888	2155	338
125°	476	533	861	1455	1716	422
135°	567	624	834	1174	1332	439
145°	658	700	823	1002	1080	412
155°	743	764	823	904	930	342
165°	802	813	823	856	866	226
175°	834	834	829	840	840	79
180°	834	834	834	834	834	



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CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	1115.8	1115.8	1115.8	1115.8	1115.8	1115.8	1115.8	1115.8	1115.8	1115.8	1115.8
2.5°	1115.8	1115.8	1122.9	1126.6	1133.7	1137.3	1144.5	1151.6	1173.2	1176.8	1184.0
5°	1087.1	1101.4	1148.1	1166.0	1216.3	1284.4	1313.1	1359.7	1456.6	1485.3	1503.2
7.5°	1044.0	1076.3	1191.1	1219.8	1345.3	1524.7	1600.1	1700.5	1854.9	1930.2	1991.2
10°	975.9	1044.0	1248.5	1316.6	1521.2	1793.8	1933.8	2073.7	2306.9	2410.9	2450.4
12.5°	900.5	1011.7	1309.5	1402.8	1697.0	2095.2	2263.8	2418.1	2683.6	2823.6	2845.0
15°	814.4	965.1	1366.9	1503.2	1883.5	2346.4	2532.9	2723.1	2970.6	3071.0	3096.2
17.5°	739.1	929.2	1420.7	1564.2	2027.0	2572.4	2762.6	2920.4	3121.3	3189.4	3207.4
20°	645.7	871.9	1456.6	1643.1	2177.7	2737.4	2920.4	3042.3	3178.7	3221.7	3228.9
22.5°	577.6	810.8	1478.1	1671.8	2278.2	2837.9	2992.1	3089.0	3182.3	3196.7	3200.2
25°	520.2	742.7	1474.5	1704.1	2364.3	2898.9	3017.3	3089.0	3142.8	3150.0	3150.0
27.5°	466.4	667.3	1460.2	1711.3	2428.9	2913.2	3006.5	3056.7	3081.8	3096.2	3096.2
30°	419.7	595.6	1424.3	1697.0	2457.6	2898.9	2974.2	2999.3	3024.4	3046.0	3056.7
32.5°	383.9	527.3	1370.5	1668.3	2461.1	2863.0	2916.8	2931.2	2967.0	3017.3	3035.2
35°	351.6	459.2	1309.5	1628.8	2439.6	2805.5	2841.5	2855.8	2927.6	3002.9	3028.0
37.5°	319.3	409.0	1230.6	1560.7	2407.4	2737.4	2762.6	2787.6	2898.9	2988.6	3017.3
40°	287.0	366.0	1137.3	1485.3	2357.1	2654.9	2676.4	2715.8	2863.0	2967.0	2995.7
42.5°	261.9	330.1	1036.9	1406.3	2292.5	2561.6	2593.9	2651.3	2819.9	2931.2	2963.4
45°	240.4	294.2	929.2	1298.7	2210.0	2464.8	2511.4	2590.3	2769.7	2877.3	2906.0
47.5°	218.9	269.1	818.0	1187.6	2120.3	2367.9	2428.9	2518.5	2701.5	2805.5	2830.7
50°	200.9	243.9	706.7	1069.2	2023.5	2263.8	2335.6	2428.9	2615.5	2712.3	2744.6
52.5°	186.6	222.4	602.7	950.8	1912.2	2156.2	2238.7	2335.6	2511.4	2604.7	2626.2
55°	172.3	204.5	513.0	825.1	1797.5	2041.4	2131.1	2224.3	2396.6	2475.5	2489.8
57.5°	165.0	190.2	437.7	706.7	1675.5	1912.2	2012.7	2098.8	2260.3	2321.2	2335.6
60°	154.2	179.4	380.3	606.3	1542.7	1790.2	1876.4	1962.5	2098.8	2149.0	2159.8
62.5°	143.5	172.3	337.3	509.4	1406.3	1646.8	1732.8	1811.8	1926.6	1962.5	1976.8
65°	136.3	165.0	304.9	437.7	1266.5	1496.1	1582.1	1650.4	1743.6	1779.5	1786.7
67.5°	129.2	157.9	279.9	376.7	1126.6	1345.3	1410.0	1474.5	1546.3	1582.1	1585.8
70°	118.4	150.7	258.3	333.6	983.0	1173.2	1227.0	1295.2	1352.6	1370.5	1381.3
72.5°	111.2	139.9	243.9	301.3	835.9	1008.2	1058.4	1097.9	1148.1	1166.0	1166.0
75°	100.5	125.5	229.6	269.1	685.2	825.1	868.2	907.7	947.2	954.3	943.5
77.5°	89.7	111.2	197.3	226.0	534.6	653.0	688.8	710.4	742.7	749.8	753.5
80°	75.3	96.9	154.2	175.8	387.5	480.7	505.9	523.8	552.5	552.5	559.7
82.5°	57.4	75.3	111.2	125.5	261.9	330.1	351.6	362.3	380.3	380.3	380.3
85°	35.8	46.6	71.8	82.6	157.9	200.9	215.2	218.9	233.2	236.8	236.8
87.5°	17.9	25.1	46.6	50.2	82.6	104.0	104.0	111.2	111.2	107.6	104.0
90°	5.6	10.0	14.6	15.7	24.6	36.6	42.5	37.8	28.3	21.3	21.3
92.5°	22.4	60.4	98.5	108.0	151.8	210.3	239.5	209.9	150.7	106.4	102.1
95°	53.8	123.4	193.1	210.4	373.7	591.3	700.1	624.7	474.0	361.0	348.1
97.5°	92.9	154.3	215.8	231.2	503.4	866.2	1047.7	1000.1	904.8	833.4	809.0
100°	123.1	178.9	234.5	248.5	550.5	953.2	1154.6	1158.1	1165.0	1170.3	1141.2
102.5°	148.9	200.9	252.8	265.8	572.2	980.7	1184.9	1245.5	1366.9	1457.9	1433.1
105°	192.5	236.5	280.5	291.6	588.2	983.7	1181.5	1317.6	1589.6	1793.8	1780.4
107.5°	237.3	278.3	319.4	329.7	591.3	940.0	1114.3	1304.2	1683.8	1968.5	1971.7
110°	267.6	304.6	341.7	350.9	586.7	901.2	1058.4	1270.6	1694.9	2013.2	2027.1



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
112.5°	297.2	332.5	367.8	376.6	586.9	867.2	1007.4	1224.6	1658.9	1984.7	2006.0
115°	342.0	374.6	407.1	415.3	592.3	828.4	946.4	1155.6	1574.0	1887.8	1917.5
117.5°	386.1	415.7	445.3	452.8	603.3	804.1	904.4	1093.3	1470.8	1754.0	1786.9
120°	411.9	439.8	467.6	474.6	612.3	795.9	887.7	1060.2	1405.2	1664.0	1695.9
122.5°	437.1	465.3	493.3	500.4	625.2	791.6	874.7	1030.1	1340.8	1573.8	1605.3
125°	475.8	501.4	527.0	533.4	642.6	788.0	860.8	992.8	1256.6	1454.6	1483.6
127.5°	507.1	533.0	558.8	565.3	659.9	786.0	849.0	962.4	1188.9	1358.9	1383.4
130°	523.9	551.8	579.6	586.5	672.5	787.2	844.6	945.4	1147.2	1298.5	1321.1
132.5°	541.2	569.1	597.0	603.9	682.9	788.0	840.6	931.0	1111.5	1246.9	1267.2
135°	567.0	592.3	617.7	624.0	694.0	787.3	833.9	909.6	1060.8	1174.3	1191.7
137.5°	593.2	618.4	643.6	649.8	710.8	792.2	832.8	896.7	1024.6	1120.5	1134.8
140°	615.1	638.2	661.3	667.1	721.1	792.9	828.9	884.1	994.6	1077.4	1090.8
142.5°	631.9	653.3	674.7	680.0	729.7	795.8	828.9	877.4	974.4	1047.2	1058.7
145°	657.6	676.2	694.9	699.6	740.9	795.8	823.3	863.0	942.4	1001.8	1010.5
147.5°	683.4	701.5	719.7	724.2	757.3	801.3	823.3	854.6	917.0	963.8	971.1
150°	700.1	716.5	733.0	737.1	765.9	804.1	823.3	849.7	902.4	941.9	947.8
152.5°	717.5	729.9	742.4	745.5	771.5	806.0	823.3	845.9	890.9	924.6	929.1
155°	743.2	752.5	761.7	764.0	783.8	810.1	823.3	841.3	877.0	903.9	906.8
157.5°	762.3	771.3	780.2	782.4	796.1	814.3	823.3	837.3	865.1	886.0	888.1
160°	775.2	782.1	789.1	790.8	801.7	816.1	823.3	835.3	859.1	877.0	878.2
162.5°	788.0	793.3	798.5	799.8	807.7	818.1	823.3	833.4	853.5	868.6	869.7
165°	802.1	806.8	811.5	812.7	816.2	821.0	823.3	830.6	845.0	855.7	856.9
167.5°	814.9	817.1	819.4	819.9	822.9	826.9	828.9	833.6	843.1	850.1	850.7
170°	823.3	825.5	827.8	828.3	828.5	828.8	828.9	833.6	843.1	850.1	850.1
172.5°	827.8	828.2	828.8	828.9	828.9	828.9	828.9	832.6	840.1	845.7	845.2
175°	833.9	833.9	833.9	833.9	832.2	829.9	828.9	831.2	836.0	839.5	839.5
177.5°	833.9	833.9	833.9	833.9	832.7	830.9	830.0	831.9	835.6	838.5	837.9
180°	833.9	833.9	833.9	833.9	833.9	833.9	833.9	833.9	833.9	833.9	833.9



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CANDELA DISTRIBUTION (continued):

	80°	90°
0°	1115.8	1115.8
2.5°	1191.1	1184.0
5°	1532.0	1539.1
7.5°	2063.0	2059.3
10°	2565.2	2597.5
12.5°	2931.2	2938.3
15°	3153.6	3168.0
17.5°	3239.7	3243.3
20°	3243.3	3236.1
22.5°	3203.8	3196.7
25°	3157.2	3153.6
27.5°	3114.1	3117.7
30°	3096.2	3107.0
32.5°	3096.2	3114.1
35°	3103.3	3121.3
37.5°	3099.7	3121.3
40°	3085.4	3110.5
42.5°	3046.0	3063.9
45°	2984.9	3006.5
47.5°	2906.0	2920.4
50°	2805.5	2819.9
52.5°	2680.0	2683.6
55°	2529.3	2543.7
57.5°	2367.9	2371.4
60°	2188.5	2199.3
62.5°	1998.3	1998.3
65°	1797.5	1804.6
67.5°	1589.4	1607.3
70°	1377.7	1381.3
72.5°	1169.6	1169.6
75°	954.3	957.9
77.5°	749.8	749.8
80°	556.1	559.7
82.5°	383.9	391.0
85°	240.4	240.4
87.5°	111.2	100.5
90°	21.3	21.3
92.5°	85.2	68.2
95°	296.9	245.7
97.5°	711.5	614.0
100°	1025.1	909.0
102.5°	1333.6	1234.1
105°	1727.0	1673.5
107.5°	1984.6	1997.5
110°	2082.8	2138.5



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CANDELA DISTRIBUTION (continued):

	80°	90°
112.5°	2091.6	2177.2
115°	2036.2	2154.8
117.5°	1918.5	2050.1
120°	1823.8	1951.6
122.5°	1731.5	1857.6
125°	1599.8	1716.0
127.5°	1481.4	1579.4
130°	1411.7	1502.2
132.5°	1348.3	1429.4
135°	1261.6	1331.5
137.5°	1192.0	1249.2
140°	1144.2	1197.7
142.5°	1104.7	1150.7
145°	1045.4	1080.2
147.5°	999.8	1028.7
150°	971.1	994.6
152.5°	946.7	964.4
155°	918.6	930.2
157.5°	896.2	904.4
160°	883.0	887.7
162.5°	874.2	878.7
165°	861.7	866.4
167.5°	852.7	854.7
170°	850.1	850.1
172.5°	843.5	841.8
175°	839.5	839.5
177.5°	835.9	833.9
180°	833.9	833.9



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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	6.30	7.32	7.14	8.19	9.29	19.49	20.51	20.33	21.39	22.48
	3H	7.01	7.94	7.87	8.82	9.94	21.35	22.27	22.20	23.15	24.27
	4H	7.32	8.19	8.19	9.08	10.21	22.00	22.88	22.87	23.76	24.89
	6H	7.58	8.39	8.46	9.28	10.42	22.45	23.25	23.33	24.15	25.29
	8H	7.65	8.42	8.54	9.33	10.48	22.57	23.34	23.47	24.26	25.40
	12H	7.67	8.41	8.57	9.32	10.49	22.65	23.38	23.55	24.29	25.46
4H	2H	13.54	14.41	14.42	15.30	16.43	19.78	20.66	20.66	21.54	22.67
	3H	15.12	15.85	16.01	16.77	17.92	21.85	22.58	22.74	23.50	24.65
	4H	15.22	15.89	16.12	16.81	17.98	22.63	23.30	23.53	24.21	25.38
	6H	15.24	15.82	16.16	16.76	17.93	23.18	23.76	24.09	24.70	25.87
	8H	15.23	15.77	16.14	16.70	17.89	23.35	23.89	24.27	24.82	26.01
	12H	15.19	15.68	16.13	16.63	17.82	23.45	23.94	24.39	24.89	26.09
8H	4H	16.69	17.23	17.60	18.16	19.35	22.70	23.24	23.62	24.18	25.36
	6H	16.94	17.39	17.88	18.36	19.55	23.34	23.79	24.29	24.77	25.95
	8H	16.96	17.36	17.91	18.32	19.52	23.57	23.97	24.52	24.93	26.13
	12H	16.93	17.28	17.89	18.24	19.49	23.72	24.07	24.68	25.03	26.28
12H	4H	16.84	17.33	17.78	18.28	19.47	22.66	23.15	23.60	24.10	25.30
	6H	17.20	17.60	18.15	18.56	19.77	23.33	23.73	24.28	24.69	25.90
	8H	17.28	17.63	18.23	18.59	19.84	23.57	23.92	24.53	24.88	26.13