

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: P938210

Luminaire Tested: SQ4-FB-150U-050D-830-1D-UNV-STD-W-4

Issue Date: 12/17/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P938210  
REPORT IS A COMBINATION OF REPORTS P933629 AND P933786  
Test Lab: INNOVATION CENTER  
Issue Date: 12/17/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ4-FB-150U-050D-830-1D-UNV-STD-W-4  
Description: CORELITE SQ4 SUSPENDED INDIRECT LED LUMINAIRE WITH Batwing Frosted Continuous Roll L  
Light Source: -  
Ballast/Driver: -

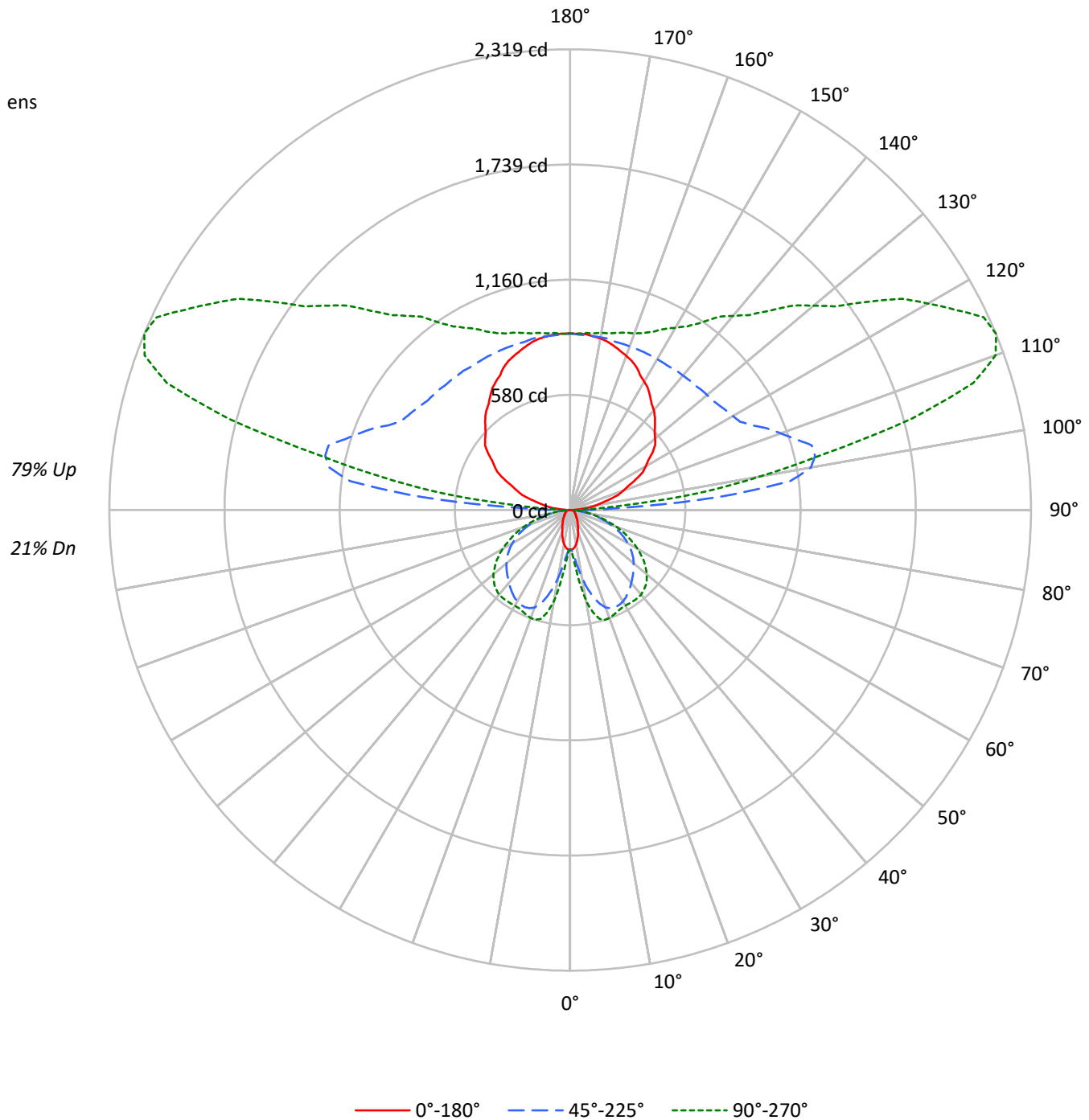
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7305.8 lumens  
Efficiency: N/A  
Efficacy: 131.4 lumens/watt  
Spacing Criteria (0/90/45): 0.71 / 2.69 / 2.33  
Luminous Opening: Rectangular w/ Sides (W: 0.29' x L: 4' x H: 0.1')  
CIE Type: Semi-Indirect

Input Watts (W): 55.6  
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

TEST NUMBER: P938210  
CATALOG NUMBER: SQ4-FB-150U-050D-830-1D-UNV-STD-W-4

### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				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	0
RCR																					
0	100	100	100	100	89	89	89	89	67	67	67	48	48	48	30	30	30	30	30	30	21
1	91	87	83	80	80	77	74	71	58	56	54	41	40	39	26	25	24	24	24	24	17
2	83	75	70	65	73	67	62	58	51	48	45	36	34	32	22	21	20	20	20	20	14
3	75	66	59	53	66	59	53	48	45	40	37	32	29	27	20	18	17	17	17	17	12
4	69	58	50	45	60	52	45	40	39	35	31	28	25	23	17	16	14	14	14	14	10
5	63	51	44	38	55	46	39	34	35	30	27	25	22	19	15	14	12	12	12	12	8
6	57	46	38	32	51	41	34	29	31	26	23	22	19	17	14	12	11	11	11	11	7
7	53	41	33	28	47	37	30	25	28	23	20	20	17	14	12	11	9	9	9	9	6
8	49	37	30	24	43	33	27	22	25	21	17	18	15	13	11	9	8	8	8	8	5
9	45	34	26	21	40	30	24	19	23	18	15	17	13	11	10	9	7	7	7	7	5
10	42	31	24	19	37	27	21	17	21	17	14	15	12	10	10	8	6	6	6	6	4

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

	0°	45°	90°
0°	1850	1850	1850
5°	1807	2137	2487
10°	1637	3114	4124
15°	1389	4065	4980
20°	1130	4708	5076
25°	941	4922	4973
30°	792	4949	4963
35°	699	4863	5091
40°	609	4753	5224
45°	549	4670	5245
50°	503	4595	5158
55°	481	4488	4929
60°	489	4285	4567
65°	508	3978	4072
70°	536	3462	3440
75°	590	2816	2684
80°	632	1945	1810
85°	530	1028	924

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 5245 cd/sqm



TEST NUMBER: P938210

CATALOG NUMBER: SQ4-FB-150U-050D-830-1D-UNV-STD-W-4

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	25.8	0.4
10°-20°	114.4	1.6
20°-30°	200.0	2.7
30°-40°	257.5	3.5
40°-50°	287.6	3.9
50°-60°	275.4	3.8
60°-70°	218.3	3.0
70°-80°	128.4	1.8
80°-90°	39.1	0.5
90°-100°	433.1	5.9
100°-110°	1138.6	15.6
110°-120°	1180.6	16.2
120°-130°	947.0	13.0
130°-140°	743.0	10.2
140°-150°	570.3	7.8
150°-160°	410.7	5.6
160°-170°	251.3	3.4
170°-180°	84.9	1.2
0°-30°	340.2	4.7
0°-40°	597.6	8.2
0°-60°	1160.7	15.9
0°-90°	1546.4	21.2
90°-120°	2752.2	37.7
90°-150°	5012.5	68.6
90°-180°	5759.0	78.8
0°-180°	7305.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	199	199	199	199	199	
5°	194	208	235	266	275	18
15°	146	269	453	549	566	41
25°	93	305	539	563	564	43
35°	63	291	508	537	558	39
45°	43	232	449	514	538	33
55°	31	148	381	442	455	28
65°	24	78	283	318	323	24
75°	18	48	155	171	171	19
85°	6	15	38	42	43	7
90°	6	17	45	23	23	5
95°	57	224	746	385	262	64
105°	205	311	1259	1911	1783	217
115°	364	442	1008	2011	2296	360
125°	507	568	917	1550	1828	450
135°	604	665	888	1251	1418	467
145°	701	745	877	1067	1151	439
155°	792	814	877	963	991	364
165°	854	866	877	912	923	241
175°	888	888	883	894	894	84
180°	888	888	888	888	888	



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CATALOG NUMBER: SQ4-FB-150U-050D-830-1D-UNV-STD-W-4

**CANDELA DISTRIBUTION (FULL):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	199.4	199.4	199.4	199.4	199.4	199.4	199.4	199.4	199.4	199.4	199.4
2.5°	199.4	199.4	200.8	201.3	202.7	203.3	204.6	205.8	209.7	210.3	211.7
5°	194.4	196.9	205.3	208.4	217.4	229.6	234.7	243.1	260.4	265.5	268.7
7.5°	186.6	192.4	212.9	218.1	240.5	272.6	286.0	304.0	331.5	345.0	355.9
10°	174.5	186.6	223.2	235.4	271.9	320.6	345.7	370.7	412.4	431.0	438.0
12.5°	161.0	180.9	234.1	250.8	303.3	374.6	404.7	432.3	479.7	504.8	508.6
15°	145.6	172.6	244.4	268.7	336.7	419.4	452.8	486.8	531.1	548.9	553.4
17.5°	132.1	166.2	254.0	279.6	362.3	459.8	493.9	522.1	557.9	570.2	573.3
20°	115.5	155.8	260.4	293.8	389.3	489.4	522.1	543.9	568.2	575.9	577.2
22.5°	103.2	144.9	264.2	298.8	407.3	507.3	534.9	552.2	568.8	571.4	572.1
25°	93.0	132.8	263.6	304.7	422.6	518.2	539.4	552.2	561.8	563.1	563.1
27.5°	83.4	119.3	261.0	305.9	434.2	520.7	537.5	546.4	550.9	553.4	553.4
30°	75.0	106.5	254.6	303.3	439.3	518.2	531.6	536.1	540.6	544.5	546.4
32.5°	68.6	94.3	245.0	298.2	440.0	511.7	521.4	524.0	530.4	539.4	542.5
35°	62.8	82.1	234.1	291.2	436.1	501.5	507.9	510.5	523.3	536.8	541.3
37.5°	57.1	73.1	220.0	279.0	430.3	489.4	493.9	498.4	518.2	534.2	539.4
40°	51.3	65.4	203.3	265.5	421.4	474.6	478.5	485.5	511.7	530.4	535.6
42.5°	46.8	59.0	185.4	251.4	409.8	457.9	463.7	474.0	504.1	524.0	529.7
45°	42.9	52.6	166.2	232.1	395.0	440.6	448.9	463.1	495.1	514.3	519.5
47.5°	39.1	48.1	146.3	212.3	379.1	423.3	434.2	450.2	483.0	501.5	506.0
50°	35.9	43.6	126.4	191.1	361.8	404.7	417.5	434.2	467.6	484.9	490.6
52.5°	33.4	39.8	107.7	170.0	341.9	385.5	400.2	417.5	448.9	465.6	469.5
55°	30.8	36.5	91.7	147.5	321.3	364.9	381.0	397.6	428.4	442.5	445.1
57.5°	29.5	34.0	78.2	126.4	299.5	341.9	359.7	375.1	404.0	414.9	417.5
60°	27.5	32.0	68.0	108.4	275.8	320.1	335.5	350.9	375.1	384.1	386.1
62.5°	25.6	30.8	60.3	91.1	251.4	294.4	309.7	323.9	344.4	350.9	353.3
65°	24.4	29.5	54.5	78.2	226.4	267.4	282.8	295.0	311.7	318.1	319.4
67.5°	23.1	28.2	50.0	67.3	201.3	240.5	252.0	263.6	276.4	282.8	283.5
70°	21.1	27.0	46.2	59.7	175.7	209.7	219.3	231.5	241.8	245.0	246.9
72.5°	19.9	25.0	43.6	53.9	149.4	180.2	189.2	196.3	205.3	208.4	208.4
75°	18.0	22.5	41.0	48.1	122.5	147.5	155.2	162.2	169.3	170.6	168.6
77.5°	16.1	19.9	35.3	40.4	95.6	116.7	123.1	127.0	132.8	134.0	134.7
80°	13.5	17.3	27.5	31.5	69.3	85.9	90.4	93.6	98.8	98.8	100.1
82.5°	10.2	13.5	19.9	22.5	46.8	59.0	62.8	64.8	68.0	68.0	68.0
85°	6.4	8.3	12.8	14.7	28.2	35.9	38.5	39.1	41.7	42.4	42.4
87.5°	3.3	4.5	8.3	9.0	14.7	18.6	18.6	19.9	19.9	19.2	18.6
90°	5.9	10.7	15.5	16.7	26.3	39.0	45.3	40.2	30.2	22.7	22.7
92.5°	23.8	64.3	105.0	115.1	161.8	224.0	255.2	223.6	160.6	113.3	108.8
95°	57.3	131.4	205.6	224.2	398.1	630.0	746.0	665.7	505.1	384.6	370.9
97.5°	98.9	164.4	229.9	246.3	536.2	922.9	1116.2	1065.5	963.9	887.8	861.8
100°	131.2	190.5	249.9	264.7	586.5	1015.6	1230.1	1233.8	1241.3	1246.8	1215.8
102.5°	158.6	214.0	269.4	283.3	609.6	1044.7	1262.3	1326.9	1456.3	1553.3	1526.8
105°	205.2	252.1	298.9	310.7	626.7	1048.0	1258.7	1403.6	1693.6	1911.0	1896.8
107.5°	252.9	296.6	340.3	351.2	629.9	1001.4	1187.2	1389.4	1793.7	2097.1	2100.5
110°	285.0	324.5	364.0	373.9	625.1	960.0	1127.5	1353.6	1805.7	2144.8	2159.6



TEST NUMBER: P938210

CATALOG NUMBER: SQ4-FB-150U-050D-830-1D-UNV-STD-W-4

**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
112.5°	316.6	354.3	392.0	401.3	625.3	924.0	1073.3	1304.7	1767.4	2114.4	2137.1
115°	364.3	399.0	433.7	442.4	631.1	882.6	1008.3	1231.1	1676.9	2011.2	2042.9
117.5°	411.5	443.0	474.6	482.4	642.8	856.7	963.6	1164.7	1567.0	1868.7	1903.8
120°	438.8	468.5	498.2	505.6	652.3	847.9	945.7	1129.4	1497.0	1772.7	1806.7
122.5°	465.7	495.6	525.6	533.1	666.0	843.4	932.0	1097.5	1428.5	1676.7	1710.3
125°	506.9	534.1	561.5	568.2	684.5	839.6	917.1	1057.6	1338.8	1549.7	1580.7
127.5°	540.2	567.8	595.3	602.2	702.9	837.4	904.6	1025.3	1266.7	1447.8	1473.9
130°	558.1	587.7	617.4	624.8	716.5	838.7	899.8	1007.2	1222.2	1383.3	1407.4
132.5°	576.6	606.3	635.9	643.4	727.4	839.6	895.6	991.8	1184.2	1328.5	1350.1
135°	604.0	631.1	658.0	664.8	739.4	838.7	888.4	969.0	1130.1	1250.9	1269.6
137.5°	632.0	658.8	685.5	692.2	757.2	844.0	887.3	955.3	1091.6	1193.8	1209.0
140°	655.3	680.0	704.7	710.8	768.2	844.8	883.1	941.9	1059.5	1147.8	1162.0
142.5°	673.2	696.0	718.7	724.5	777.3	847.8	883.1	934.8	1038.1	1115.7	1127.9
145°	700.7	720.5	740.3	745.3	789.3	847.9	877.1	919.4	1003.9	1067.3	1076.6
147.5°	728.0	747.4	766.7	771.6	806.8	853.7	877.1	910.4	976.8	1026.7	1034.4
150°	746.0	763.5	780.9	785.3	815.9	856.7	877.1	905.2	961.4	1003.5	1009.7
152.5°	764.4	777.7	790.9	794.2	821.9	858.7	877.1	901.1	949.1	985.1	989.7
155°	791.9	801.7	811.5	813.9	835.0	863.1	877.1	896.2	934.4	963.0	966.1
157.5°	812.1	821.7	831.1	833.5	848.1	867.5	877.1	891.9	921.6	943.9	946.1
160°	825.8	833.2	840.7	842.5	854.1	869.5	877.1	889.8	915.3	934.3	935.5
162.5°	839.6	845.1	850.6	852.1	860.4	871.6	877.1	887.8	909.3	925.4	926.6
165°	854.5	859.4	864.5	865.8	869.6	874.6	877.1	884.8	900.2	911.6	912.9
167.5°	868.1	870.5	872.9	873.5	876.7	881.0	883.1	888.1	898.2	905.7	906.3
170°	877.1	879.5	881.9	882.5	882.7	883.0	883.1	888.1	898.2	905.7	905.7
172.5°	881.9	882.4	883.0	883.1	883.1	883.1	883.1	887.1	895.0	900.9	900.5
175°	888.4	888.4	888.4	888.4	886.6	884.2	883.1	885.5	890.6	894.4	894.4
177.5°	888.4	888.4	888.4	888.4	887.1	885.3	884.3	886.3	890.2	893.2	892.6
180°	888.4	888.4	888.4	888.4	888.4	888.4	888.4	888.4	888.4	888.4	888.4



TEST NUMBER: P938210

CATALOG NUMBER: SQ4-FB-150U-050D-830-1D-UNV-STD-W-4

**CANDELA DISTRIBUTION (continued):**

	80°	90°
0°	199.4	199.4
2.5°	212.9	211.7
5°	273.9	275.1
7.5°	368.7	368.2
10°	458.6	464.3
12.5°	524.0	525.2
15°	563.8	566.3
17.5°	579.1	579.8
20°	579.8	578.5
22.5°	572.7	571.4
25°	564.4	563.8
27.5°	556.7	557.3
30°	553.4	555.4
32.5°	553.4	556.7
35°	554.8	557.9
37.5°	554.1	557.9
40°	551.5	556.0
42.5°	544.5	547.7
45°	533.5	537.5
47.5°	519.5	522.1
50°	501.5	504.1
52.5°	479.1	479.7
55°	452.2	454.7
57.5°	423.3	423.9
60°	391.2	393.1
62.5°	357.3	357.3
65°	321.3	322.6
67.5°	284.1	287.3
70°	246.3	246.9
72.5°	209.1	209.1
75°	170.6	171.2
77.5°	134.0	134.0
80°	99.4	100.1
82.5°	68.6	69.9
85°	42.9	42.9
87.5°	19.9	18.0
90°	22.7	22.7
92.5°	90.7	72.8
95°	316.3	261.8
97.5°	758.0	654.1
100°	1092.1	968.3
102.5°	1420.8	1314.8
105°	1839.8	1782.8
107.5°	2114.3	2128.1
110°	2219.0	2278.3





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CATALOG NUMBER: SQ4-FB-150U-050D-830-1D-UNV-STD-W-4

**CANDELA DISTRIBUTION (continued):**

	80°	90°
112.5°	2228.3	2319.4
115°	2169.3	2295.6
117.5°	2043.9	2184.1
120°	1943.0	2079.2
122.5°	1844.7	1979.0
125°	1704.4	1828.2
127.5°	1578.3	1682.7
130°	1503.9	1600.3
132.5°	1436.4	1522.8
135°	1344.0	1418.5
137.5°	1270.0	1330.8
140°	1219.0	1276.0
142.5°	1176.9	1225.9
145°	1113.7	1150.8
147.5°	1065.2	1096.0
150°	1034.7	1059.5
152.5°	1008.6	1027.3
155°	978.6	991.0
157.5°	954.8	963.6
160°	940.6	945.7
162.5°	931.3	936.1
165°	918.0	923.0
167.5°	908.4	910.5
170°	905.7	905.7
172.5°	898.6	896.8
175°	894.4	894.4
177.5°	890.5	888.4
180°	888.4	888.4



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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	0.00	0.22	0.72	1.37	3.00	12.69	13.36	13.86	14.51	16.14
	3H	0.24	0.84	1.42	2.00	3.65	14.50	15.10	15.68	16.26	17.90
	4H	0.54	1.10	1.72	2.26	3.91	15.13	15.70	16.31	16.86	18.50
	6H	0.78	1.30	1.97	2.46	4.12	15.54	16.06	16.73	17.22	18.88
	8H	0.84	1.33	2.03	2.51	4.16	15.64	16.14	16.84	17.32	18.97
	12H	0.85	1.32	2.04	2.49	4.17	15.70	16.17	16.89	17.34	19.01
4H	2H	6.72	7.29	7.91	8.45	10.10	12.95	13.51	14.14	14.67	16.32
	3H	8.27	8.75	9.47	9.93	11.59	14.96	15.43	16.15	16.62	18.28
	4H	8.36	8.79	9.55	9.97	11.65	15.71	16.14	16.90	17.32	18.99
	6H	8.36	8.73	9.56	9.93	11.60	16.22	16.59	17.42	17.79	19.46
	8H	8.33	8.68	9.53	9.87	11.55	16.37	16.72	17.57	17.91	19.59
	12H	8.28	8.59	9.49	9.79	11.48	16.44	16.76	17.66	17.96	19.65
8H	4H	9.78	10.12	10.97	11.31	13.00	15.75	16.10	16.95	17.29	18.97
	6H	10.01	10.30	11.23	11.53	13.21	16.36	16.64	17.57	17.88	19.56
	8H	10.02	10.27	11.25	11.48	13.18	16.57	16.82	17.79	18.02	19.73
	12H	9.98	10.20	11.21	11.41	13.14	16.69	16.91	17.92	18.12	19.85
12H	4H	9.91	10.22	11.12	11.42	13.11	15.69	16.01	16.91	17.21	18.90
	6H	10.26	10.51	11.48	11.72	13.42	16.34	16.59	17.56	17.80	19.50
	8H	10.32	10.54	11.55	11.75	13.48	16.55	16.77	17.78	17.98	19.71