

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: P937424

Luminaire Tested: SQ4-FB-100U-050D-927-1D-UNV-STD-W-8

Issue Date: 12/17/2024

**Test Information**

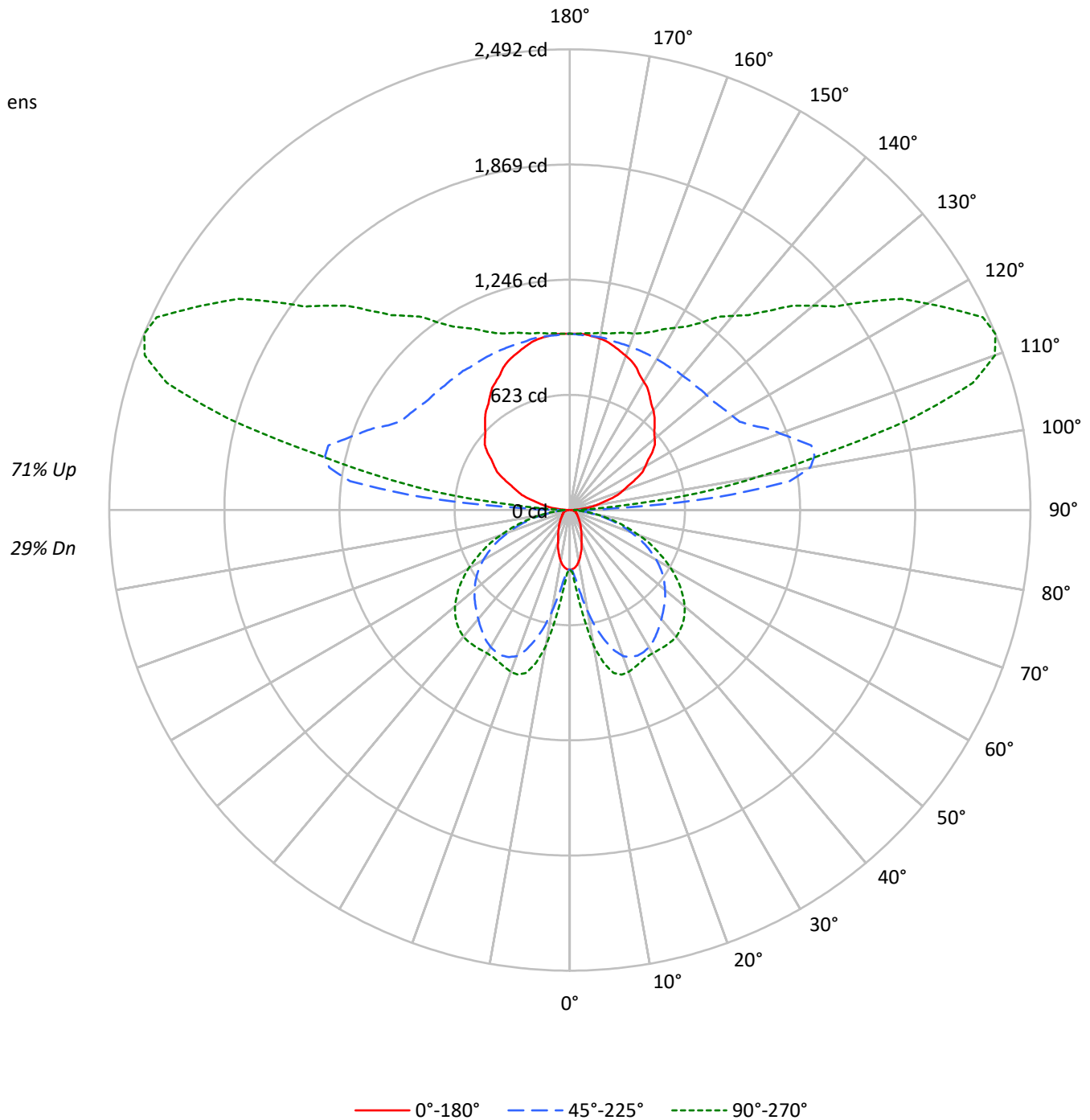
Test Method: LM-79-2019  
Report Number: P937424  
REPORT IS A COMBINATION OF REPORTS P933581 AND P933786  
Test Lab: INNOVATION CENTER  
Issue Date: 12/17/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ4-FB-100U-050D-927-1D-UNV-STD-W-8  
Description: CORELITE SQ4 SUSPENDED INDIRECT LED LUMINAIRE WITH Batwing Frosted Continuous Roll L  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8675.6 lumens  
Efficiency: N/A  
Efficacy: 105.3 lumens/watt  
Spacing Criteria (0/90/45): 0.71 / 2.69 / 2.33  
Luminous Opening: Rectangular w/ Sides (W: 0.29' x L: 8' x H: 0.1')  
CIE Type: Semi-Indirect  
  
Input Watts (W): 82.4  
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

TEST NUMBER: P937424  
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### 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	102	102	102	102	91	91	91	91	71	71	71	53	53	53	37	37	37	29				29
1	93	88	84	81	83	79	76	73	62	60	58	46	45	44	32	31	30	23				23
2	84	77	71	66	75	69	64	59	54	50	47	40	38	36	28	26	25	19				19
3	76	67	60	54	68	60	54	49	47	43	39	35	32	30	24	22	21	16				16
4	70	59	51	45	62	53	46	41	42	37	33	31	28	25	21	19	18	13				13
5	64	52	44	38	57	47	40	35	37	32	28	28	24	21	19	17	15	11				11
6	58	47	39	33	52	42	35	30	33	28	24	25	21	18	17	15	13	10				10
7	54	42	34	28	48	38	31	26	30	25	21	22	19	16	15	13	11	8				8
8	50	38	30	25	44	34	27	23	27	22	18	20	17	14	14	12	10	7				7
9	46	34	27	22	41	31	24	20	24	20	16	18	15	12	13	11	9	7				7
10	43	31	24	19	38	28	22	18	22	18	14	17	14	11	12	10	8	6				6

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

	0°	45°	90°
0°	1490	1490	1490
5°	1456	1722	2003
10°	1320	2511	3321
15°	1123	3280	4010
20°	914	3801	4086
25°	762	3978	4004
30°	643	4003	3996
35°	568	3937	4099
40°	495	3850	4206
45°	448	3787	4223
50°	411	3730	4153
55°	394	3647	3969
60°	403	3487	3678
65°	420	3243	3279
70°	447	2828	2770
75°	497	2306	2161
80°	541	1599	1456
85°	480	849	745

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 4223 cd/sqm



TEST NUMBER: P937424

CATALOG NUMBER: SQ4-FB-100U-050D-927-1D-UNV-STD-W-8

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	41.5	0.5
10°-20°	184.1	2.1
20°-30°	322.1	3.7
30°-40°	414.6	4.8
40°-50°	463.1	5.3
50°-60°	443.6	5.1
60°-70°	351.5	4.1
70°-80°	206.7	2.4
80°-90°	61.1	0.7
90°-100°	465.3	5.4
100°-110°	1223.1	14.1
110°-120°	1268.3	14.6
120°-130°	1017.3	11.7
130°-140°	798.2	9.2
140°-150°	612.7	7.1
150°-160°	441.2	5.1
160°-170°	270.0	3.1
170°-180°	91.2	1.1
0°-30°	547.8	6.3
0°-40°	962.4	11.1
0°-60°	1869.1	21.5
0°-90°	2488.4	28.7
90°-120°	2956.6	34.1
90°-150°	5384.8	62.1
90°-180°	6187.0	71.3
0°-180°	8675.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	321	321	321	321	321	
5°	313	336	378	428	443	29
15°	234	433	729	884	912	65
25°	150	491	869	907	908	69
35°	101	469	818	864	898	63
45°	69	374	723	828	866	54
55°	50	238	614	713	732	45
65°	39	126	456	512	520	39
75°	29	78	250	275	276	30
85°	10	24	62	68	69	11
90°	6	18	49	24	24	6
95°	62	241	801	413	281	68
105°	220	334	1352	2053	1915	234
115°	391	475	1083	2161	2466	387
125°	544	610	985	1665	1964	483
135°	649	714	954	1344	1524	502
145°	753	801	942	1147	1236	472
155°	851	874	942	1034	1065	391
165°	918	930	942	979	992	259
175°	954	954	949	961	961	91
180°	954	954	954	954	954	



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**CANDELA DISTRIBUTION (FULL):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	321.2	321.2	321.2	321.2	321.2	321.2	321.2	321.2	321.2	321.2	321.2
2.5°	321.2	321.2	323.2	324.3	326.3	327.4	329.5	331.6	337.7	338.7	340.8
5°	312.9	317.1	330.5	335.6	350.1	369.8	378.0	391.4	419.3	427.6	432.7
7.5°	300.5	309.8	342.9	351.1	387.3	438.9	460.6	489.6	533.9	555.6	573.2
10°	280.9	300.5	359.4	379.1	437.9	516.4	556.7	597.0	664.0	694.0	705.4
12.5°	259.3	291.2	377.0	403.8	488.5	603.1	651.7	696.1	772.5	812.8	819.0
15°	234.5	277.8	393.5	432.7	542.2	675.4	729.2	783.9	855.2	884.0	891.3
17.5°	212.8	267.5	409.0	450.3	583.5	740.5	795.3	840.7	898.5	918.1	923.3
20°	185.9	250.9	419.3	473.0	626.9	788.0	840.7	875.8	915.1	927.5	929.5
22.5°	166.2	233.4	425.5	481.2	655.8	817.0	861.3	889.3	916.1	920.2	921.2
25°	149.8	213.8	424.5	490.6	680.6	834.5	868.6	889.3	904.8	906.8	906.8
27.5°	134.3	192.1	420.3	492.6	699.2	838.6	865.5	880.0	887.2	891.3	891.3
30°	120.8	171.5	410.0	488.5	707.5	834.5	856.2	863.4	870.6	876.9	880.0
32.5°	110.5	151.8	394.5	480.2	708.5	824.1	839.7	843.8	854.1	868.6	873.7
35°	101.2	132.2	377.0	468.9	702.3	807.7	818.0	822.1	842.8	864.5	871.6
37.5°	91.9	117.7	354.3	449.3	693.0	788.0	795.3	802.5	834.5	860.3	868.6
40°	82.6	105.3	327.4	427.6	678.5	764.3	770.5	781.9	824.1	854.1	862.4
42.5°	75.4	95.0	298.5	404.9	660.0	737.4	746.7	763.2	811.8	843.8	853.1
45°	69.2	84.7	267.5	373.8	636.2	709.6	723.0	745.7	797.3	828.3	836.5
47.5°	63.0	77.5	235.5	341.9	610.4	681.7	699.2	725.0	777.7	807.7	814.9
50°	57.8	70.2	203.4	307.8	582.5	651.7	672.4	699.2	752.9	780.8	790.1
52.5°	53.7	64.1	173.5	273.7	550.5	620.7	644.5	672.4	723.0	749.8	756.0
55°	49.6	58.9	147.7	237.5	517.4	587.7	613.5	640.3	689.9	712.6	716.8
57.5°	47.5	54.7	126.0	203.4	482.3	550.5	579.4	604.2	650.6	668.2	672.4
60°	44.4	51.7	109.5	174.6	444.1	515.4	540.2	564.9	604.2	618.6	621.8
62.5°	41.3	49.6	97.1	146.7	404.9	474.1	498.8	521.6	554.6	564.9	569.1
65°	39.3	47.5	87.8	126.0	364.6	430.7	455.5	475.1	502.0	512.3	514.4
67.5°	37.2	45.4	80.5	108.4	324.3	387.3	405.9	424.5	445.1	455.5	456.5
70°	34.1	43.4	74.4	96.0	283.0	337.7	353.2	372.8	389.4	394.5	397.6
72.5°	32.0	40.3	70.2	86.8	240.6	290.2	304.7	316.0	330.5	335.6	335.6
75°	29.0	36.1	66.1	77.5	197.3	237.5	249.9	261.3	272.7	274.7	271.7
77.5°	25.8	32.0	56.8	65.1	153.9	188.0	198.3	204.5	213.8	215.8	216.9
80°	21.7	27.9	44.4	50.6	111.6	138.4	145.6	150.8	159.1	159.1	161.1
82.5°	16.6	21.7	32.0	36.1	75.4	95.0	101.2	104.3	109.5	109.5	109.5
85°	10.3	13.4	20.6	23.7	45.4	57.8	62.0	63.0	67.1	68.1	68.1
87.5°	5.2	7.2	13.4	14.5	23.7	30.0	30.0	32.0	32.0	31.0	30.0
90°	6.4	11.6	16.6	17.9	28.2	41.8	48.7	43.3	32.4	24.3	24.3
92.5°	25.6	69.2	112.8	123.7	173.8	240.7	274.1	240.2	172.6	121.7	116.9
95°	61.5	141.2	220.9	240.9	427.7	676.8	801.3	715.1	542.5	413.2	398.6
97.5°	106.3	176.6	247.0	264.6	576.1	991.5	1199.1	1144.6	1035.6	953.8	925.9
100°	140.9	204.7	268.5	284.4	630.1	1091.0	1321.5	1325.5	1333.4	1339.4	1306.2
102.5°	170.4	229.8	289.4	304.2	654.8	1122.3	1356.0	1425.5	1564.5	1668.7	1640.2
105°	220.4	270.7	321.1	333.7	673.2	1125.9	1352.2	1507.9	1819.4	2053.0	2037.7
107.5°	271.6	318.5	365.5	377.3	676.7	1075.8	1275.4	1492.6	1927.0	2252.8	2256.5
110°	306.2	348.6	391.0	401.6	671.5	1031.3	1211.3	1454.1	1939.8	2304.1	2320.0



TEST NUMBER: P937424

CATALOG NUMBER: SQ4-FB-100U-050D-927-1D-UNV-STD-W-8

**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
112.5°	340.1	380.5	421.0	431.1	671.7	992.6	1153.0	1401.6	1898.6	2271.4	2295.9
115°	391.4	428.7	466.0	475.3	677.9	948.1	1083.2	1322.6	1801.5	2160.6	2194.6
117.5°	442.0	475.9	509.7	518.2	690.5	920.2	1035.1	1251.2	1683.4	2007.5	2045.1
120°	471.5	503.3	535.2	543.2	700.8	910.9	1015.9	1213.4	1608.2	1904.4	1940.9
122.5°	500.3	532.5	564.6	572.6	715.5	905.9	1001.2	1178.9	1534.5	1801.3	1837.4
125°	544.5	573.8	603.1	610.5	735.4	901.9	985.1	1136.2	1438.3	1664.8	1698.1
127.5°	580.3	609.9	639.6	647.0	755.2	899.6	971.7	1101.4	1360.7	1555.2	1583.3
130°	599.5	631.4	663.3	671.3	769.7	901.0	966.6	1082.0	1312.9	1486.1	1512.0
132.5°	619.4	651.3	683.1	691.2	781.5	901.9	962.1	1065.4	1272.1	1427.1	1450.3
135°	648.9	677.9	707.0	714.3	794.3	901.1	954.4	1041.0	1214.1	1343.9	1363.9
137.5°	679.0	707.7	736.5	743.7	813.5	906.6	953.1	1026.3	1172.6	1282.4	1298.8
140°	703.9	730.4	756.9	763.5	825.2	907.5	948.6	1011.9	1138.3	1233.1	1248.4
142.5°	723.2	747.7	772.2	778.2	835.1	910.8	948.6	1004.2	1115.2	1198.5	1211.7
145°	752.7	774.0	795.4	800.7	847.9	910.8	942.2	987.7	1078.5	1146.6	1156.5
147.5°	782.1	802.9	823.7	828.9	866.7	917.1	942.2	978.0	1049.4	1103.0	1111.3
150°	801.3	820.1	838.9	843.6	876.5	920.3	942.2	972.4	1032.8	1078.1	1084.8
152.5°	821.2	835.4	849.7	853.2	882.9	922.5	942.2	968.0	1019.6	1058.2	1063.3
155°	850.6	861.2	871.7	874.3	897.0	927.2	942.2	962.7	1003.8	1034.5	1037.8
157.5°	872.4	882.7	893.0	895.5	911.1	931.9	942.2	958.2	990.1	1014.0	1016.3
160°	887.2	895.2	903.1	905.1	917.5	934.0	942.2	956.0	983.3	1003.8	1005.2
162.5°	901.9	907.9	913.9	915.4	924.3	936.2	942.2	953.8	976.8	994.1	995.5
165°	917.9	923.3	928.7	930.1	934.2	939.6	942.2	950.5	967.0	979.4	980.8
167.5°	932.6	935.2	937.8	938.4	941.8	946.3	948.6	954.0	964.9	973.0	973.5
170°	942.2	944.8	947.4	948.0	948.3	948.5	948.6	954.0	964.9	973.0	973.0
172.5°	947.4	947.9	948.5	948.6	948.6	948.6	948.6	953.0	961.5	967.9	967.4
175°	954.4	954.4	954.4	954.4	952.5	949.9	948.6	951.3	956.7	960.8	960.8
177.5°	954.4	954.4	954.4	954.4	953.0	951.0	949.9	952.1	956.3	959.6	959.0
180°	954.4	954.4	954.4	954.4	954.4	954.4	954.4	954.4	954.4	954.4	954.4



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CATALOG NUMBER: SQ4-FB-100U-050D-927-1D-UNV-STD-W-8

**CANDELA DISTRIBUTION (continued):**

	80°	90°
0°	321.2	321.2
2.5°	342.9	340.8
5°	441.0	443.1
7.5°	593.8	592.8
10°	738.4	747.7
12.5°	843.8	845.8
15°	907.8	912.0
17.5°	932.6	933.6
20°	933.6	931.5
22.5°	922.3	920.2
25°	908.8	907.8
27.5°	896.4	897.5
30°	891.3	894.4
32.5°	891.3	896.4
35°	893.4	898.5
37.5°	892.4	898.5
40°	888.2	895.4
42.5°	876.9	882.0
45°	859.3	865.5
47.5°	836.5	840.7
50°	807.7	811.8
52.5°	771.5	772.5
55°	728.1	732.3
57.5°	681.7	682.7
60°	630.0	633.1
62.5°	575.3	575.3
65°	517.4	519.5
67.5°	457.5	462.7
70°	396.6	397.6
72.5°	336.7	336.7
75°	274.7	275.7
77.5°	215.8	215.8
80°	160.1	161.1
82.5°	110.5	112.6
85°	69.2	69.2
87.5°	32.0	29.0
90°	24.3	24.3
92.5°	97.6	78.2
95°	339.9	281.2
97.5°	814.3	702.7
100°	1173.2	1040.3
102.5°	1526.3	1412.4
105°	1976.4	1915.2
107.5°	2271.3	2286.1
110°	2383.8	2447.5





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CATALOG NUMBER: SQ4-FB-100U-050D-927-1D-UNV-STD-W-8

**CANDELA DISTRIBUTION (continued):**

	80°	90°
112.5°	2393.8	2491.7
115°	2330.3	2466.2
117.5°	2195.7	2346.3
120°	2087.3	2233.6
122.5°	1981.7	2126.0
125°	1831.0	1964.0
127.5°	1695.5	1807.7
130°	1615.6	1719.3
132.5°	1543.2	1635.9
135°	1443.9	1523.9
137.5°	1364.2	1429.7
140°	1309.5	1370.8
142.5°	1264.3	1317.0
145°	1196.4	1236.2
147.5°	1144.3	1177.3
150°	1111.5	1138.3
152.5°	1083.5	1103.6
155°	1051.2	1064.6
157.5°	1025.7	1035.1
160°	1010.5	1015.9
162.5°	1000.5	1005.7
165°	986.2	991.6
167.5°	975.8	978.1
170°	973.0	973.0
172.5°	965.4	963.4
175°	960.8	960.8
177.5°	956.7	954.4
180°	954.4	954.4



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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	0.02	0.73	1.13	1.85	3.39	13.20	13.91	14.31	15.03	16.57
	3H	0.71	1.35	1.84	2.48	4.04	15.03	15.67	16.15	16.79	18.35
	4H	1.00	1.61	2.14	2.74	4.30	15.66	16.27	16.80	17.40	18.96
	6H	1.25	1.81	2.39	2.93	4.51	16.09	16.65	17.23	17.77	19.35
	8H	1.31	1.85	2.45	2.99	4.56	16.20	16.74	17.35	17.88	19.45
	12H	1.32	1.83	2.47	2.97	4.56	16.27	16.77	17.42	17.91	19.50
4H	2H	7.22	7.83	8.36	8.95	10.51	13.45	14.06	14.59	15.19	16.75
	3H	8.77	9.28	9.92	10.43	12.01	15.49	16.00	16.63	17.14	18.72
	4H	8.86	9.33	10.01	10.47	12.06	16.25	16.72	17.40	17.85	19.45
	6H	8.86	9.26	10.02	10.42	12.01	16.78	17.18	17.93	18.34	19.93
	8H	8.83	9.21	9.99	10.36	11.97	16.93	17.31	18.09	18.46	20.07
	12H	8.78	9.12	9.95	10.29	11.90	17.02	17.36	18.19	18.52	20.14
8H	4H	10.29	10.67	11.45	11.82	13.42	16.29	16.67	17.45	17.82	19.43
	6H	10.53	10.84	11.70	12.03	13.63	16.92	17.23	18.09	18.42	20.02
	8H	10.54	10.81	11.72	11.98	13.61	17.13	17.41	18.31	18.58	20.20
	12H	10.50	10.74	11.69	11.91	13.57	17.27	17.51	18.46	18.68	20.33
12H	4H	10.43	10.77	11.60	11.93	13.54	16.24	16.58	17.41	17.74	19.35
	6H	10.78	11.05	11.96	12.23	13.85	16.90	17.17	18.08	18.34	19.96
	8H	10.84	11.08	12.03	12.25	13.91	17.12	17.36	18.31	18.53	20.18