

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: P937411

Luminaire Tested: SQ4-FB-100U-050D-830-1D-UNV-STD-W-6

Issue Date: 12/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P937411
REPORT IS A COMBINATION OF REPORTS P933573 AND P933786
Test Lab: INNOVATION CENTER
Issue Date: 12/17/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: CORELITE
Catalog Number: SQ4-FB-100U-050D-830-1D-UNV-STD-W-6
Description: CORELITE SQ4 SUSPENDED INDIRECT LED LUMINAIRE WITH Batwing Frosted Continuous Roll L
Light Source: -
Ballast/Driver: -

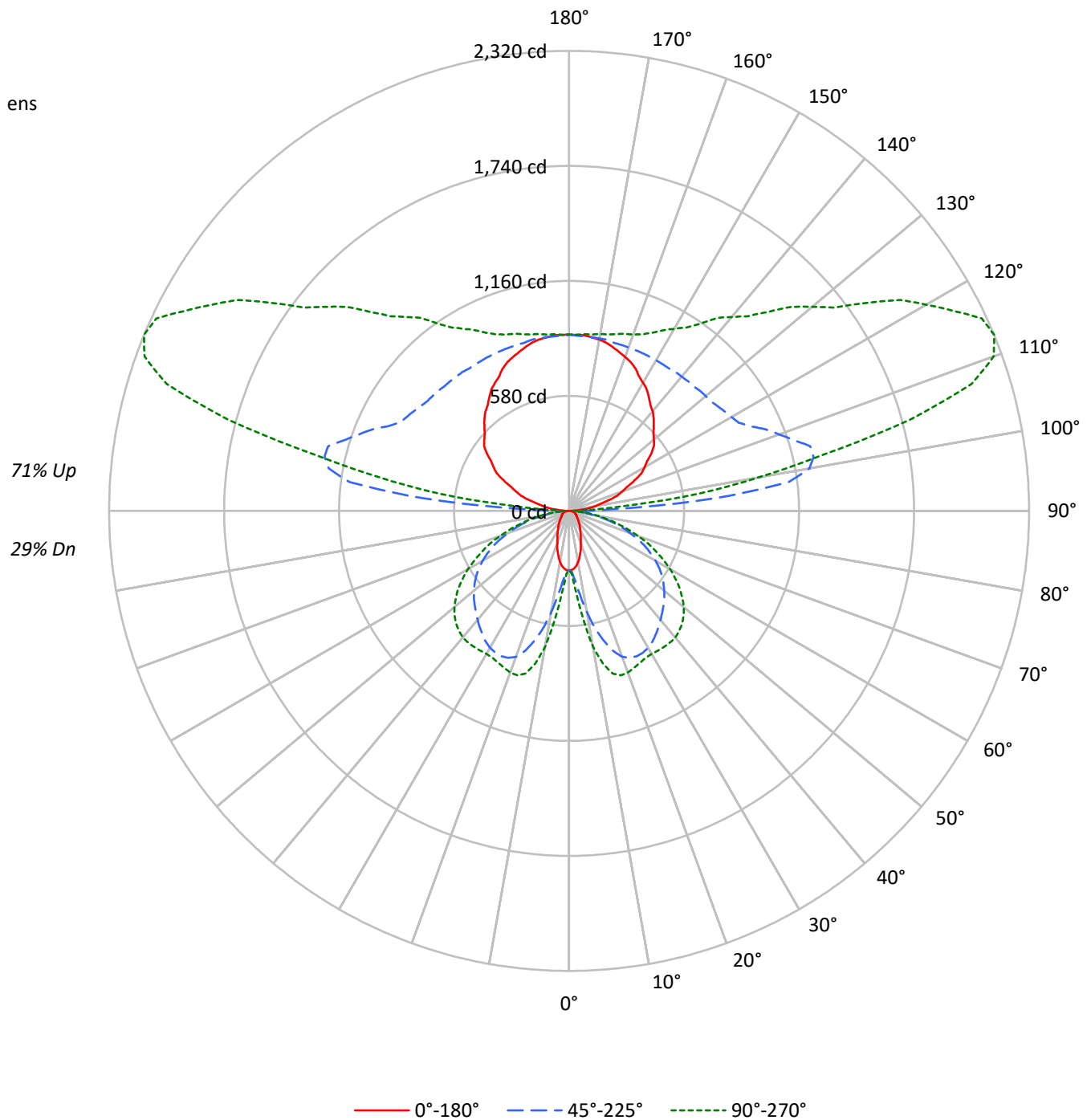
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8078.2 lumens
Efficiency: N/A
Efficacy: 130.7 lumens/watt
Spacing Criteria (0/90/45): 0.71 / 2.69 / 2.33
Luminous Opening: Rectangular w/ Sides (W: 0.29' x L: 6' x H: 0.1')
CIE Type: Semi-Indirect

Input Watts (W): 61.8
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

TEST NUMBER: P937411
CATALOG NUMBER: SQ4-FB-100U-050D-830-1D-UNV-STD-W-6

Luminous Intensity Polar Plot





TEST NUMBER: P937411

CATALOG NUMBER: SQ4-FB-100U-050D-830-1D-UNV-STD-W-6

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1850	1850	1850
5°	1807	2137	2487
10°	1638	3115	4123
15°	1392	4069	4978
20°	1133	4715	5073
25°	945	4932	4971
30°	796	4962	4961
35°	704	4878	5089
40°	613	4770	5222
45°	554	4690	5242
50°	508	4618	5155
55°	487	4513	4927
60°	498	4314	4566
65°	516	4010	4069
70°	548	3495	3439
75°	608	2846	2684
80°	657	1972	1808
85°	578	1044	925

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 5242 cd/sqm



TEST NUMBER: P937411

CATALOG NUMBER: SQ4-FB-100U-050D-830-1D-UNV-STD-W-6

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	38.7	0.5
10°-20°	171.5	2.1
20°-30°	299.9	3.7
30°-40°	386.1	4.8
40°-50°	431.2	5.3
50°-60°	413.0	5.1
60°-70°	327.3	4.1
70°-80°	192.5	2.4
80°-90°	56.9	0.7
90°-100°	433.2	5.4
100°-110°	1138.9	14.1
110°-120°	1180.9	14.6
120°-130°	947.3	11.7
130°-140°	743.3	9.2
140°-150°	570.5	7.1
150°-160°	410.8	5.1
160°-170°	251.4	3.1
170°-180°	84.9	1.1
0°-30°	510.0	6.3
0°-40°	896.1	11.1
0°-60°	1740.3	21.5
0°-90°	2316.9	28.7
90°-120°	2753.1	34.1
90°-150°	5014.1	62.1
90°-180°	5761.0	71.3
0°-180°	8078.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	299	299	299	299	299	
5°	291	312	352	398	412	27
15°	218	403	679	823	849	61
25°	140	457	809	844	845	64
35°	94	437	762	805	837	59
45°	64	348	673	771	806	50
55°	46	221	571	664	682	42
65°	36	117	424	477	484	36
75°	27	72	233	256	257	28
85°	10	22	58	64	64	10
90°	6	17	45	23	23	6
95°	57	224	746	385	262	64
105°	205	311	1259	1912	1783	218
115°	364	442	1009	2012	2296	360
125°	507	568	917	1550	1829	450
135°	604	665	889	1251	1419	467
145°	701	746	877	1068	1151	439
155°	792	814	877	963	991	364
165°	855	866	877	912	923	241
175°	889	889	883	895	895	84
180°	889	889	889	889	889	



TEST NUMBER: P937411

CATALOG NUMBER: SQ4-FB-100U-050D-830-1D-UNV-STD-W-6

CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	299.0	299.0	299.0	299.0	299.0	299.0	299.0	299.0	299.0	299.0	299.0
2.5°	299.0	299.0	300.9	301.9	303.9	304.9	306.8	308.7	314.4	315.4	317.3
5°	291.4	295.2	307.7	312.5	326.0	344.3	351.9	364.4	390.4	398.1	403.0
7.5°	279.8	288.5	319.2	327.0	360.6	408.7	428.9	455.8	497.1	517.4	533.7
10°	261.6	279.8	334.6	353.0	407.7	480.8	518.3	555.8	618.3	646.2	656.8
12.5°	241.4	271.2	350.9	376.0	454.9	561.6	606.8	648.2	719.3	756.8	762.5
15°	218.3	258.7	366.3	403.0	504.9	628.9	678.9	729.9	796.3	823.1	829.9
17.5°	198.1	249.0	380.8	419.3	543.3	689.5	740.4	782.8	836.6	854.9	859.6
20°	173.1	233.6	390.4	440.4	583.7	733.7	782.8	815.5	852.0	863.6	865.5
22.5°	154.8	217.3	396.2	448.1	610.6	760.6	802.0	827.9	852.9	856.8	857.7
25°	139.5	199.0	395.2	456.8	633.7	776.9	808.7	827.9	842.3	844.2	844.2
27.5°	125.0	178.9	391.4	458.7	651.0	780.9	805.8	819.3	826.0	829.9	829.9
30°	112.5	159.7	381.7	454.9	658.7	776.9	797.2	803.9	810.6	816.4	819.3
32.5°	102.9	141.4	367.3	447.1	659.6	767.4	781.8	785.6	795.2	808.7	813.6
35°	94.3	123.1	350.9	436.6	653.9	752.0	761.5	765.5	784.7	804.9	811.5
37.5°	85.6	109.7	329.8	418.3	645.2	733.7	740.4	747.2	776.9	801.0	808.7
40°	77.0	98.1	304.9	398.1	631.8	711.6	717.4	727.9	767.4	795.2	802.9
42.5°	70.2	88.4	277.9	377.0	614.4	686.6	695.2	710.6	755.8	785.6	794.2
45°	64.4	78.9	249.0	348.1	592.3	660.6	673.1	694.2	742.3	771.2	778.9
47.5°	58.7	72.1	219.2	318.3	568.3	634.7	651.0	675.0	724.1	752.0	758.7
50°	53.8	65.4	189.5	286.5	542.3	606.8	626.0	651.0	701.0	726.9	735.6
52.5°	50.0	59.7	161.6	254.9	512.5	577.9	600.1	626.0	673.1	698.2	703.9
55°	46.2	54.8	137.5	221.1	481.7	547.1	571.2	596.2	642.3	663.5	667.4
57.5°	44.3	51.0	117.3	189.5	449.0	512.5	539.5	562.5	605.8	622.2	626.0
60°	41.4	48.1	101.9	162.5	413.5	479.8	503.0	526.0	562.5	576.0	578.9
62.5°	38.4	46.2	90.4	136.5	377.0	441.4	464.4	485.6	516.3	526.0	529.8
65°	36.5	44.3	81.7	117.3	339.5	400.9	424.1	442.3	467.3	476.9	478.9
67.5°	34.6	42.4	75.0	101.0	301.9	360.6	377.9	395.2	414.4	424.1	425.0
70°	31.7	40.3	69.2	89.4	263.5	314.4	328.9	347.1	362.5	367.3	370.3
72.5°	29.8	37.5	65.4	80.8	224.1	270.2	283.6	294.3	307.7	312.5	312.5
75°	27.0	33.7	61.6	72.1	183.6	221.1	232.7	243.3	253.8	255.8	252.9
77.5°	24.0	29.8	52.9	60.6	143.3	175.0	184.6	190.4	199.0	201.0	201.9
80°	20.2	26.0	41.4	47.1	103.8	128.9	135.6	140.4	148.1	148.1	150.0
82.5°	15.4	20.2	29.8	33.7	70.2	88.4	94.3	97.1	101.9	101.9	101.9
85°	9.7	12.5	19.2	22.1	42.4	53.8	57.7	58.7	62.5	63.5	63.5
87.5°	4.8	6.7	12.5	13.5	22.1	27.9	27.9	29.8	29.8	28.9	27.9
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°	23.9	64.4	105.0	115.1	161.9	224.1	255.3	223.7	160.6	113.3	108.8
95°	57.3	131.4	205.7	224.3	398.3	630.2	746.2	665.9	505.2	384.7	371.0
97.5°	99.0	164.5	230.0	246.4	536.4	923.2	1116.6	1065.8	964.3	888.1	862.1
100°	131.3	190.6	250.0	264.8	586.7	1015.8	1230.5	1234.2	1241.7	1247.2	1216.2
102.5°	158.7	214.1	269.5	283.4	609.8	1045.1	1262.7	1327.4	1456.8	1553.8	1527.3
105°	205.2	252.1	299.0	310.8	626.9	1048.4	1259.1	1404.2	1694.1	1911.6	1897.4
107.5°	252.9	296.6	340.4	351.3	630.1	1001.7	1187.5	1389.8	1794.3	2097.8	2101.2
110°	285.1	324.6	364.1	374.0	625.3	960.4	1127.9	1354.0	1806.3	2145.5	2160.3



TEST NUMBER: P937411

CATALOG NUMBER: SQ4-FB-100U-050D-830-1D-UNV-STD-W-6

CANDELA DISTRIBUTION (continued):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
112.5°	316.7	354.4	392.1	401.4	625.5	924.3	1073.6	1305.0	1767.9	2115.1	2137.8
115°	364.4	399.1	433.8	442.5	631.2	882.8	1008.6	1231.5	1677.5	2011.9	2043.5
117.5°	411.6	443.1	474.7	482.5	642.9	856.9	963.8	1165.1	1567.5	1869.3	1904.4
120°	439.0	468.7	498.4	505.8	652.6	848.2	946.0	1129.8	1497.5	1773.3	1807.3
122.5°	465.9	495.8	525.8	533.3	666.2	843.6	932.3	1097.9	1428.9	1677.2	1710.9
125°	507.0	534.3	561.6	568.4	684.8	839.8	917.4	1058.0	1339.3	1550.2	1581.2
127.5°	540.4	568.0	595.6	602.5	703.2	837.6	904.9	1025.6	1267.1	1448.2	1474.3
130°	558.3	588.0	617.7	625.1	716.8	839.0	900.1	1007.5	1222.5	1383.8	1407.9
132.5°	576.8	606.5	636.1	643.6	727.7	839.8	895.9	992.1	1184.6	1328.9	1350.5
135°	604.2	631.2	658.3	665.1	739.7	839.0	888.7	969.3	1130.5	1251.4	1270.0
137.5°	632.2	659.0	685.8	692.5	757.5	844.2	887.6	955.7	1091.9	1194.1	1209.3
140°	655.5	680.2	704.9	711.0	768.4	845.0	883.3	942.2	1059.9	1148.2	1162.4
142.5°	673.4	696.3	719.0	724.7	777.6	848.1	883.3	935.1	1038.4	1115.9	1128.2
145°	700.8	720.7	740.6	745.6	789.6	848.2	877.4	919.7	1004.3	1067.7	1076.9
147.5°	728.3	747.6	766.9	771.8	807.0	853.9	877.4	910.7	977.2	1027.1	1034.8
150°	746.2	763.7	781.1	785.5	816.1	857.0	877.4	905.5	961.6	1003.8	1010.0
152.5°	764.7	778.0	791.2	794.5	822.2	859.0	877.4	901.4	949.4	985.3	990.0
155°	792.1	801.9	811.6	814.1	835.3	863.4	877.4	896.5	934.7	963.3	966.4
157.5°	812.4	822.0	831.4	833.8	848.4	867.8	877.4	892.2	922.0	944.2	946.4
160°	826.1	833.5	841.0	842.8	854.4	869.8	877.4	890.1	915.6	934.7	935.9
162.5°	839.8	845.4	850.9	852.4	860.7	871.9	877.4	888.1	909.6	925.7	926.8
165°	854.8	859.7	864.8	866.0	869.9	874.9	877.4	885.1	900.5	912.0	913.3
167.5°	868.4	870.8	873.2	873.8	876.9	881.2	883.3	888.4	898.4	906.0	906.6
170°	877.4	879.8	882.2	882.8	883.0	883.2	883.3	888.4	898.4	906.0	906.0
172.5°	882.2	882.7	883.2	883.3	883.3	883.3	883.3	887.4	895.3	901.2	900.7
175°	888.7	888.7	888.7	888.7	886.9	884.5	883.3	885.8	890.9	894.7	894.7
177.5°	888.7	888.7	888.7	888.7	887.4	885.5	884.6	886.6	890.5	893.5	892.9
180°	888.7	888.7	888.7	888.7	888.7	888.7	888.7	888.7	888.7	888.7	888.7



TEST NUMBER: P937411

CATALOG NUMBER: SQ4-FB-100U-050D-830-1D-UNV-STD-W-6

CANDELA DISTRIBUTION (continued):

	80°	90°
0°	299.0	299.0
2.5°	319.2	317.3
5°	410.6	412.5
7.5°	553.0	552.0
10°	687.6	696.2
12.5°	785.6	787.6
15°	845.3	849.1
17.5°	868.3	869.3
20°	869.3	867.4
22.5°	858.7	856.8
25°	846.3	845.3
27.5°	834.7	835.6
30°	829.9	832.8
32.5°	829.9	834.7
35°	831.8	836.6
37.5°	830.9	836.6
40°	826.9	833.7
42.5°	816.4	821.2
45°	800.1	805.8
47.5°	778.9	782.8
50°	752.0	755.8
52.5°	718.3	719.3
55°	677.9	681.8
57.5°	634.7	635.6
60°	586.6	589.5
62.5°	535.6	535.6
65°	481.7	483.6
67.5°	426.0	430.8
70°	369.3	370.3
72.5°	313.5	313.5
75°	255.8	256.8
77.5°	201.0	201.0
80°	149.0	150.0
82.5°	102.9	104.8
85°	64.4	64.4
87.5°	29.8	27.0
90°	22.7	22.7
92.5°	90.7	72.8
95°	316.4	261.8
97.5°	758.2	654.3
100°	1092.4	968.6
102.5°	1421.2	1315.2
105°	1840.4	1783.4
107.5°	2115.1	2128.8
110°	2219.7	2279.1



TEST NUMBER: P937411

CATALOG NUMBER: SQ4-FB-100U-050D-830-1D-UNV-STD-W-6

CANDELA DISTRIBUTION (continued):

	80°	90°
112.5°	2229.0	2320.2
115°	2169.9	2296.4
117.5°	2044.6	2184.8
120°	1943.6	2079.9
122.5°	1845.3	1979.7
125°	1704.9	1828.7
127.5°	1578.8	1683.2
130°	1504.5	1600.9
132.5°	1437.0	1523.4
135°	1344.5	1419.0
137.5°	1270.3	1331.3
140°	1219.5	1276.5
142.5°	1177.3	1226.4
145°	1114.1	1151.2
147.5°	1065.6	1096.3
150°	1035.0	1059.9
152.5°	1008.9	1027.7
155°	978.8	991.3
157.5°	955.1	963.8
160°	941.0	946.0
162.5°	931.6	936.4
165°	918.3	923.3
167.5°	908.7	910.8
170°	906.0	906.0
172.5°	898.9	897.1
175°	894.7	894.7
177.5°	890.8	888.7
180°	888.7	888.7



TEST NUMBER: P937411
 CATALOG NUMBER: SQ4-FB-100U-050D-830-1D-UNV-STD-W-6

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	0.76	1.48	1.88	2.59	4.14	13.93	14.65	15.05	15.76	17.30
	3H	1.46	2.10	2.58	3.22	4.78	15.75	16.40	16.88	17.52	19.08
	4H	1.75	2.36	2.88	3.48	5.05	16.39	17.00	17.52	18.12	19.69
	6H	1.99	2.56	3.14	3.68	5.26	16.81	17.37	17.95	18.49	20.07
	8H	2.06	2.59	3.20	3.73	5.30	16.92	17.46	18.07	18.60	20.17
	12H	2.07	2.58	3.22	3.71	5.31	16.98	17.49	18.13	18.62	20.22
4H	2H	7.95	8.56	9.09	9.69	11.25	14.19	14.80	15.33	15.92	17.49
	3H	9.51	10.02	10.66	11.17	12.75	16.21	16.72	17.36	17.87	19.45
	4H	9.60	10.07	10.75	11.20	12.80	16.97	17.44	18.12	18.58	20.18
	6H	9.60	10.00	10.76	11.16	12.75	17.50	17.90	18.65	19.06	20.65
	8H	9.57	9.95	10.73	11.10	12.71	17.65	18.03	18.81	19.18	20.79
	12H	9.52	9.86	10.69	11.03	12.64	17.74	18.08	18.91	19.24	20.85
8H	4H	11.03	11.40	12.18	12.55	14.16	17.02	17.40	18.17	18.55	20.15
	6H	11.26	11.57	12.44	12.77	14.37	17.64	17.95	18.81	19.14	20.74
	8H	11.28	11.55	12.46	12.72	14.34	17.85	18.12	19.03	19.30	20.92
	12H	11.24	11.48	12.42	12.65	14.30	17.99	18.22	19.17	19.39	21.05
12H	4H	11.16	11.50	12.33	12.67	14.28	16.96	17.31	18.14	18.47	20.08
	6H	11.52	11.79	12.70	12.96	14.58	17.62	17.89	18.80	19.06	20.68
	8H	11.58	11.82	12.76	12.99	14.64	17.84	18.08	19.02	19.25	20.90