

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: P937503

Luminaire Tested: SQ4-FB-100U-050D-B40-1D-UNV-STD-W-6

Issue Date: 12/17/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P937503  
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-B40-1D-UNV-STD-W-6  
Description: CORELITE SQ4 SUSPENDED INDIRECT LED LUMINAIRE WITH Batwing Frosted Continuous Roll L  
Light Source: -  
Ballast/Driver: -

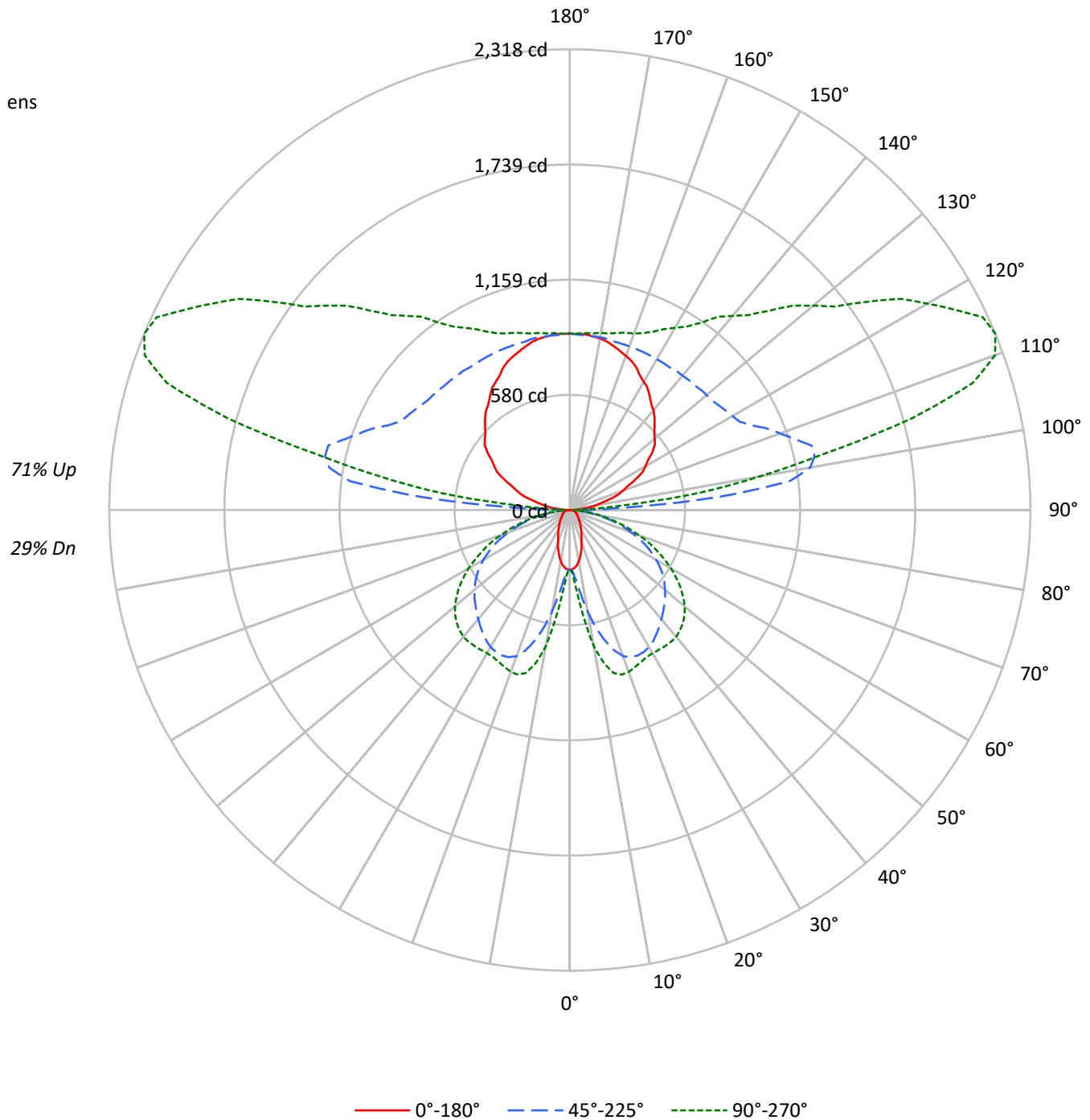
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8069.7 lumens  
Efficiency: N/A  
Efficacy: 130.6 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 (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				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°	1848	1848	1848
5°	1805	2135	2484
10°	1637	3112	4118
15°	1390	4064	4973
20°	1132	4710	5068
25°	943	4927	4965
30°	795	4957	4956
35°	703	4873	5084
40°	612	4765	5217
45°	554	4685	5237
50°	508	4613	5150
55°	486	4508	4922
60°	498	4308	4562
65°	516	4005	4065
70°	548	3490	3436
75°	605	2843	2681
80°	657	1969	1806
85°	572	1044	925

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 5237 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	38.6	0.5
10°-20°	171.3	2.1
20°-30°	299.6	3.7
30°-40°	385.6	4.8
40°-50°	430.7	5.3
50°-60°	412.6	5.1
60°-70°	327.0	4.1
70°-80°	192.3	2.4
80°-90°	56.8	0.7
90°-100°	432.8	5.4
100°-110°	1137.7	14.1
110°-120°	1179.7	14.6
120°-130°	946.3	11.7
130°-140°	742.5	9.2
140°-150°	569.9	7.1
150°-160°	410.4	5.1
160°-170°	251.1	3.1
170°-180°	84.8	1.1
0°-30°	509.5	6.3
0°-40°	895.1	11.1
0°-60°	1738.5	21.5
0°-90°	2314.5	28.7
90°-120°	2750.2	34.1
90°-150°	5008.9	62.1
90°-180°	5755.0	71.3
0°-180°	8069.7	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	402	678	822	848	61
25°	139	456	808	843	844	64
35°	94	436	761	804	836	59
45°	64	348	672	770	805	50
55°	46	221	571	663	681	42
65°	36	117	424	476	483	36
75°	27	72	232	256	256	28
85°	10	22	58	63	64	10
90°	6	17	45	23	23	6
95°	57	224	745	384	262	64
105°	205	310	1258	1910	1782	217
115°	364	442	1008	2010	2294	360
125°	506	568	916	1549	1827	450
135°	604	664	888	1250	1418	467
145°	700	745	876	1066	1150	439
155°	791	813	876	962	990	364
165°	854	865	876	911	922	241
175°	888	888	882	894	894	84
180°	888	888	888	888	888	



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**CANDELA DISTRIBUTION (FULL):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	298.7	298.7	298.7	298.7	298.7	298.7	298.7	298.7	298.7	298.7	298.7
2.5°	298.7	298.7	300.6	301.6	303.6	304.5	306.5	308.4	314.1	315.1	317.0
5°	291.1	294.9	307.4	312.2	325.7	343.9	351.5	364.0	390.0	397.7	402.5
7.5°	279.5	288.2	318.9	326.6	360.2	408.3	428.4	455.3	496.6	516.8	533.2
10°	261.3	279.5	334.2	352.6	407.3	480.3	517.8	555.2	617.7	645.5	656.1
12.5°	241.1	270.9	350.6	375.6	454.4	561.0	606.1	647.5	718.5	756.0	761.7
15°	218.0	258.4	366.0	402.5	504.3	628.2	678.1	729.1	795.4	822.3	829.0
17.5°	197.9	248.8	380.4	418.9	542.7	688.7	739.6	782.0	835.7	854.0	858.7
20°	173.0	233.4	390.0	440.0	583.1	733.0	782.0	814.6	851.1	862.7	864.6
22.5°	154.6	217.1	395.8	447.6	610.0	759.8	801.1	827.0	852.1	855.9	856.8
25°	139.3	198.8	394.8	456.3	633.1	776.1	807.8	827.0	841.5	843.4	843.4
27.5°	124.9	178.7	391.0	458.2	650.4	780.0	805.0	818.4	825.1	829.0	829.0
30°	112.4	159.5	381.3	454.4	658.0	776.1	796.4	803.1	809.7	815.6	818.4
32.5°	102.8	141.2	366.9	446.7	658.9	766.6	781.0	784.8	794.4	807.8	812.7
35°	94.2	123.0	350.6	436.1	653.2	751.2	760.8	764.7	783.9	804.0	810.7
37.5°	85.5	109.5	329.5	417.9	644.5	733.0	739.6	746.4	776.1	800.2	807.8
40°	76.9	98.0	304.5	397.7	631.2	710.8	716.6	727.1	766.6	794.4	802.1
42.5°	70.1	88.3	277.6	376.6	613.8	685.9	694.5	709.9	755.0	784.8	793.4
45°	64.4	78.8	248.8	347.7	591.7	659.9	672.4	693.5	741.6	770.4	778.0
47.5°	58.6	72.0	219.0	317.9	567.7	634.0	650.4	674.3	723.3	751.2	757.9
50°	53.8	65.3	189.3	286.2	541.8	606.1	625.3	650.4	700.3	726.2	734.9
52.5°	49.9	59.6	161.4	254.6	512.0	577.3	599.5	625.3	672.4	697.4	703.2
55°	46.1	54.7	137.3	220.9	481.2	546.5	570.6	595.5	641.7	662.8	666.7
57.5°	44.2	50.9	117.2	189.3	448.6	512.0	538.9	561.9	605.2	621.5	625.3
60°	41.4	48.0	101.8	162.4	413.0	479.3	502.4	525.4	561.9	575.4	578.3
62.5°	38.4	46.1	90.3	136.4	376.6	440.9	463.9	485.1	515.8	525.4	529.3
65°	36.5	44.2	81.7	117.2	339.1	400.5	423.6	441.9	466.8	476.4	478.4
67.5°	34.6	42.3	75.0	100.8	301.6	360.2	377.5	394.8	414.0	423.6	424.6
70°	31.7	40.3	69.1	89.3	263.2	314.1	328.5	346.8	362.1	366.9	369.9
72.5°	29.8	37.4	65.3	80.7	223.9	269.9	283.3	293.9	307.4	312.2	312.2
75°	26.9	33.6	61.5	72.0	183.5	220.9	232.4	243.0	253.6	255.6	252.6
77.5°	24.0	29.8	52.8	60.5	143.2	174.9	184.4	190.2	198.8	200.7	201.7
80°	20.2	26.0	41.4	47.1	103.7	128.7	135.4	140.3	147.9	147.9	149.8
82.5°	15.4	20.2	29.8	33.6	70.1	88.3	94.2	97.0	101.8	101.8	101.8
85°	9.6	12.5	19.2	22.1	42.3	53.8	57.7	58.6	62.5	63.4	63.4
87.5°	4.8	6.7	12.5	13.5	22.1	27.9	27.9	29.8	29.8	28.8	27.9
90°	5.9	10.7	15.5	16.7	26.3	39.0	45.3	40.2	30.2	22.6	22.6
92.5°	23.9	64.4	104.9	115.0	161.7	223.9	255.0	223.5	160.4	113.2	108.7
95°	57.2	131.3	205.5	224.0	397.9	629.5	745.4	665.2	504.6	384.3	370.6
97.5°	98.9	164.4	229.8	246.1	535.9	922.2	1115.4	1064.7	963.3	887.2	861.2
100°	131.1	190.4	249.7	264.5	586.1	1014.8	1229.2	1232.9	1240.4	1245.9	1215.0
102.5°	158.5	213.9	269.2	283.1	609.2	1044.0	1261.4	1326.0	1455.2	1552.2	1525.7
105°	204.9	251.8	298.7	310.5	626.3	1047.3	1257.8	1402.7	1692.4	1909.6	1895.4
107.5°	252.6	296.3	340.1	351.0	629.4	1000.6	1186.3	1388.4	1792.4	2095.6	2099.0
110°	284.8	324.2	363.8	373.6	624.7	959.4	1126.7	1352.6	1804.4	2143.2	2158.0



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
112.5°	316.4	354.0	391.6	401.0	624.9	923.3	1072.5	1303.7	1766.1	2112.8	2135.6
115°	364.0	398.7	433.4	442.1	630.6	881.8	1007.5	1230.2	1675.7	2009.8	2041.4
117.5°	411.1	442.6	474.2	482.0	642.2	856.0	962.8	1163.9	1565.8	1867.3	1902.4
120°	438.5	468.2	497.8	505.3	651.9	847.3	945.0	1128.6	1495.9	1771.4	1805.4
122.5°	465.4	495.3	525.2	532.7	665.5	842.7	931.3	1096.7	1427.4	1675.5	1709.1
125°	506.4	533.7	561.1	567.8	684.1	839.0	916.4	1056.9	1337.9	1548.6	1579.6
127.5°	539.9	567.4	595.0	601.8	702.5	836.8	903.9	1024.5	1265.8	1446.7	1472.8
130°	557.7	587.4	617.0	624.5	716.1	838.1	899.1	1006.5	1221.3	1382.4	1406.4
132.5°	576.2	605.9	635.5	642.9	726.9	839.0	894.9	991.1	1183.3	1327.5	1349.1
135°	603.6	630.6	657.6	664.4	738.9	838.1	887.8	968.3	1129.3	1250.1	1268.7
137.5°	631.5	658.3	685.1	691.8	756.7	843.4	886.6	954.7	1090.8	1192.9	1208.1
140°	654.8	679.5	704.1	710.2	767.6	844.1	882.4	941.2	1058.8	1147.0	1161.2
142.5°	672.7	695.5	718.3	724.0	776.8	847.2	882.4	934.1	1037.3	1114.8	1127.0
145°	700.1	720.0	739.8	744.8	788.7	847.3	876.5	918.7	1003.2	1066.5	1075.8
147.5°	727.5	746.8	766.1	771.0	806.1	853.0	876.5	909.7	976.2	1026.1	1033.7
150°	745.4	762.9	780.3	784.7	815.3	856.1	876.5	904.6	960.6	1002.8	1009.0
152.5°	763.9	777.2	790.4	793.7	821.3	858.1	876.5	900.5	948.4	984.3	989.0
155°	791.3	801.1	810.8	813.3	834.4	862.5	876.5	895.6	933.7	962.3	965.4
157.5°	811.6	821.1	830.6	833.0	847.5	866.9	876.5	891.3	921.0	943.3	945.4
160°	825.2	832.7	840.1	841.9	853.5	868.9	876.5	889.2	914.6	933.7	934.9
162.5°	839.0	844.5	850.0	851.5	859.8	871.0	876.5	887.2	908.7	924.7	925.9
165°	853.9	858.8	863.9	865.1	869.0	874.0	876.5	884.1	899.5	911.1	912.3
167.5°	867.5	869.9	872.3	872.9	876.0	880.3	882.4	887.5	897.5	905.1	905.6
170°	876.5	878.9	881.3	881.8	882.0	882.3	882.4	887.5	897.5	905.1	905.1
172.5°	881.3	881.8	882.3	882.4	882.4	882.4	882.4	886.4	894.4	900.3	899.8
175°	887.8	887.8	887.8	887.8	886.0	883.6	882.4	884.9	890.0	893.8	893.8
177.5°	887.8	887.8	887.8	887.8	886.4	884.6	883.7	885.7	889.6	892.5	892.0
180°	887.8	887.8	887.8	887.8	887.8	887.8	887.8	887.8	887.8	887.8	887.8



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**CANDELA DISTRIBUTION (continued):**

	80°	90°
0°	298.7	298.7
2.5°	318.9	317.0
5°	410.2	412.1
7.5°	552.4	551.4
10°	686.8	695.4
12.5°	784.8	786.7
15°	844.4	848.2
17.5°	867.4	868.4
20°	868.4	866.5
22.5°	857.8	855.9
25°	845.4	844.4
27.5°	833.8	834.8
30°	829.0	831.9
32.5°	829.0	833.8
35°	830.9	835.7
37.5°	830.0	835.7
40°	826.1	832.9
42.5°	815.6	820.3
45°	799.2	805.0
47.5°	778.0	782.0
50°	751.2	755.0
52.5°	717.6	718.5
55°	677.2	681.1
57.5°	634.0	635.0
60°	586.0	588.9
62.5°	535.1	535.1
65°	481.2	483.1
67.5°	425.5	430.3
70°	368.9	369.9
72.5°	313.1	313.1
75°	255.6	256.5
77.5°	200.7	200.7
80°	148.9	149.8
82.5°	102.8	104.7
85°	64.4	64.4
87.5°	29.8	26.9
90°	22.6	22.6
92.5°	90.6	72.7
95°	316.1	261.6
97.5°	757.4	653.6
100°	1091.3	967.6
102.5°	1419.7	1313.8
105°	1838.5	1781.6
107.5°	2112.8	2126.6
110°	2217.4	2276.7





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**CANDELA DISTRIBUTION (continued):**

	80°	90°
112.5°	2226.7	2317.8
115°	2167.7	2294.0
117.5°	2042.5	2182.6
120°	1941.6	2077.7
122.5°	1843.3	1977.6
125°	1703.1	1826.8
127.5°	1577.2	1681.5
130°	1502.9	1599.2
132.5°	1435.5	1521.8
135°	1343.1	1417.5
137.5°	1269.0	1329.9
140°	1218.2	1275.1
142.5°	1176.1	1225.1
145°	1113.0	1150.0
147.5°	1064.4	1095.2
150°	1033.9	1058.8
152.5°	1007.8	1026.6
155°	977.8	990.2
157.5°	954.1	962.8
160°	940.0	945.0
162.5°	930.6	935.4
165°	917.4	922.3
167.5°	907.7	909.8
170°	905.1	905.1
172.5°	898.0	896.2
175°	893.8	893.8
177.5°	889.9	887.8
180°	887.8	887.8



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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	0.76	1.48	1.88	2.59	4.14	13.93	14.64	15.04	15.76	17.30
	3H	1.46	2.10	2.58	3.22	4.78	15.75	16.39	16.87	17.51	19.07
	4H	1.75	2.36	2.88	3.48	5.05	16.38	16.99	17.52	18.12	19.68
	6H	1.99	2.55	3.13	3.68	5.25	16.80	17.36	17.94	18.49	20.07
	8H	2.05	2.59	3.20	3.73	5.30	16.92	17.45	18.06	18.59	20.16
	12H	2.07	2.58	3.22	3.71	5.30	16.98	17.49	18.13	18.62	20.21
4H	2H	7.95	8.56	9.09	9.68	11.25	14.18	14.79	15.32	15.92	17.48
	3H	9.50	10.02	10.65	11.16	12.74	16.21	16.72	17.36	17.87	19.45
	4H	9.59	10.06	10.74	11.20	12.80	16.97	17.44	18.12	18.57	20.17
	6H	9.60	10.00	10.75	11.16	12.75	17.49	17.90	18.65	19.06	20.64
	8H	9.57	9.95	10.72	11.10	12.70	17.65	18.03	18.80	19.18	20.78
	12H	9.52	9.86	10.69	11.02	12.63	17.73	18.07	18.90	19.24	20.85
8H	4H	11.02	11.40	12.18	12.55	14.15	17.01	17.39	18.17	18.54	20.15
	6H	11.26	11.57	12.43	12.76	14.36	17.63	17.94	18.81	19.14	20.74
	8H	11.27	11.54	12.45	12.72	14.34	17.85	18.12	19.03	19.29	20.91
	12H	11.23	11.47	12.42	12.64	14.30	17.98	18.22	19.17	19.39	21.05
12H	4H	11.16	11.50	12.33	12.66	14.27	16.96	17.30	18.13	18.46	20.08
	6H	11.51	11.78	12.69	12.96	14.58	17.61	17.89	18.80	19.06	20.68
	8H	11.57	11.81	12.76	12.98	14.64	17.83	18.07	19.02	19.24	20.90