

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: P937502

Luminaire Tested: SQ4-FB-100U-050D-B40-1D-UNV-STD-W-4

Issue Date: 12/17/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P937502  
REPORT IS A COMBINATION OF REPORTS P933565 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-4  
Description: CORELITE SQ4 SUSPENDED INDIRECT LED LUMINAIRE WITH Batwing Frosted Continuous Roll L  
Light Source: -  
Ballast/Driver: -

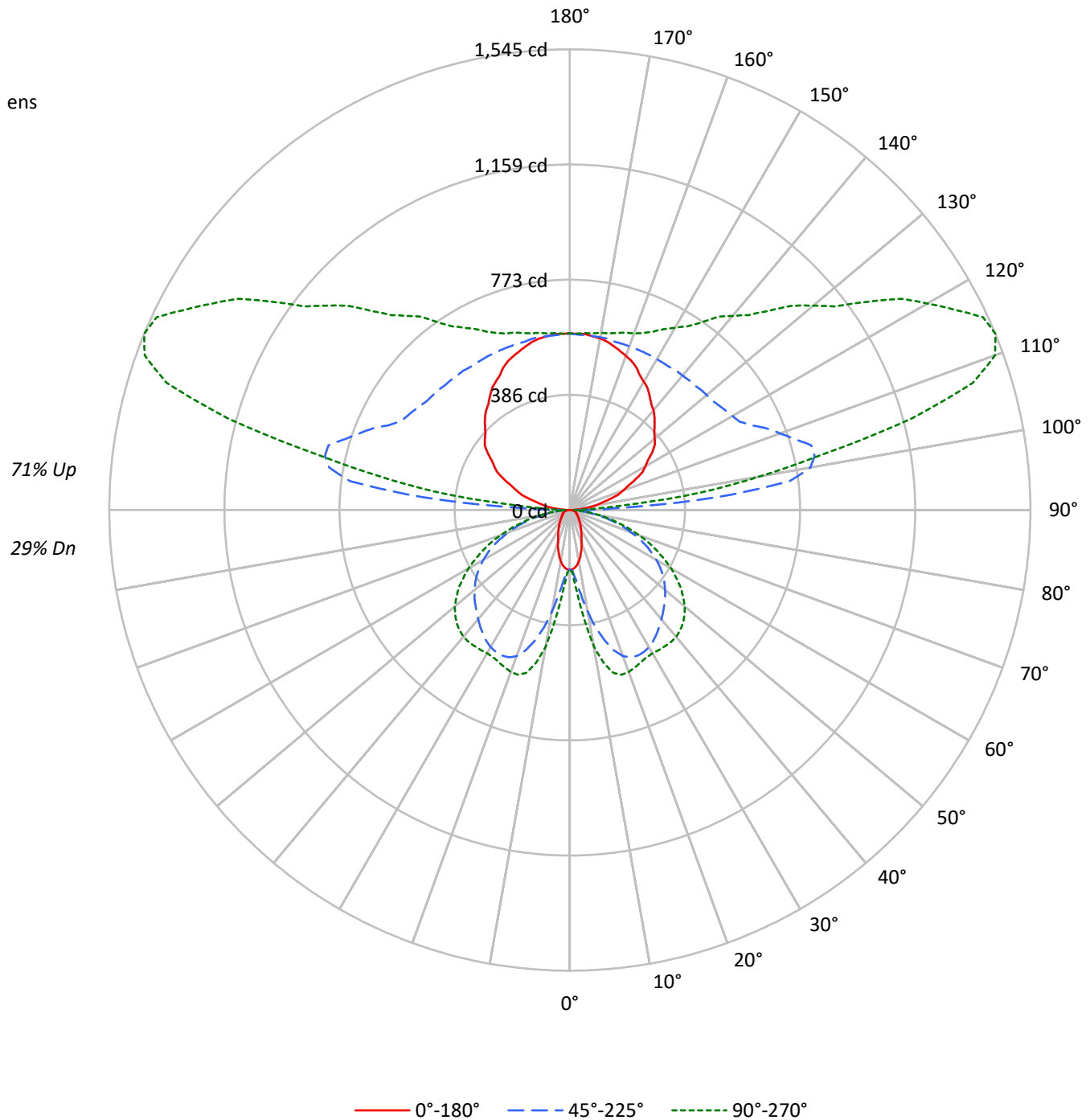
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5380.5 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: 4' x H: 0.1')  
CIE Type: Semi-Indirect

Input Watts (W): 41.2  
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

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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	2485
10°	1635	3110	4120
15°	1388	4061	4975
20°	1129	4702	5070
25°	940	4917	4968
30°	792	4944	4958
35°	698	4858	5085
40°	609	4748	5218
45°	549	4666	5239
50°	503	4589	5153
55°	481	4483	4923
60°	489	4280	4563
65°	508	3974	4067
70°	536	3459	3437
75°	590	2812	2681
80°	632	1943	1808
85°	530	1028	924

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 5239 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	25.8	0.5
10°-20°	114.2	2.1
20°-30°	199.8	3.7
30°-40°	257.2	4.8
40°-50°	287.3	5.3
50°-60°	275.2	5.1
60°-70°	218.1	4.1
70°-80°	128.2	2.4
80°-90°	37.9	0.7
90°-100°	288.5	5.4
100°-110°	758.5	14.1
110°-120°	786.5	14.6
120°-130°	630.8	11.7
130°-140°	495.0	9.2
140°-150°	379.9	7.1
150°-160°	273.6	5.1
160°-170°	167.4	3.1
170°-180°	56.6	1.1
0°-30°	339.8	6.3
0°-40°	597.0	11.1
0°-60°	1159.5	21.5
0°-90°	1543.6	28.7
90°-120°	1833.5	34.1
90°-150°	3339.2	62.1
90°-180°	3837.0	71.3
0°-180°	5380.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	199	199	199	199	199	
5°	194	208	234	265	275	18
15°	145	268	452	548	566	40
25°	93	304	539	562	563	43
35°	63	291	507	536	557	39
45°	43	232	448	514	537	33
55°	31	147	381	442	454	28
65°	24	78	282	318	322	24
75°	18	48	155	170	171	19
85°	6	15	38	42	43	7
90°	4	11	30	15	15	4
95°	38	149	497	256	174	42
105°	137	207	839	1273	1188	145
115°	243	295	672	1340	1529	240
125°	338	379	611	1032	1218	300
135°	402	443	592	833	945	311
145°	467	496	584	711	767	292
155°	528	542	584	642	660	242
165°	569	577	584	607	615	161
175°	592	592	588	596	596	56
180°	592	592	592	592	592	



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**CANDELA DISTRIBUTION (FULL):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	199.2	199.2	199.2	199.2	199.2	199.2	199.2	199.2	199.2	199.2	199.2
2.5°	199.2	199.2	200.5	201.1	202.5	203.1	204.4	205.6	209.5	210.1	211.4
5°	194.2	196.7	205.0	208.2	217.2	229.4	234.5	242.9	260.1	265.2	268.5
7.5°	186.4	192.2	212.7	217.8	240.3	272.3	285.7	303.7	331.2	344.7	355.5
10°	174.3	186.4	223.0	235.1	271.6	320.3	345.3	370.3	412.0	430.5	437.6
12.5°	160.8	180.7	233.9	250.5	303.0	374.2	404.3	431.9	479.2	504.2	508.1
15°	145.4	172.4	244.1	268.5	336.4	419.0	452.3	486.3	530.5	548.4	552.8
17.5°	132.0	166.0	253.7	279.3	361.9	459.4	493.4	521.5	557.3	569.6	572.7
20°	115.4	155.7	260.1	293.5	388.9	488.9	521.5	543.3	567.7	575.3	576.6
22.5°	103.1	144.8	264.0	298.5	406.8	506.7	534.3	551.6	568.2	570.8	571.5
25°	92.9	132.6	263.3	304.4	422.2	517.6	538.8	551.6	561.3	562.5	562.5
27.5°	83.3	119.2	260.7	305.6	433.8	520.2	536.9	545.9	550.4	552.8	552.8
30°	75.0	106.4	254.3	303.0	438.8	517.6	531.1	535.6	540.1	544.0	545.9
32.5°	68.6	94.2	244.8	297.9	439.5	511.2	520.9	523.4	529.8	538.8	542.0
35°	62.7	82.0	233.9	290.9	435.7	501.0	507.4	510.0	522.8	536.2	540.7
37.5°	57.0	73.1	219.7	278.7	429.8	488.9	493.4	497.8	517.6	533.7	538.8
40°	51.3	65.3	203.1	265.2	421.0	474.1	478.0	484.9	511.2	529.8	535.0
42.5°	46.8	58.9	185.2	251.2	409.4	457.4	463.2	473.5	503.6	523.4	529.2
45°	42.9	52.5	166.0	231.9	394.6	440.2	448.5	462.6	494.6	513.8	518.9
47.5°	39.1	48.0	146.1	212.1	378.7	422.9	433.8	449.7	482.5	501.0	505.5
50°	35.9	43.5	126.3	190.9	361.4	404.3	417.0	433.8	467.1	484.4	490.1
52.5°	33.3	39.7	107.6	169.8	341.5	385.1	399.8	417.0	448.5	465.1	469.0
55°	30.8	36.5	91.6	147.4	321.0	364.5	380.6	397.2	427.9	442.1	444.6
57.5°	29.5	34.0	78.1	126.3	299.2	341.5	359.4	374.7	403.6	414.5	417.0
60°	27.5	32.0	67.9	108.3	275.5	319.7	335.1	350.5	374.7	383.7	385.7
62.5°	25.6	30.8	60.3	91.0	251.2	294.0	309.4	323.6	344.0	350.5	353.0
65°	24.4	29.5	54.4	78.1	226.1	267.1	282.5	294.7	311.3	317.7	319.1
67.5°	23.1	28.2	49.9	67.2	201.1	240.3	251.7	263.3	276.1	282.5	283.2
70°	21.1	26.9	46.1	59.6	175.5	209.5	219.1	231.3	241.5	244.8	246.7
72.5°	19.9	25.0	43.5	53.9	149.3	180.0	189.0	196.1	205.0	208.2	208.2
75°	18.0	22.4	41.0	48.0	122.3	147.4	155.0	162.1	169.1	170.4	168.5
77.5°	16.0	19.9	35.2	40.4	95.5	116.6	123.0	126.8	132.6	133.9	134.6
80°	13.5	17.3	27.5	31.4	69.2	85.9	90.3	93.5	98.7	98.7	100.0
82.5°	10.2	13.5	19.9	22.4	46.8	58.9	62.7	64.7	67.9	67.9	67.9
85°	6.4	8.3	12.8	14.7	28.2	35.9	38.5	39.1	41.6	42.3	42.3
87.5°	3.2	4.5	8.3	9.0	14.7	18.6	18.6	19.9	19.9	19.2	18.6
90°	4.0	7.2	10.3	11.1	17.5	26.0	30.2	26.8	20.2	15.1	15.1
92.5°	15.9	42.9	69.9	76.7	107.8	149.3	170.0	149.0	107.0	75.4	72.5
95°	38.1	87.6	137.0	149.4	265.2	419.6	496.9	443.4	336.4	256.2	247.2
97.5°	65.9	109.5	153.2	164.1	357.3	614.8	743.6	709.8	642.1	591.4	574.1
100°	87.4	126.9	166.5	176.4	390.8	676.6	819.5	822.0	826.8	830.6	809.9
102.5°	105.6	142.6	179.4	188.7	406.2	696.0	841.0	884.0	970.2	1034.7	1017.1
105°	136.7	167.9	199.1	206.9	417.5	698.2	838.6	935.1	1128.2	1273.1	1263.7
107.5°	168.5	197.6	226.7	234.0	419.6	667.1	790.8	925.6	1195.0	1397.1	1399.4
110°	189.9	216.2	242.5	249.1	416.4	639.6	751.1	901.7	1202.9	1428.8	1438.7



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
112.5°	211.0	236.0	261.0	267.3	416.6	615.5	715.0	869.1	1177.3	1408.5	1423.7
115°	242.7	265.8	288.9	294.7	420.4	588.0	671.7	820.2	1117.2	1339.9	1360.9
117.5°	274.1	295.1	316.1	321.4	428.2	570.7	642.0	775.9	1043.9	1244.9	1268.2
120°	292.3	312.1	331.9	336.8	434.5	564.9	630.0	752.4	997.3	1181.0	1203.7
122.5°	310.3	330.2	350.2	355.2	443.7	561.8	620.8	731.1	951.6	1117.0	1139.3
125°	337.7	355.8	374.0	378.6	456.0	559.2	610.9	704.6	891.9	1032.4	1053.0
127.5°	359.8	378.2	396.6	401.2	468.3	557.8	602.6	683.0	843.8	964.5	981.8
130°	371.8	391.6	411.3	416.3	477.3	558.8	599.5	671.1	814.2	921.6	937.6
132.5°	384.1	403.9	423.6	428.6	484.6	559.2	596.6	660.7	788.8	885.0	899.4
135°	402.4	420.4	438.4	442.9	492.6	558.8	591.9	645.6	752.8	833.3	845.7
137.5°	421.1	438.9	456.7	461.2	504.4	562.2	591.0	636.4	727.1	795.2	805.4
140°	436.5	453.0	469.4	473.5	511.8	562.8	588.3	627.4	705.8	764.7	774.1
142.5°	448.5	463.7	478.8	482.7	517.9	564.8	588.3	622.7	691.5	743.2	751.4
145°	466.7	480.0	493.2	496.5	525.8	564.9	584.4	612.5	668.8	711.0	717.2
147.5°	485.0	497.9	510.7	514.0	537.5	568.7	584.4	606.5	650.8	684.1	689.2
150°	496.9	508.5	520.2	523.1	543.6	570.8	584.4	603.1	640.4	668.5	672.6
152.5°	509.2	518.0	526.9	529.1	547.5	572.0	584.4	600.3	632.2	656.2	659.3
155°	527.5	534.0	540.6	542.2	556.3	575.0	584.4	597.1	622.5	641.5	643.6
157.5°	541.0	547.4	553.7	555.3	565.0	577.9	584.4	594.2	614.0	628.8	630.2
160°	550.2	555.1	560.0	561.3	569.0	579.2	584.4	592.9	609.8	622.5	623.3
162.5°	559.2	563.0	566.7	567.7	573.2	580.6	584.4	591.5	605.8	616.5	617.2
165°	569.2	572.5	575.9	576.7	579.3	582.6	584.4	589.5	599.7	607.4	608.2
167.5°	578.3	580.0	581.6	582.0	584.1	586.8	588.3	591.6	598.3	603.4	603.8
170°	584.4	585.9	587.5	587.9	588.0	588.2	588.3	591.6	598.3	603.4	603.4
172.5°	587.5	587.9	588.2	588.3	588.3	588.3	588.3	591.0	596.2	600.2	599.9
175°	591.9	591.9	591.9	591.9	590.7	589.0	588.3	590.0	593.3	595.8	595.8
177.5°	591.9	591.9	591.9	591.9	591.0	589.7	589.0	590.4	593.1	595.1	594.7
180°	591.9	591.9	591.9	591.9	591.9	591.9	591.9	591.9	591.9	591.9	591.9



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**CANDELA DISTRIBUTION (continued):**

	80°	90°
0°	199.2	199.2
2.5°	212.7	211.4
5°	273.6	274.8
7.5°	368.3	367.8
10°	458.1	463.8
12.5°	523.4	524.7
15°	563.2	565.7
17.5°	578.5	579.2
20°	579.2	577.9
22.5°	572.1	570.8
25°	563.8	563.2
27.5°	556.1	556.8
30°	552.8	554.9
32.5°	552.8	556.1
35°	554.2	557.3
37.5°	553.5	557.3
40°	550.9	555.4
42.5°	544.0	547.1
45°	533.0	536.9
47.5°	518.9	521.5
50°	501.0	503.6
52.5°	478.6	479.2
55°	451.7	454.2
57.5°	422.9	423.4
60°	390.8	392.7
62.5°	356.9	356.9
65°	321.0	322.2
67.5°	283.8	287.0
70°	246.0	246.7
72.5°	208.9	208.9
75°	170.4	171.0
77.5°	133.9	133.9
80°	99.3	100.0
82.5°	68.6	69.8
85°	42.9	42.9
87.5°	19.9	18.0
90°	15.1	15.1
92.5°	60.5	48.4
95°	210.8	174.4
97.5°	504.9	435.8
100°	727.5	645.1
102.5°	946.5	875.9
105°	1225.6	1187.7
107.5°	1408.5	1417.7
110°	1478.2	1517.8





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**CANDELA DISTRIBUTION (continued):**

	80°	90°
112.5°	1484.5	1545.2
115°	1445.1	1529.3
117.5°	1361.6	1455.0
120°	1294.4	1385.1
122.5°	1228.9	1318.4
125°	1135.4	1217.9
127.5°	1051.5	1121.0
130°	1001.9	1066.2
132.5°	956.9	1014.5
135°	895.3	945.0
137.5°	846.0	886.6
140°	812.1	850.0
142.5°	784.1	816.7
145°	741.9	766.7
147.5°	709.7	730.1
150°	689.2	705.8
152.5°	671.8	684.4
155°	651.9	660.2
157.5°	636.1	642.0
160°	626.7	630.0
162.5°	620.5	623.6
165°	611.6	614.9
167.5°	605.1	606.5
170°	603.4	603.4
172.5°	598.7	597.4
175°	595.8	595.8
177.5°	593.3	591.9
180°	591.9	591.9



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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	0.75	1.47	1.87	2.58	4.12	13.89	14.61	15.01	15.72	17.27
	3H	1.45	2.09	2.57	3.21	4.77	15.71	16.35	16.83	17.47	19.03
	4H	1.74	2.35	2.87	3.47	5.04	16.33	16.94	17.47	18.07	19.63
	6H	1.98	2.54	3.12	3.67	5.25	16.74	17.31	17.89	18.43	20.01
	8H	2.05	2.58	3.19	3.72	5.29	16.85	17.39	18.00	18.53	20.10
	12H	2.06	2.57	3.21	3.70	5.29	16.91	17.42	18.06	18.55	20.15
4H	2H	7.93	8.54	9.07	9.66	11.22	14.15	14.76	15.29	15.88	17.45
	3H	9.48	9.99	10.63	11.14	12.72	16.17	16.68	17.31	17.83	19.40
	4H	9.57	10.04	10.72	11.18	12.78	16.92	17.39	18.07	18.52	20.12
	6H	9.57	9.98	10.73	11.14	12.72	17.44	17.84	18.59	19.00	20.59
	8H	9.55	9.92	10.70	11.07	12.68	17.59	17.96	18.74	19.12	20.72
	12H	9.50	9.84	10.67	11.00	12.61	17.66	18.01	18.84	19.17	20.78
8H	4H	10.99	11.37	12.15	12.52	14.13	16.97	17.34	18.12	18.49	20.10
	6H	11.23	11.54	12.40	12.73	14.33	17.58	17.89	18.75	19.08	20.68
	8H	11.24	11.52	12.43	12.69	14.31	17.79	18.06	18.97	19.23	20.85
	12H	11.21	11.44	12.39	12.61	14.27	17.91	18.15	19.10	19.32	20.98
12H	4H	11.13	11.47	12.30	12.63	14.24	16.91	17.25	18.08	18.42	20.03
	6H	11.48	11.75	12.66	12.93	14.55	17.56	17.83	18.74	19.00	20.62
	8H	11.54	11.78	12.73	12.95	14.61	17.77	18.01	18.96	19.18	20.84