

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: P936814

Luminaire Tested: SQ4-FB-050U-100D-835-1D-UNV-STD-W-4

Issue Date: 12/17/2024

**Test Information**

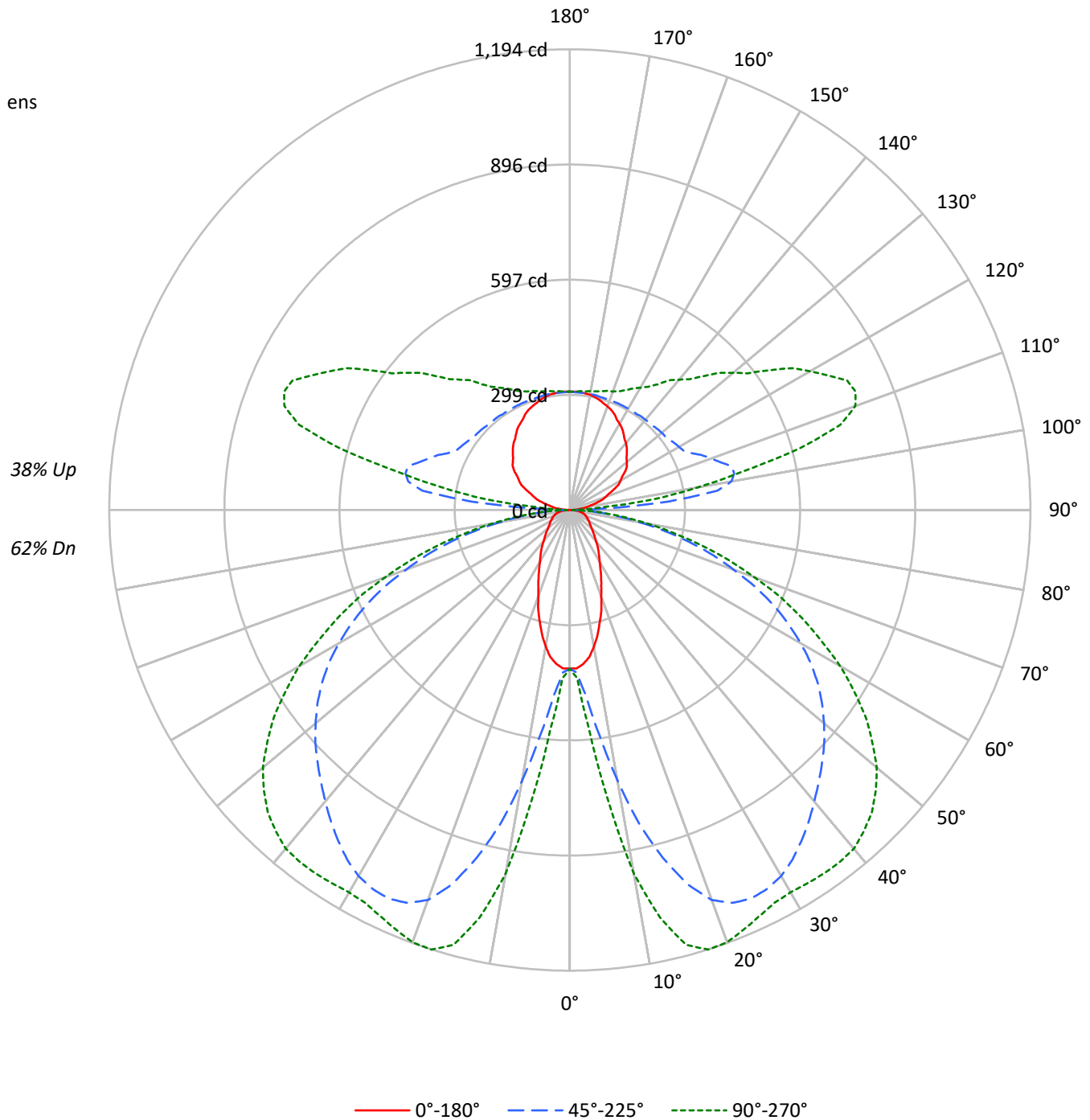
Test Method: LM-79-2019  
Report Number: P936814  
REPORT IS A COMBINATION OF REPORTS P933471 AND P933786  
Test Lab: INNOVATION CENTER  
Issue Date: 12/17/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ4-FB-050U-100D-835-1D-UNV-STD-W-4  
Description: CORELITE SQ4 SUSPENDED INDIRECT LED LUMINAIRE WITH Batwing Frosted Continuous Roll L  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5171.0 lumens  
Efficiency: N/A  
Efficacy: 114.4 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-Direct  
  
Input Watts (W): 45.2  
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				
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	110	110	110	110	103	103	103	103	90	90	90	78	78	78	67	67	67	67	67	67	62
1	100	95	91	87	93	89	85	82	78	75	72	67	65	63	58	56	55	55	55	55	50
2	90	82	75	70	84	77	71	66	67	63	59	58	55	52	50	48	45	45	45	45	41
3	82	72	64	57	76	67	60	54	59	53	49	51	47	43	44	40	38	38	38	38	34
4	74	63	54	48	69	59	51	45	52	46	41	45	40	36	39	35	32	32	32	32	28
5	68	56	47	41	63	52	44	39	46	40	35	40	35	31	34	30	27	27	27	27	24
6	63	50	41	35	58	47	39	33	41	35	30	36	31	27	31	27	23	23	23	23	21
7	58	45	36	30	54	42	34	29	37	31	26	32	27	23	28	24	21	21	21	21	18
8	53	40	32	26	50	38	30	25	34	27	23	29	24	20	25	21	18	18	18	18	16
9	50	37	29	23	46	35	27	22	31	24	20	27	22	18	23	19	16	16	16	16	14
10	46	33	26	21	43	32	25	20	28	22	18	25	20	16	21	17	14	14	14	14	12

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

	0°	45°	90°
0°	3813	3813	3813
5°	3721	4404	5126
10°	3372	6415	8497
15°	2862	8375	10260
20°	2327	9698	10456
25°	1939	10140	10245
30°	1633	10197	10225
35°	1442	10020	10490
40°	1254	9791	10763
45°	1133	9621	10805
50°	1037	9467	10626
55°	990	9245	10155
60°	1010	8827	9411
65°	1046	8197	8389
70°	1107	7134	7087
75°	1213	5803	5531
80°	1296	4009	3726
85°	1093	2117	1907

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 10805 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	53.2	1.0
10°-20°	235.6	4.6
20°-30°	412.1	8.0
30°-40°	530.5	10.3
40°-50°	592.5	11.5
50°-60°	567.5	11.0
60°-70°	449.7	8.7
70°-80°	264.5	5.1
80°-90°	74.6	1.4
90°-100°	149.7	2.9
100°-110°	393.6	7.6
110°-120°	408.1	7.9
120°-130°	327.3	6.3
130°-140°	256.8	5.0
140°-150°	197.1	3.8
150°-160°	142.0	2.7
160°-170°	86.9	1.7
170°-180°	29.3	0.6
0°-30°	700.8	13.6
0°-40°	1231.3	23.8
0°-60°	2391.3	46.2
0°-90°	3180.2	61.5
90°-120°	951.3	18.4
90°-150°	1732.6	33.5
90°-180°	1991.0	38.5
0°-180°	5171.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	411	411	411	411	411	
5°	400	429	484	547	567	37
15°	300	554	933	1131	1167	83
25°	192	628	1111	1160	1162	88
35°	130	600	1046	1106	1150	81
45°	88	478	925	1060	1107	68
55°	63	304	785	912	937	58
65°	50	161	583	655	665	50
75°	37	99	320	352	353	39
85°	13	30	79	87	88	14
90°	2	6	16	8	8	3
95°	20	78	258	133	90	22
105°	71	107	435	661	616	75
115°	126	153	348	695	794	124
125°	175	196	317	536	632	156
135°	209	230	307	432	490	162
145°	242	258	303	369	398	152
155°	274	281	303	333	343	126
165°	295	299	303	315	319	83
175°	307	307	305	309	309	29
180°	307	307	307	307	307	



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**CANDELA DISTRIBUTION (FULL):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	410.9	410.9	410.9	410.9	410.9	410.9	410.9	410.9	410.9	410.9	410.9
2.5°	410.9	410.9	413.6	414.9	417.5	418.9	421.5	424.1	432.1	433.4	436.0
5°	400.4	405.7	422.8	429.4	447.9	473.0	483.6	500.8	536.5	547.0	553.6
7.5°	384.5	396.4	438.7	449.3	495.5	561.6	589.3	626.3	683.1	710.9	733.3
10°	359.4	384.5	459.8	484.9	560.2	660.7	712.2	763.7	849.6	887.9	902.5
12.5°	331.7	372.6	482.3	516.6	625.0	771.7	833.8	890.6	988.4	1039.9	1047.8
15°	299.9	355.4	503.4	553.6	693.7	864.2	932.9	1002.9	1094.1	1131.1	1140.3
17.5°	272.2	342.2	523.2	576.1	746.6	947.4	1017.4	1075.6	1149.6	1174.7	1181.3
20°	237.8	321.1	536.5	605.2	802.1	1008.2	1075.6	1120.5	1170.7	1186.6	1189.2
22.5°	212.7	298.6	544.4	615.7	839.0	1045.2	1102.0	1137.7	1172.0	1177.3	1178.6
25°	191.6	273.5	543.1	627.6	870.8	1067.6	1111.2	1137.7	1157.5	1160.1	1160.1
27.5°	171.8	245.8	537.8	630.3	894.5	1072.9	1107.3	1125.8	1135.0	1140.3	1140.3
30°	154.6	219.3	524.6	625.0	905.1	1067.6	1095.4	1104.6	1113.9	1121.8	1125.8
32.5°	141.4	194.2	504.8	614.4	906.4	1054.4	1074.2	1079.5	1092.7	1111.2	1117.9
35°	129.5	169.1	482.3	599.9	898.5	1033.3	1046.5	1051.8	1078.2	1106.0	1115.2
37.5°	117.6	150.6	453.2	574.8	886.6	1008.2	1017.4	1026.7	1067.6	1100.7	1111.2
40°	105.7	134.8	418.9	547.0	868.1	977.8	985.7	1000.3	1054.4	1092.7	1103.3
42.5°	96.5	121.6	381.9	518.0	844.3	943.4	955.3	976.5	1038.6	1079.5	1091.4
45°	88.5	108.3	342.2	478.3	813.9	907.8	924.9	954.0	1020.1	1059.7	1070.3
47.5°	80.6	99.1	301.3	437.4	780.9	872.1	894.5	927.6	995.0	1033.3	1042.5
50°	74.0	89.9	260.3	393.8	745.2	833.8	860.2	894.5	963.3	998.9	1010.8
52.5°	68.7	81.9	222.0	350.2	704.3	794.1	824.5	860.2	924.9	959.3	967.2
55°	63.4	75.3	189.0	303.9	662.0	751.8	784.9	819.2	882.7	911.7	917.0
57.5°	60.8	70.0	161.2	260.3	617.1	704.3	741.3	773.0	832.4	854.9	860.2
60°	56.8	66.1	140.1	223.3	568.2	659.3	691.1	722.8	773.0	791.5	795.4
62.5°	52.9	63.4	124.2	187.6	518.0	606.5	638.2	667.3	709.6	722.8	728.1
65°	50.2	60.8	112.3	161.2	466.4	551.0	582.7	607.8	642.2	655.4	658.0
67.5°	47.6	58.1	103.1	138.7	414.9	495.5	519.3	543.1	569.5	582.7	584.0
70°	43.6	55.5	95.1	122.9	362.0	432.1	451.9	477.0	498.1	504.8	508.7
72.5°	41.0	51.5	89.9	111.0	307.9	371.3	389.8	404.3	422.8	429.4	429.4
75°	37.0	46.2	84.6	99.1	252.4	303.9	319.8	334.3	348.8	351.5	347.5
77.5°	33.0	41.0	72.7	83.2	196.9	240.5	253.7	261.6	273.5	276.2	277.5
80°	27.7	35.7	56.8	64.7	142.7	177.1	186.3	192.9	203.5	203.5	206.1
82.5°	21.1	27.7	41.0	46.2	96.5	121.6	129.5	133.5	140.1	140.1	140.1
85°	13.2	17.2	26.4	30.4	58.1	74.0	79.3	80.6	85.9	87.2	87.2
87.5°	6.6	9.2	17.2	18.5	30.4	38.3	38.3	41.0	41.0	39.6	38.3
90°	2.1	3.7	5.4	5.8	9.1	13.5	15.7	13.9	10.4	7.8	7.8
92.5°	8.2	22.2	36.3	39.8	55.9	77.4	88.2	77.3	55.5	39.2	37.6
95°	19.8	45.4	71.1	77.5	137.6	217.7	257.8	230.0	174.5	132.9	128.2
97.5°	34.2	56.8	79.4	85.1	185.3	319.0	385.8	368.3	333.2	306.9	297.9
100°	45.3	65.8	86.4	91.5	202.7	351.0	425.2	426.5	429.1	431.0	420.3
102.5°	54.8	74.0	93.1	97.9	210.7	361.1	436.3	458.7	503.4	536.9	527.7
105°	70.9	87.1	103.3	107.4	216.6	362.3	435.1	485.2	585.4	660.6	655.7
107.5°	87.4	102.5	117.6	121.4	217.7	346.2	410.4	480.3	620.1	724.9	726.1
110°	98.5	112.1	125.8	129.2	216.1	331.9	389.8	467.9	624.2	741.4	746.5



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
112.5°	109.4	122.4	135.4	138.7	216.1	319.4	371.0	451.0	610.9	730.9	738.8
115°	125.9	137.9	149.9	152.9	218.1	305.0	348.5	425.5	579.6	695.2	706.1
117.5°	142.2	153.1	164.0	166.7	222.2	296.1	333.1	402.6	541.6	645.9	658.0
120°	151.7	162.0	172.2	174.8	225.5	293.1	326.9	390.4	517.5	612.8	624.6
122.5°	161.0	171.4	181.7	184.3	230.2	291.5	322.1	379.3	493.8	579.6	591.2
125°	175.2	184.6	194.0	196.4	236.6	290.2	317.0	365.6	462.8	535.7	546.4
127.5°	186.7	196.3	205.8	208.2	243.0	289.5	312.7	354.4	437.8	500.4	509.4
130°	192.9	203.2	213.4	216.0	247.7	289.9	311.0	348.2	422.5	478.2	486.5
132.5°	199.3	209.6	219.8	222.4	251.5	290.2	309.6	342.8	409.3	459.2	466.7
135°	208.8	218.1	227.5	229.8	255.6	289.9	307.1	334.9	390.6	432.4	438.8
137.5°	218.5	227.7	237.0	239.3	261.8	291.7	306.7	330.2	377.3	412.6	417.9
140°	226.5	235.0	243.6	245.7	265.5	292.0	305.2	325.6	366.3	396.8	401.7
142.5°	232.7	240.6	248.4	250.4	268.7	293.0	305.2	323.1	358.8	385.6	389.8
145°	242.2	249.0	255.9	257.6	272.8	293.1	303.2	317.8	347.0	368.9	372.1
147.5°	251.7	258.4	265.0	266.7	278.9	295.1	303.2	314.7	337.7	354.9	357.6
150°	257.8	263.8	269.9	271.4	282.0	296.1	303.2	312.9	332.3	346.9	349.1
152.5°	264.2	268.8	273.4	274.5	284.1	296.8	303.2	311.5	328.1	340.5	342.1
155°	273.7	277.1	280.5	281.3	288.6	298.3	303.2	309.8	323.0	332.9	334.0
157.5°	280.7	284.0	287.3	288.1	293.1	299.8	303.2	308.3	318.6	326.3	327.1
160°	285.5	288.0	290.6	291.2	295.2	300.5	303.2	307.6	316.4	323.0	323.4
162.5°	290.2	292.1	294.0	294.5	297.4	301.3	303.2	306.9	314.3	319.9	320.3
165°	295.4	297.1	298.9	299.3	300.6	302.3	303.2	305.8	311.1	315.1	315.5
167.5°	300.1	300.9	301.7	301.9	303.0	304.5	305.2	307.0	310.5	313.1	313.3
170°	303.2	304.0	304.8	305.0	305.1	305.2	305.2	307.0	310.5	313.1	313.1
172.5°	304.8	305.0	305.2	305.2	305.2	305.2	305.2	306.6	309.3	311.4	311.2
175°	307.1	307.1	307.1	307.1	306.5	305.6	305.2	306.1	307.9	309.2	309.2
177.5°	307.1	307.1	307.1	307.1	306.6	306.0	305.7	306.4	307.8	308.8	308.6
180°	307.1	307.1	307.1	307.1	307.1	307.1	307.1	307.1	307.1	307.1	307.1



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**CANDELA DISTRIBUTION (continued):**

	80°	90°
0°	410.9	410.9
2.5°	438.7	436.0
5°	564.2	566.9
7.5°	759.8	758.4
10°	944.8	956.6
12.5°	1079.5	1082.2
15°	1161.5	1166.7
17.5°	1193.2	1194.5
20°	1194.5	1191.8
22.5°	1180.0	1177.3
25°	1162.8	1161.5
27.5°	1146.9	1148.2
30°	1140.3	1144.3
32.5°	1140.3	1146.9
35°	1143.0	1149.6
37.5°	1141.6	1149.6
40°	1136.4	1145.6
42.5°	1121.8	1128.4
45°	1099.4	1107.3
47.5°	1070.3	1075.6
50°	1033.3	1038.6
52.5°	987.0	988.4
55°	931.5	936.8
57.5°	872.1	873.4
60°	806.0	810.0
62.5°	736.0	736.0
65°	662.0	664.6
67.5°	585.4	592.0
70°	507.4	508.7
72.5°	430.8	430.8
75°	351.5	352.8
77.5°	276.2	276.2
80°	204.8	206.1
82.5°	141.4	144.0
85°	88.5	88.5
87.5°	41.0	37.0
90°	7.8	7.8
92.5°	31.4	25.1
95°	109.3	90.5
97.5°	262.0	226.1
100°	377.5	334.7
102.5°	491.1	454.5
105°	636.0	616.3
107.5°	730.8	735.6
110°	767.0	787.5





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**CANDELA DISTRIBUTION (continued):**

	80°	90°
112.5°	770.3	801.8
115°	749.8	793.5
117.5°	706.5	755.0
120°	671.6	718.7
122.5°	637.7	684.1
125°	589.1	631.9
127.5°	545.5	581.6
130°	519.9	553.2
132.5°	496.5	526.4
135°	464.6	490.3
137.5°	438.9	460.0
140°	421.4	441.1
142.5°	406.8	423.8
145°	385.0	397.8
147.5°	368.2	378.8
150°	357.7	366.3
152.5°	348.6	355.1
155°	338.3	342.6
157.5°	330.1	333.1
160°	325.2	326.9
162.5°	322.0	323.6
165°	317.3	319.1
167.5°	314.0	314.7
170°	313.1	313.1
172.5°	310.6	310.0
175°	309.2	309.2
177.5°	307.9	307.1
180°	307.1	307.1



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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	6.63	7.65	7.47	8.52	9.62	19.76	20.79	20.61	21.66	22.75
	3H	7.34	8.27	8.20	9.15	10.27	21.60	22.52	22.45	23.40	24.52
	4H	7.65	8.52	8.52	9.41	10.54	22.24	23.12	23.11	24.00	25.13
	6H	7.91	8.72	8.79	9.61	10.75	22.67	23.48	23.55	24.37	25.51
	8H	7.98	8.75	8.87	9.66	10.81	22.79	23.56	23.68	24.47	25.61
	12H	8.00	8.74	8.90	9.64	10.81	22.86	23.59	23.75	24.50	25.67
4H	2H	13.83	14.71	14.71	15.60	16.73	20.06	20.93	20.93	21.82	22.95
	3H	15.42	16.15	16.31	17.07	18.22	22.10	22.84	22.99	23.76	24.90
	4H	15.52	16.19	16.42	17.11	18.28	22.87	23.54	23.77	24.45	25.62
	6H	15.54	16.12	16.46	17.06	18.23	23.41	23.99	24.32	24.92	26.10
	8H	15.52	16.07	16.44	17.00	18.19	23.56	24.11	24.48	25.04	26.23
	12H	15.49	15.98	16.43	16.93	18.12	23.66	24.15	24.60	25.10	26.29
8H	4H	16.97	17.51	17.89	18.45	19.63	22.94	23.49	23.86	24.42	25.61
	6H	17.22	17.67	18.17	18.65	19.83	23.57	24.02	24.51	24.99	26.18
	8H	17.24	17.64	18.20	18.61	19.81	23.78	24.18	24.74	25.15	26.35
	12H	17.22	17.57	18.18	18.53	19.78	23.93	24.28	24.89	25.24	26.49
12H	4H	17.12	17.61	18.06	18.56	19.75	22.91	23.40	23.84	24.35	25.54
	6H	17.48	17.88	18.43	18.84	20.05	23.55	23.95	24.51	24.92	26.12
	8H	17.56	17.91	18.51	18.87	20.12	23.78	24.14	24.74	25.10	26.35