

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: P938418

Luminaire Tested: SQ4-FB-150U-100D-840-1D-UNV-STD-W-4

Issue Date: 12/17/2024

**Test Information**

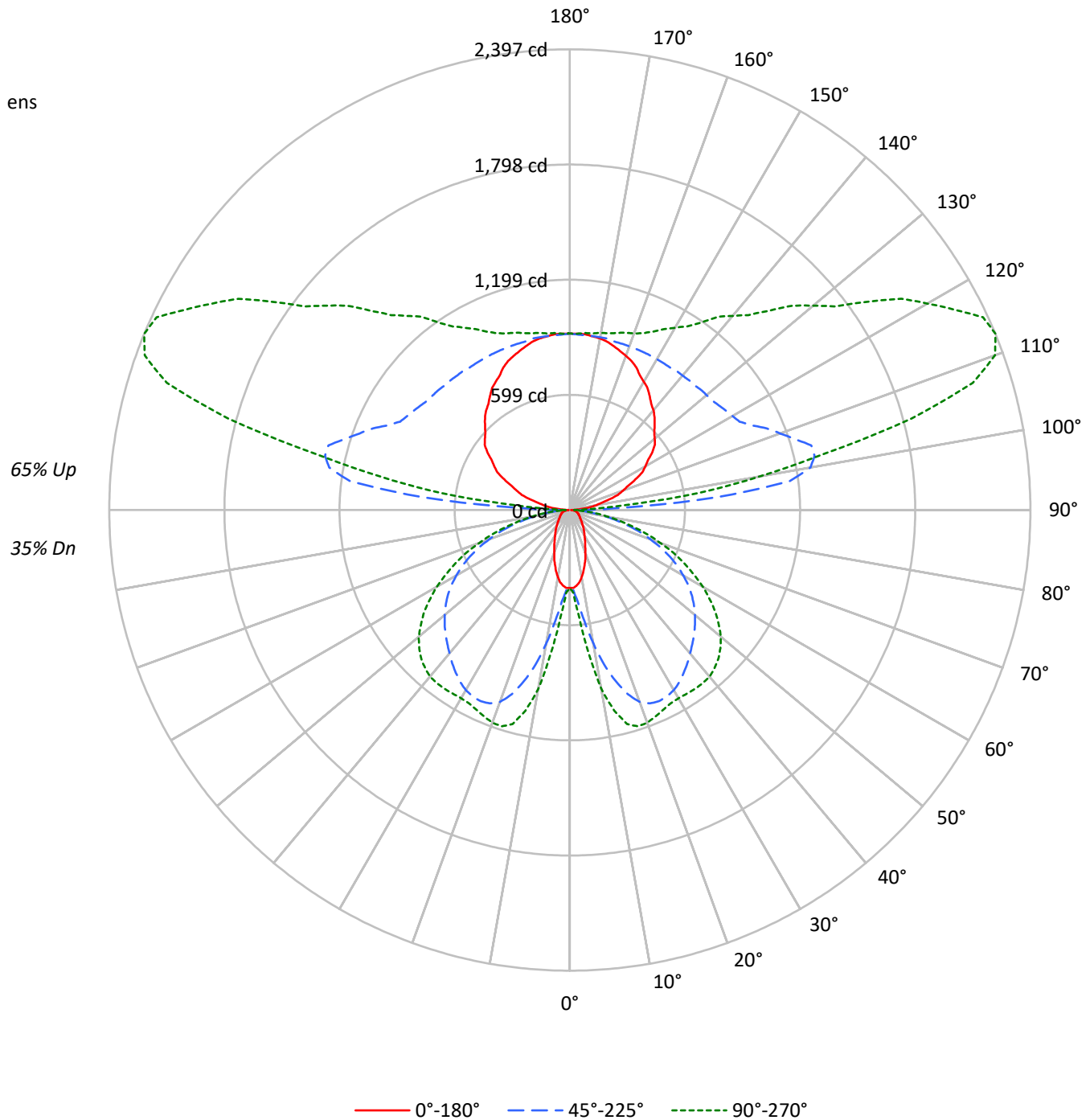
Test Method: LM-79-2019  
Report Number: P938418  
REPORT IS A COMBINATION OF REPORTS P933631 AND P933786  
Test Lab: INNOVATION CENTER  
Issue Date: 12/17/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ4-FB-150U-100D-840-1D-UNV-STD-W-4  
Description: CORELITE SQ4 SUSPENDED INDIRECT LED LUMINAIRE WITH Batwing Frosted Continuous Roll L  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 9096.5 lumens  
Efficiency: N/A  
Efficacy: 125.6 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): 72.4  
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	103	103	103	103	93	93	93	93	75	75	75	58	58	58	42	42	42	35				35
1	94	90	86	82	85	81	78	75	65	63	60	50	49	47	36	35	35	28				28
2	85	78	72	66	77	70	65	61	56	53	49	43	41	39	32	30	29	23				23
3	77	68	61	55	69	61	55	50	49	45	41	38	35	32	28	26	24	19				19
4	71	60	52	46	63	54	47	42	43	38	34	34	30	27	24	22	20	16				16
5	64	53	45	39	58	48	41	36	39	33	29	30	26	23	22	19	17	14				14
6	59	47	39	33	53	43	36	30	34	29	25	27	23	20	19	17	15	12				12
7	54	42	34	29	49	38	31	26	31	26	22	24	20	17	18	15	13	10				10
8	50	38	30	25	45	35	28	23	28	23	19	22	18	15	16	13	11	9				9
9	47	35	27	22	42	31	25	20	26	20	17	20	16	14	15	12	10	8				8
10	43	31	24	20	39	29	22	18	23	18	15	18	15	12	13	11	9	7				7

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

	0°	45°	90°
0°	3767	3767	3767
5°	3677	4351	5064
10°	3331	6338	8395
15°	2827	8275	10137
20°	2299	9582	10331
25°	1916	10019	10122
30°	1613	10075	10103
35°	1424	9899	10364
40°	1239	9674	10634
45°	1119	9506	10675
50°	1025	9354	10498
55°	978	9134	10033
60°	998	8721	9299
65°	1034	8099	8288
70°	1094	7049	7002
75°	1200	5734	5465
80°	1282	3962	3681
85°	1076	2090	1883

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 10675 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	52.5	0.6
10°-20°	232.8	2.6
20°-30°	407.1	4.5
30°-40°	524.1	5.8
40°-50°	585.4	6.4
50°-60°	560.7	6.2
60°-70°	444.4	4.9
70°-80°	261.3	2.9
80°-90°	76.1	0.8
90°-100°	447.6	4.9
100°-110°	1176.7	12.9
110°-120°	1220.1	13.4
120°-130°	978.7	10.8
130°-140°	767.9	8.4
140°-150°	589.4	6.5
150°-160°	424.5	4.7
160°-170°	259.7	2.9
170°-180°	87.7	1.0
0°-30°	692.4	7.6
0°-40°	1216.5	13.4
0°-60°	2362.6	26.0
0°-90°	3144.4	34.6
90°-120°	2844.3	31.3
90°-150°	5180.3	56.9
90°-180°	5952.0	65.4
0°-180°	9096.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	406	406	406	406	406	
5°	396	424	478	540	560	37
15°	296	547	922	1118	1153	82
25°	189	620	1098	1146	1148	87
35°	128	593	1034	1093	1136	80
45°	87	473	914	1047	1094	68
55°	63	300	776	901	926	57
65°	50	159	576	648	657	49
75°	37	98	316	347	349	38
85°	13	30	78	86	87	14
90°	6	17	47	23	23	6
95°	59	232	771	398	270	66
105°	212	321	1301	1975	1842	225
115°	376	457	1042	2079	2372	372
125°	524	587	948	1602	1889	465
135°	624	687	918	1293	1466	483
145°	724	770	906	1103	1189	454
155°	818	841	906	995	1024	376
165°	883	895	906	942	954	249
175°	918	918	913	924	924	87
180°	918	918	918	918	918	



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**CANDELA DISTRIBUTION (FULL):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	406.0	406.0	406.0	406.0	406.0	406.0	406.0	406.0	406.0	406.0	406.0
2.5°	406.0	406.0	408.6	409.9	412.5	413.9	416.4	419.0	426.9	428.2	430.8
5°	395.6	400.8	417.7	424.2	442.5	467.3	477.8	494.8	530.1	540.4	547.0
7.5°	379.9	391.6	433.4	443.9	489.6	554.9	582.2	618.8	674.9	702.4	724.5
10°	355.1	379.9	454.3	479.1	553.5	652.8	703.7	754.5	839.4	877.2	891.7
12.5°	327.7	368.1	476.5	510.4	617.5	762.4	823.8	879.9	976.5	1027.4	1035.2
15°	296.3	351.1	497.4	547.0	685.4	853.8	921.7	990.9	1081.0	1117.5	1126.6
17.5°	268.9	338.1	516.9	569.2	737.6	936.0	1005.2	1062.7	1135.8	1160.6	1167.1
20°	234.9	317.2	530.1	597.9	792.5	996.1	1062.7	1107.1	1156.7	1172.4	1174.9
22.5°	210.1	295.0	537.9	608.3	828.9	1032.7	1088.8	1124.0	1157.9	1163.2	1164.5
25°	189.3	270.2	536.6	620.1	860.4	1054.8	1097.9	1124.0	1143.6	1146.2	1146.2
27.5°	169.7	242.9	531.3	622.7	883.8	1060.0	1094.0	1112.3	1121.4	1126.6	1126.6
30°	152.7	216.7	518.3	617.5	894.2	1054.8	1082.3	1091.3	1100.5	1108.3	1112.3
32.5°	139.7	191.9	498.7	607.0	895.5	1041.7	1061.3	1066.5	1079.6	1097.9	1104.5
35°	127.9	167.1	476.5	592.7	887.7	1020.9	1033.9	1039.2	1065.3	1092.7	1101.8
37.5°	116.2	148.8	447.8	567.9	876.0	996.1	1005.2	1014.4	1054.8	1087.5	1097.9
40°	104.4	133.2	413.9	540.4	857.7	966.1	973.9	988.3	1041.7	1079.6	1090.1
42.5°	95.3	120.1	377.3	511.8	834.2	932.1	943.8	964.8	1026.1	1066.5	1078.3
45°	87.4	107.0	338.1	472.6	804.1	896.9	913.8	942.6	1007.9	1047.0	1057.5
47.5°	79.6	97.9	297.7	432.2	771.5	861.6	883.8	916.5	983.1	1020.9	1030.0
50°	73.1	88.8	257.2	389.1	736.3	823.8	849.9	883.8	951.7	986.9	998.7
52.5°	67.9	80.9	219.3	346.0	695.8	784.6	814.6	849.9	913.8	947.8	955.6
55°	62.6	74.4	186.7	300.3	654.1	742.8	775.5	809.4	872.1	900.8	906.0
57.5°	60.1	69.2	159.3	257.2	609.7	695.8	732.4	763.7	822.4	844.6	849.9
60°	56.1	65.3	138.4	220.6	561.4	651.4	682.8	714.1	763.7	782.0	785.9
62.5°	52.3	62.6	122.7	185.3	511.8	599.2	630.5	659.3	701.1	714.1	719.4
65°	49.6	60.1	111.0	159.3	460.8	544.4	575.7	600.5	634.5	647.5	650.1
67.5°	47.0	57.4	101.9	137.0	409.9	489.6	513.1	536.6	562.7	575.7	577.0
70°	43.1	54.8	94.0	121.4	357.7	426.9	446.5	471.3	492.1	498.7	502.6
72.5°	40.5	50.9	88.8	109.7	304.2	366.8	385.1	399.4	417.7	424.2	424.2
75°	36.6	45.6	83.6	97.9	249.4	300.3	316.0	330.3	344.6	347.3	343.3
77.5°	32.6	40.5	71.8	82.2	194.5	237.6	250.7	258.5	270.2	272.9	274.2
80°	27.4	35.3	56.1	63.9	141.0	175.0	184.1	190.6	201.1	201.1	203.6
82.5°	20.8	27.4	40.5	45.6	95.3	120.1	127.9	131.9	138.4	138.4	138.4
85°	13.0	17.0	26.1	30.0	57.4	73.1	78.3	79.6	84.9	86.2	86.2
87.5°	6.5	9.1	17.0	18.3	30.0	37.8	37.8	40.5	40.5	39.1	37.8
90°	6.1	11.1	16.0	17.3	27.2	40.3	46.8	41.6	31.2	23.4	23.4
92.5°	24.6	66.5	108.5	119.0	167.2	231.5	263.7	231.1	166.0	117.1	112.4
95°	59.2	135.8	212.5	231.7	411.4	651.1	770.9	687.9	522.0	397.5	383.3
97.5°	102.3	169.9	237.6	254.5	554.2	953.8	1153.6	1101.1	996.2	917.6	890.7
100°	135.6	196.9	258.3	273.6	606.1	1049.6	1271.3	1275.1	1282.8	1288.5	1256.5
102.5°	163.9	221.2	278.4	292.7	630.0	1079.7	1304.6	1371.3	1505.0	1605.3	1577.9
105°	212.0	260.5	308.9	321.1	647.6	1083.0	1300.8	1450.6	1750.2	1975.0	1960.3
107.5°	261.3	306.5	351.7	363.0	651.0	1034.9	1226.9	1435.9	1853.8	2167.3	2170.8
110°	294.5	335.3	376.2	386.4	646.1	992.1	1165.2	1398.9	1866.1	2216.6	2231.9



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
112.5°	327.2	366.2	405.1	414.8	646.3	954.9	1109.2	1348.3	1826.5	2185.2	2208.7
115°	376.5	412.4	448.3	457.2	652.2	912.1	1042.0	1272.3	1733.1	2078.6	2111.3
117.5°	425.2	457.8	490.4	498.5	664.3	885.3	995.8	1203.7	1619.4	1931.2	1967.5
120°	453.5	484.2	514.8	522.6	674.1	876.3	977.3	1167.2	1547.1	1832.0	1867.2
122.5°	481.3	512.2	543.2	550.9	688.3	871.6	963.2	1134.2	1476.3	1732.9	1767.5
125°	523.8	552.0	580.3	587.3	707.4	867.7	947.8	1093.0	1383.6	1601.5	1633.6
127.5°	558.3	586.8	615.2	622.3	726.5	865.4	934.8	1059.6	1309.1	1496.2	1523.2
130°	576.8	607.4	638.1	645.8	740.5	866.8	929.9	1041.0	1263.1	1429.6	1454.5
132.5°	595.9	626.6	657.2	664.9	751.8	867.7	925.6	1025.0	1223.8	1372.9	1395.3
135°	624.2	652.2	680.0	687.1	764.1	866.8	918.1	1001.4	1167.9	1292.8	1312.1
137.5°	653.2	680.8	708.5	715.4	782.6	872.2	917.0	987.3	1128.1	1233.7	1249.4
140°	677.3	702.8	728.3	734.6	794.0	873.1	912.6	973.4	1095.0	1186.2	1200.9
142.5°	695.7	719.3	742.8	748.7	803.3	876.2	912.6	966.1	1072.9	1153.0	1165.6
145°	724.1	744.7	765.1	770.2	815.7	876.3	906.5	950.2	1037.5	1103.0	1112.6
147.5°	752.4	772.4	792.4	797.4	833.8	882.3	906.5	940.9	1009.5	1061.1	1069.0
150°	770.9	789.0	807.0	811.5	843.2	885.3	906.5	935.5	993.5	1037.1	1043.5
152.5°	790.0	803.7	817.4	820.8	849.4	887.4	906.5	931.3	980.9	1018.0	1022.9
155°	818.4	828.5	838.6	841.2	862.9	892.0	906.5	926.2	965.7	995.2	998.5
157.5°	839.3	849.2	859.0	861.4	876.5	896.5	906.5	921.8	952.4	975.5	977.7
160°	853.4	861.1	868.8	870.7	882.7	898.6	906.5	919.6	945.9	965.6	966.9
162.5°	867.7	873.4	879.1	880.6	889.2	900.8	906.5	917.6	939.8	956.4	957.6
165°	883.1	888.2	893.4	894.7	898.7	903.9	906.5	914.4	930.3	942.2	943.4
167.5°	897.2	899.7	902.1	902.7	906.0	910.4	912.6	917.9	928.2	936.0	936.6
170°	906.5	909.0	911.4	912.0	912.2	912.5	912.6	917.9	928.2	936.0	936.0
172.5°	911.4	911.9	912.5	912.6	912.6	912.6	912.6	916.8	925.0	931.1	930.6
175°	918.1	918.1	918.1	918.1	916.3	913.8	912.6	915.2	920.4	924.4	924.4
177.5°	918.1	918.1	918.1	918.1	916.8	914.9	913.9	916.0	920.0	923.1	922.5
180°	918.1	918.1	918.1	918.1	918.1	918.1	918.1	918.1	918.1	918.1	918.1



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**CANDELA DISTRIBUTION (continued):**

	80°	90°
0°	406.0	406.0
2.5°	433.4	430.8
5°	557.4	560.1
7.5°	750.7	749.3
10°	933.5	945.1
12.5°	1066.5	1069.2
15°	1147.6	1152.7
17.5°	1178.9	1180.2
20°	1180.2	1177.5
22.5°	1165.8	1163.2
25°	1148.8	1147.6
27.5°	1133.1	1134.4
30°	1126.6	1130.6
32.5°	1126.6	1133.1
35°	1129.3	1135.8
37.5°	1127.9	1135.8
40°	1122.8	1131.9
42.5°	1108.3	1114.9
45°	1086.2	1094.0
47.5°	1057.5	1062.7
50°	1020.9	1026.1
52.5°	975.2	976.5
55°	920.3	925.6
57.5°	861.6	862.9
60°	796.3	800.3
62.5°	727.2	727.2
65°	654.1	656.6
67.5°	578.4	584.9
70°	501.3	502.6
72.5°	425.6	425.6
75°	347.3	348.6
77.5°	272.9	272.9
80°	202.3	203.6
82.5°	139.7	142.3
85°	87.4	87.4
87.5°	40.5	36.6
90°	23.4	23.4
92.5°	93.8	75.2
95°	326.9	270.5
97.5°	783.4	676.0
100°	1128.7	1000.7
102.5°	1468.4	1358.8
105°	1901.4	1842.5
107.5°	2185.1	2199.3
110°	2293.2	2354.6





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**CANDELA DISTRIBUTION (continued):**

	80°	90°
112.5°	2302.9	2397.1
115°	2241.9	2372.5
117.5°	2112.3	2257.2
120°	2008.0	2148.8
122.5°	1906.4	2045.3
125°	1761.4	1889.4
127.5°	1631.1	1739.0
130°	1554.2	1653.9
132.5°	1484.5	1573.8
135°	1389.0	1466.0
137.5°	1312.5	1375.4
140°	1259.8	1318.7
142.5°	1216.3	1266.9
145°	1151.0	1189.4
147.5°	1100.8	1132.6
150°	1069.3	1095.0
152.5°	1042.3	1061.7
155°	1011.3	1024.2
157.5°	986.7	995.8
160°	972.1	977.3
162.5°	962.5	967.4
165°	948.7	953.9
167.5°	938.8	941.0
170°	936.0	936.0
172.5°	928.7	926.8
175°	924.4	924.4
177.5°	920.3	918.1
180°	918.1	918.1



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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	3.99	4.75	5.07	5.83	7.31	17.13	17.89	18.20	18.97	20.44
	3H	4.69	5.37	5.77	6.46	7.95	18.95	19.63	20.03	20.72	22.21
	4H	4.98	5.63	6.08	6.72	8.22	19.58	20.23	20.67	21.31	22.81
	6H	5.23	5.83	6.33	6.92	8.43	19.99	20.59	21.09	21.68	23.19
	8H	5.29	5.86	6.40	6.97	8.47	20.10	20.67	21.21	21.78	23.28
	12H	5.31	5.85	6.42	6.95	8.48	20.16	20.70	21.27	21.80	23.33
4H	2H	11.17	11.82	12.27	12.91	14.40	17.39	18.04	18.49	19.13	20.63
	3H	12.73	13.27	13.84	14.39	15.90	19.42	19.96	20.52	21.07	22.58
	4H	12.82	13.32	13.93	14.42	15.96	20.17	20.67	21.28	21.77	23.30
	6H	12.83	13.26	13.95	14.38	15.91	20.69	21.12	21.81	22.25	23.77
	8H	12.80	13.20	13.92	14.32	15.86	20.84	21.24	21.96	22.36	23.90
	12H	12.75	13.12	13.89	14.25	15.79	20.92	21.28	22.06	22.42	23.96
8H	4H	14.25	14.65	15.37	15.77	17.31	20.22	20.62	21.34	21.74	23.28
	6H	14.48	14.82	15.63	15.98	17.51	20.83	21.16	21.97	22.33	23.86
	8H	14.50	14.79	15.65	15.93	17.49	21.04	21.33	22.19	22.47	24.03
	12H	14.47	14.72	15.62	15.86	17.45	21.17	21.43	22.33	22.57	24.16
12H	4H	14.38	14.75	15.52	15.88	17.42	20.17	20.53	21.30	21.66	23.21
	6H	14.74	15.03	15.89	16.17	17.73	20.81	21.10	21.96	22.25	23.80
	8H	14.80	15.06	15.95	16.20	17.79	21.03	21.29	22.18	22.43	24.02