

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: P936845

Luminaire Tested: SQ4-FB-050U-100D-92765-1D-UNV-STD-W-8-3500K

Issue Date: 12/17/2024

**Test Information**

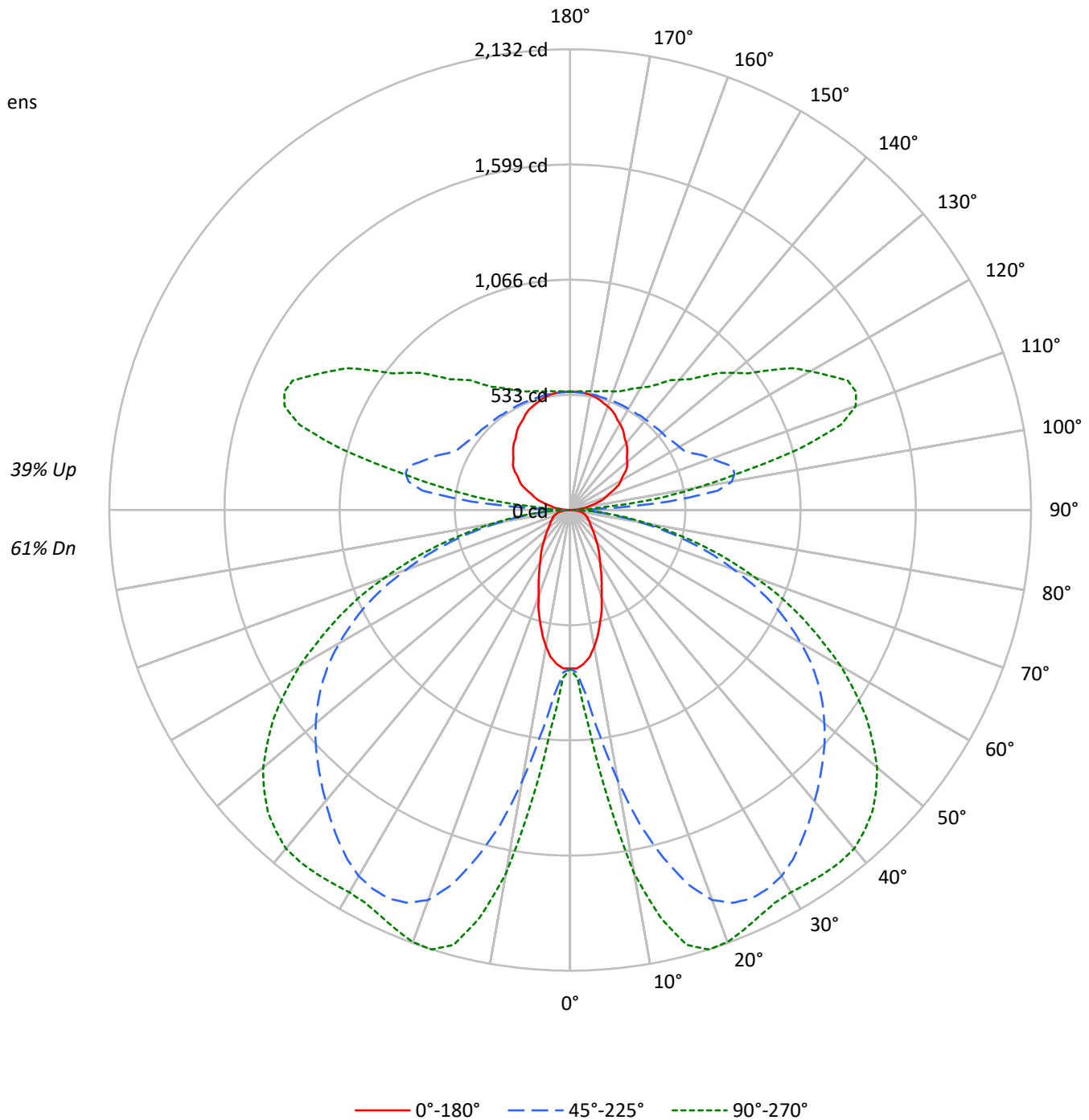
Test Method: LM-79-2019  
Report Number: P936845  
REPORT IS A COMBINATION OF REPORTS P933487 AND P933786  
Test Lab: INNOVATION CENTER  
Issue Date: 12/17/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ4-FB-050U-100D-92765-1D-UNV-STD-W-8-3500K  
Description: CORELITE SQ4 SUSPENDED INDIRECT LED LUMINAIRE WITH Batwing Frosted Continuous Roll L  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 9231.5 lumens  
Efficiency: N/A  
Efficacy: 102.1 lumens/watt  
Spacing Criteria (0/90/45): 0.71 / 2.69 / 2.33  
Luminous Opening: Rectangular w/ Sides (W: 0.29' x L: 8' x H: 0.1')  
CIE Type: Semi-Direct  
  
Input Watts (W): 90.4  
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

TEST NUMBER: P936845  
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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	0
RCR																		
0	110	110	110	110	103	103	103	103	90	90	90	78	78	78	67	67	67	61
1	100	95	91	87	93	89	85	82	78	75	72	67	65	63	58	56	55	50
2	90	82	75	70	84	77	71	66	67	63	59	58	55	52	50	48	45	41
3	82	72	64	57	76	67	60	54	59	53	49	51	47	43	44	40	38	34
4	74	63	54	48	69	59	51	45	52	46	41	45	40	36	39	35	32	28
5	68	56	47	41	63	52	44	39	46	40	35	40	35	31	34	30	27	24
6	63	50	41	35	58	47	39	33	41	35	30	36	31	27	31	27	23	21
7	58	45	36	30	54	42	34	29	37	31	26	32	27	23	28	24	21	18
8	53	40	32	26	50	38	30	25	34	27	23	29	24	20	25	21	18	16
9	50	37	29	23	46	35	27	22	31	24	20	27	22	18	23	19	16	14
10	46	33	26	21	43	32	25	20	28	22	18	25	20	16	21	17	14	12

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

	0°	45°	90°
0°	3404	3404	3404
5°	3325	3934	4575
10°	3016	5734	7585
15°	2564	7492	9159
20°	2087	8682	9334
25°	1741	9085	9144
30°	1468	9143	9127
35°	1298	8991	9363
40°	1131	8793	9607
45°	1025	8649	9645
50°	939	8519	9485
55°	900	8328	9065
60°	921	7963	8401
65°	958	7407	7489
70°	1020	6459	6326
75°	1132	5266	4937
80°	1235	3653	3327
85°	1099	1939	1703

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 9645 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	94.9	1.0
10°-20°	420.6	4.6
20°-30°	735.7	8.0
30°-40°	947.0	10.3
40°-50°	1057.8	11.5
50°-60°	1013.1	11.0
60°-70°	802.9	8.7
70°-80°	472.1	5.1
80°-90°	133.3	1.4
90°-100°	267.2	2.9
100°-110°	702.6	7.6
110°-120°	728.5	7.9
120°-130°	584.4	6.3
130°-140°	458.5	5.0
140°-150°	351.9	3.8
150°-160°	253.5	2.7
160°-170°	155.1	1.7
170°-180°	52.4	0.6
0°-30°	1251.2	13.6
0°-40°	2198.2	23.8
0°-60°	4269.1	46.2
0°-90°	5677.4	61.5
90°-120°	1698.4	18.4
90°-150°	3093.2	33.5
90°-180°	3554.0	38.5
0°-180°	9231.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	734	734	734	734	734	
5°	715	767	863	977	1012	66
15°	536	988	1665	2019	2083	149
25°	342	1120	1984	2071	2074	158
35°	231	1071	1868	1974	2052	144
45°	158	854	1651	1892	1977	122
55°	113	542	1401	1628	1672	103
65°	90	288	1040	1170	1187	89
75°	66	177	571	628	630	69
85°	24	54	142	156	158	25
90°	4	10	28	14	14	5
95°	35	138	460	237	162	39
105°	127	192	777	1179	1100	134
115°	225	273	622	1241	1417	222
125°	313	351	566	956	1128	278
135°	373	410	548	772	875	288
145°	432	460	541	659	710	271
155°	489	502	541	594	612	225
165°	527	534	541	563	570	149
175°	548	548	545	552	552	52
180°	548	548	548	548	548	



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**CANDELA DISTRIBUTION (FULL):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	733.6	733.6	733.6	733.6	733.6	733.6	733.6	733.6	733.6	733.6	733.6
2.5°	733.6	733.6	738.4	740.7	745.4	747.7	752.5	757.2	771.4	773.7	778.5
5°	714.7	724.2	754.9	766.7	799.7	844.5	863.3	894.0	957.7	976.6	988.4
7.5°	686.4	707.7	783.2	802.0	884.6	1002.5	1052.0	1118.1	1219.6	1269.1	1309.2
10°	641.6	686.4	820.9	865.8	1000.2	1179.4	1271.4	1363.5	1516.7	1585.2	1611.1
12.5°	592.1	665.2	861.0	922.3	1115.8	1377.6	1488.4	1589.9	1764.4	1856.5	1870.6
15°	535.5	634.6	898.8	988.4	1238.4	1542.7	1665.4	1790.4	1953.1	2019.2	2035.7
17.5°	485.9	611.0	934.1	1028.5	1332.8	1691.3	1816.4	1920.1	2052.2	2097.0	2108.9
20°	424.6	573.2	957.7	1080.3	1431.9	1799.9	1920.1	2000.4	2090.0	2118.3	2123.0
22.5°	379.8	533.1	971.9	1099.3	1497.9	1865.9	1967.3	2031.0	2092.4	2101.8	2104.2
25°	342.1	488.3	969.5	1120.5	1554.5	1906.0	1983.8	2031.0	2066.4	2071.1	2071.1
27.5°	306.6	438.7	960.1	1125.2	1597.0	1915.5	1976.8	2009.8	2026.3	2035.7	2035.7
30°	276.0	391.6	936.4	1115.8	1615.8	1906.0	1955.6	1972.1	1988.6	2002.7	2009.8
32.5°	252.4	346.8	901.1	1096.9	1618.2	1882.4	1917.8	1927.3	1950.8	1983.8	1995.6
35°	231.2	302.0	861.0	1071.0	1604.0	1844.7	1868.3	1877.7	1924.8	1974.4	1990.9
37.5°	209.9	268.9	809.1	1026.2	1582.8	1799.9	1816.4	1832.9	1906.0	1964.9	1983.8
40°	188.7	240.7	747.7	976.6	1549.8	1745.6	1759.7	1785.7	1882.4	1950.8	1969.7
42.5°	172.2	217.0	681.7	924.7	1507.4	1684.3	1705.5	1743.2	1854.1	1927.3	1948.5
45°	158.1	193.4	611.0	853.9	1453.1	1620.6	1651.3	1703.1	1821.0	1891.8	1910.7
47.5°	143.9	176.9	537.8	780.8	1394.1	1556.9	1597.0	1656.0	1776.2	1844.7	1861.2
50°	132.1	160.4	464.7	702.9	1330.5	1488.4	1535.7	1597.0	1719.6	1783.4	1804.5
52.5°	122.6	146.2	396.3	625.1	1257.3	1417.7	1471.9	1535.7	1651.3	1712.6	1726.7
55°	113.2	134.4	337.3	542.5	1181.8	1342.2	1401.1	1462.6	1575.7	1627.6	1637.1
57.5°	108.5	125.1	287.8	464.7	1101.6	1257.3	1323.3	1380.0	1486.1	1526.2	1535.7
60°	101.4	117.9	250.0	398.6	1014.4	1177.1	1233.7	1290.3	1380.0	1413.0	1420.1
62.5°	94.3	113.2	221.7	335.0	924.7	1082.7	1139.3	1191.3	1266.7	1290.3	1299.7
65°	89.6	108.5	200.5	287.8	832.7	983.7	1040.3	1085.1	1146.4	1170.0	1174.8
67.5°	84.9	103.8	184.0	247.7	740.7	884.6	927.1	969.5	1016.7	1040.3	1042.7
70°	77.8	99.1	169.9	219.4	646.3	771.4	806.7	851.6	889.3	901.1	908.2
72.5°	73.1	92.0	160.4	198.2	549.6	662.9	695.9	721.9	754.9	766.7	766.7
75°	66.1	82.6	150.9	176.9	450.6	542.5	570.8	596.8	622.8	627.5	620.4
77.5°	59.0	73.1	129.7	148.6	351.5	429.4	452.9	467.0	488.3	493.0	495.4
80°	49.5	63.7	101.4	115.6	254.8	316.1	332.6	344.4	363.3	363.3	368.0
82.5°	37.8	49.5	73.1	82.6	172.2	217.0	231.2	238.2	250.0	250.0	250.0
85°	23.6	30.7	47.2	54.3	103.8	132.1	141.6	143.9	153.4	155.7	155.7
87.5°	11.8	16.5	30.7	33.0	54.3	68.4	68.4	73.1	73.1	70.8	68.4
90°	3.7	6.6	9.6	10.3	16.2	24.0	27.9	24.8	18.7	14.0	14.0
92.5°	14.7	39.7	64.8	71.1	99.9	138.3	157.5	138.0	99.1	69.9	67.1
95°	35.3	81.1	126.9	138.4	245.6	388.7	460.3	410.8	311.7	237.3	229.0
97.5°	61.1	101.4	141.8	151.9	330.9	569.5	688.8	657.5	594.8	547.9	531.8
100°	81.0	117.6	154.2	163.3	362.0	626.7	759.1	761.4	766.0	769.3	750.2
102.5°	97.9	132.1	166.2	174.8	376.2	644.7	779.0	818.9	898.7	958.5	942.2
105°	126.6	155.5	184.5	191.7	386.8	646.8	776.8	866.2	1045.2	1179.3	1170.5
107.5°	156.0	183.0	209.9	216.7	388.6	618.0	732.6	857.4	1106.9	1294.1	1296.3
110°	175.8	200.2	224.7	230.7	385.8	592.4	695.8	835.3	1114.3	1323.5	1332.7



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
112.5°	195.4	218.6	241.8	247.6	385.9	570.2	662.3	805.1	1090.6	1304.7	1318.8
115°	224.9	246.3	267.7	273.1	389.5	544.7	622.2	759.8	1034.8	1241.1	1260.6
117.5°	253.9	273.3	292.8	297.7	396.7	528.6	594.6	718.7	967.0	1153.2	1174.8
120°	270.8	289.1	307.5	312.1	402.6	523.3	583.6	697.0	923.8	1093.9	1114.9
122.5°	287.3	305.8	324.3	328.9	411.0	520.4	575.1	677.2	881.6	1034.7	1055.4
125°	312.8	329.6	346.4	350.6	422.4	518.1	565.9	652.7	826.2	956.4	975.5
127.5°	333.4	350.4	367.3	371.6	433.8	516.7	558.2	632.7	781.7	893.4	909.5
130°	344.4	362.7	381.1	385.6	442.1	517.5	555.2	621.5	754.2	853.6	868.5
132.5°	355.8	374.1	392.5	397.0	448.9	518.1	552.7	612.1	730.8	819.8	833.1
135°	372.8	389.5	406.1	410.2	456.2	517.5	548.2	598.0	697.4	771.9	783.5
137.5°	390.1	406.6	423.1	427.2	467.3	520.8	547.5	589.6	673.7	736.7	746.1
140°	404.4	419.6	434.8	438.6	474.1	521.3	544.9	581.3	653.8	708.3	717.0
142.5°	415.4	429.4	443.5	447.0	479.7	523.2	544.9	576.8	640.6	688.5	696.1
145°	432.4	444.6	456.9	460.0	487.1	523.3	541.3	567.3	619.6	658.7	664.4
147.5°	449.3	461.2	473.2	476.1	497.8	526.8	541.3	561.8	602.8	633.6	638.3
150°	460.3	471.1	481.9	484.6	503.5	528.7	541.3	558.6	593.3	619.3	623.1
152.5°	471.7	480.0	488.1	490.1	507.2	529.9	541.3	556.1	585.6	607.9	610.8
155°	488.6	494.7	500.8	502.3	515.3	532.6	541.3	553.1	576.5	594.2	596.2
157.5°	501.1	507.0	512.9	514.4	523.3	535.3	541.3	550.4	568.7	582.4	583.8
160°	509.6	514.2	518.8	520.0	527.1	536.6	541.3	549.1	564.8	576.5	577.3
162.5°	518.1	521.6	524.9	525.8	531.0	537.9	541.3	547.9	561.2	571.1	571.8
165°	527.3	530.4	533.4	534.2	536.6	539.7	541.3	546.0	555.5	562.6	563.4
167.5°	535.8	537.2	538.7	539.1	541.0	543.6	544.9	548.1	554.3	559.0	559.3
170°	541.3	542.7	544.2	544.6	544.7	544.9	544.9	548.1	554.3	559.0	559.0
172.5°	544.2	544.6	544.9	544.9	544.9	544.9	544.9	547.4	552.4	556.0	555.7
175°	548.2	548.2	548.2	548.2	547.2	545.7	544.9	546.5	549.6	551.9	551.9
177.5°	548.2	548.2	548.2	548.2	547.4	546.2	545.7	546.9	549.3	551.2	550.8
180°	548.2	548.2	548.2	548.2	548.2	548.2	548.2	548.2	548.2	548.2	548.2



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**CANDELA DISTRIBUTION (continued):**

	80°	90°
0°	733.6	733.6
2.5°	783.2	778.5
5°	1007.2	1012.0
7.5°	1356.3	1354.0
10°	1686.6	1707.8
12.5°	1927.3	1932.0
15°	2073.5	2082.9
17.5°	2130.1	2132.5
20°	2132.5	2127.7
22.5°	2106.5	2101.8
25°	2075.9	2073.5
27.5°	2047.5	2049.9
30°	2035.7	2042.9
32.5°	2035.7	2047.5
35°	2040.4	2052.2
37.5°	2038.1	2052.2
40°	2028.7	2045.2
42.5°	2002.7	2014.5
45°	1962.6	1976.8
47.5°	1910.7	1920.1
50°	1844.7	1854.1
52.5°	1762.1	1764.4
55°	1663.0	1672.5
57.5°	1556.9	1559.2
60°	1438.9	1446.0
62.5°	1313.9	1313.9
65°	1181.8	1186.6
67.5°	1045.0	1056.8
70°	905.8	908.2
72.5°	769.0	769.0
75°	627.5	629.8
77.5°	493.0	493.0
80°	365.6	368.0
82.5°	252.4	257.2
85°	158.1	158.1
87.5°	73.1	66.1
90°	14.0	14.0
92.5°	56.0	44.9
95°	195.2	161.6
97.5°	467.7	403.6
100°	673.9	597.5
102.5°	876.7	811.3
105°	1135.3	1100.2
107.5°	1304.7	1313.2
110°	1369.3	1406.0





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**CANDELA DISTRIBUTION (continued):**

	80°	90°
112.5°	1375.1	1431.3
115°	1338.6	1416.6
117.5°	1261.4	1347.9
120°	1199.0	1283.1
122.5°	1138.4	1221.3
125°	1051.8	1128.2
127.5°	973.9	1038.4
130°	928.1	987.6
132.5°	886.5	939.8
135°	829.4	875.4
137.5°	783.7	821.3
140°	752.2	787.4
142.5°	726.2	756.5
145°	687.3	710.2
147.5°	657.3	676.3
150°	638.5	653.8
152.5°	622.4	634.0
155°	603.9	611.5
157.5°	589.2	594.6
160°	580.5	583.6
162.5°	574.8	577.7
165°	566.5	569.6
167.5°	560.6	561.9
170°	559.0	559.0
172.5°	554.6	553.4
175°	551.9	551.9
177.5°	549.6	548.2
180°	548.2	548.2



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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	6.25	7.27	7.09	8.14	9.24	19.42	20.45	20.27	21.32	22.41
	3H	6.96	7.89	7.82	8.77	9.89	21.27	22.20	22.13	23.08	24.20
	4H	7.27	8.14	8.14	9.03	10.16	21.93	22.80	22.80	23.69	24.82
	6H	7.53	8.33	8.41	9.23	10.37	22.37	23.17	23.25	24.07	25.21
	8H	7.60	8.37	8.49	9.28	10.43	22.49	23.26	23.38	24.18	25.32
	12H	7.62	8.36	8.52	9.26	10.43	22.57	23.30	23.46	24.21	25.38
4H	2H	13.48	14.35	14.36	15.24	16.37	19.72	20.59	20.59	21.48	22.61
	3H	15.06	15.79	15.95	16.71	17.86	21.78	22.51	22.67	23.43	24.58
	4H	15.16	15.83	16.06	16.75	17.92	22.55	23.22	23.45	24.14	25.31
	6H	15.18	15.76	16.10	16.70	17.88	23.10	23.68	24.02	24.62	25.79
	8H	15.17	15.71	16.08	16.64	17.83	23.27	23.81	24.18	24.74	25.93
	12H	15.13	15.62	16.07	16.57	17.76	23.37	23.86	24.31	24.81	26.00
8H	4H	16.62	17.17	17.54	18.10	19.29	22.63	23.17	23.54	24.10	25.29
	6H	16.87	17.32	17.82	18.30	19.48	23.26	23.71	24.21	24.69	25.87
	8H	16.89	17.29	17.85	18.26	19.46	23.49	23.88	24.44	24.85	26.05
	12H	16.87	17.22	17.83	18.18	19.43	23.64	23.99	24.60	24.95	26.20
12H	4H	16.77	17.26	17.71	18.22	19.41	22.59	23.08	23.53	24.03	25.22
	6H	17.13	17.53	18.09	18.50	19.70	23.25	23.65	24.20	24.61	25.82
	8H	17.21	17.56	18.17	18.52	19.77	23.49	23.84	24.45	24.80	26.05