

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: P936656

Luminaire Tested: SQ4-FB-050U-050D-93050-1D-UNV-STD-W-12-5000K

Issue Date: 12/17/2024

**Test Information**

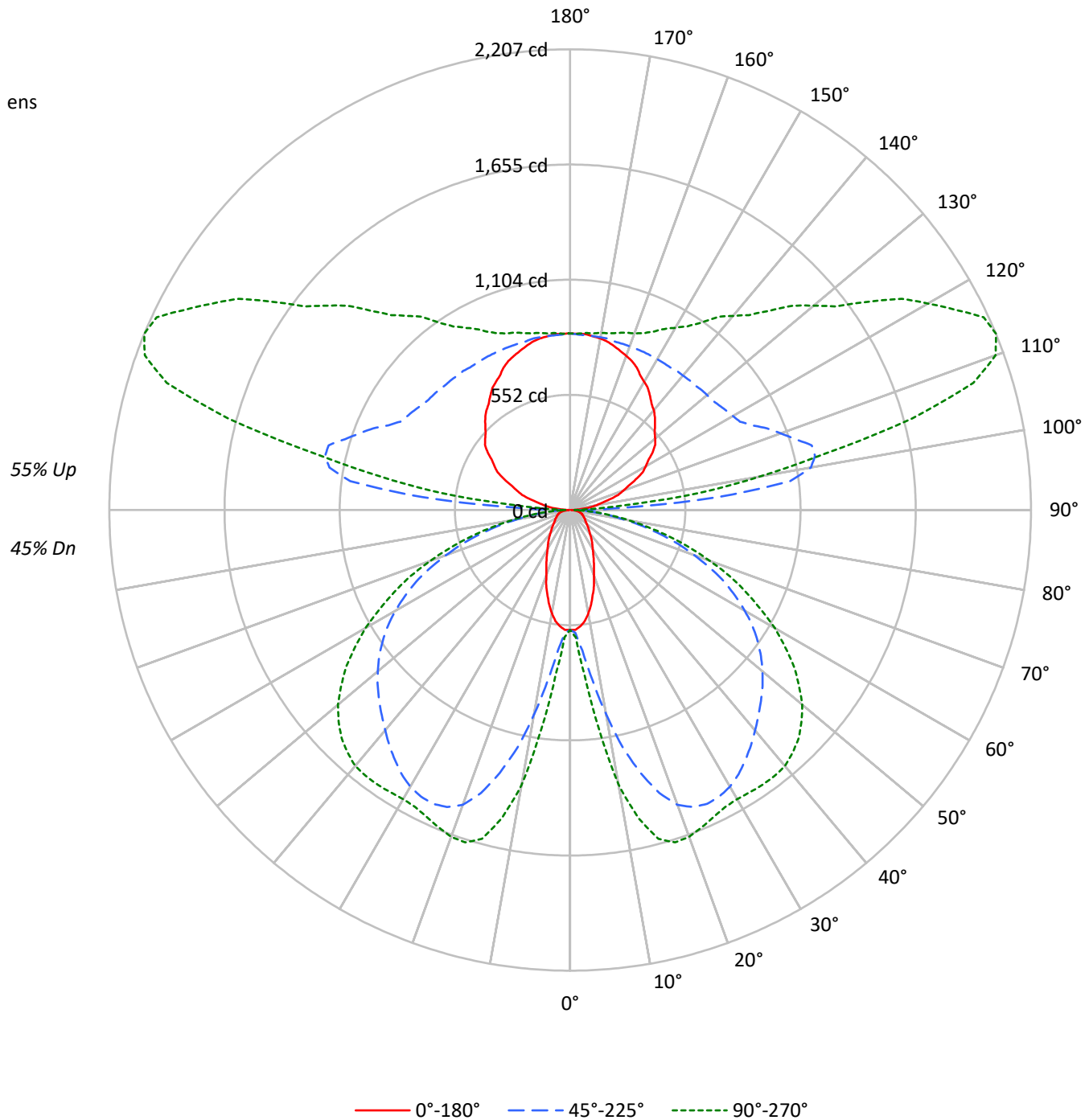
Test Method: LM-79-2019  
Report Number: P936656  
REPORT IS A COMBINATION OF REPORTS P933461 AND P933786  
Test Lab: INNOVATION CENTER  
Issue Date: 12/17/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ4-FB-050U-050D-93050-1D-UNV-STD-W-12-5000K  
Description: CORELITE SQ4 SUSPENDED INDIRECT LED LUMINAIRE WITH Batwing Frosted Continuous Roll L  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 9926.7 lumens  
Efficiency: N/A  
Efficacy: 116.5 lumens/watt  
Spacing Criteria (0/90/45): 0.71 / 2.69 / 2.33  
Luminous Opening: Rectangular w/ Sides (W: 0.29' x L: 12' x H: 0.1')  
CIE Type: General Diffuse  
  
Input Watts (W): 85.2  
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	0
RCR																		
0	106	106	106	106	97	97	97	97	80	80	80	65	65	65	51	51	51	45
1	96	92	88	84	88	84	81	77	70	67	65	57	55	53	45	43	42	37
2	87	79	73	68	79	73	67	63	60	56	53	49	46	44	39	37	35	30
3	79	69	62	56	72	64	57	52	53	48	44	43	39	36	34	31	29	25
4	72	61	53	47	66	56	49	43	47	41	37	38	34	31	30	27	25	21
5	66	54	46	39	60	50	42	37	41	36	31	34	29	26	26	23	21	18
6	60	48	40	34	55	44	37	31	37	31	27	30	26	22	24	21	18	15
7	56	43	35	29	51	40	32	27	33	28	23	27	23	20	21	18	16	13
8	51	39	31	26	47	36	29	24	30	25	21	25	20	17	20	16	14	12
9	48	35	28	23	44	33	26	21	27	22	18	23	18	15	18	15	12	10
10	45	32	25	20	41	30	23	19	25	20	16	21	17	14	17	13	11	9

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

	0°	45°	90°
0°	1776	1776	1776
5°	1736	2053	2388
10°	1575	2994	3958
15°	1339	3913	4780
20°	1091	4535	4871
25°	910	4747	4772
30°	768	4778	4763
35°	679	4700	4886
40°	592	4599	5013
45°	537	4524	5033
50°	493	4458	4950
55°	472	4360	4730
60°	484	4171	4384
65°	505	3882	3908
70°	538	3388	3301
75°	599	2764	2576
80°	660	1920	1736
85°	596	1020	888

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 5033 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	74.3	0.7
10°-20°	329.2	3.3
20°-30°	575.9	5.8
30°-40°	741.3	7.5
40°-50°	828.0	8.3
50°-60°	793.1	8.0
60°-70°	628.5	6.3
70°-80°	369.6	3.7
80°-90°	105.9	1.1
90°-100°	412.1	4.2
100°-110°	1083.5	10.9
110°-120°	1123.5	11.3
120°-130°	901.2	9.1
130°-140°	707.1	7.1
140°-150°	542.7	5.5
150°-160°	390.9	3.9
160°-170°	239.1	2.4
170°-180°	80.8	0.8
0°-30°	979.4	9.9
0°-40°	1720.7	17.3
0°-60°	3341.8	33.7
0°-90°	4445.8	44.8
90°-120°	2619.1	26.4
90°-150°	4770.1	48.1
90°-180°	5481.0	55.2
0°-180°	9926.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	574	574	574	574	574	
5°	560	600	676	764	792	52
15°	419	774	1304	1581	1630	117
25°	268	877	1553	1621	1623	123
35°	181	838	1462	1546	1606	113
45°	124	668	1293	1481	1547	96
55°	89	425	1097	1274	1309	81
65°	70	225	814	916	929	70
75°	52	138	447	491	493	54
85°	18	42	111	122	124	20
90°	6	16	43	22	22	6
95°	54	213	710	366	249	60
105°	195	296	1198	1819	1697	207
115°	347	421	960	1914	2185	342
125°	482	541	873	1475	1740	428
135°	575	633	846	1190	1350	445
145°	667	709	835	1016	1095	418
155°	754	774	835	916	943	346
165°	813	824	835	868	878	229
175°	846	846	840	851	851	80
180°	846	846	846	846	846	



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**CANDELA DISTRIBUTION (FULL):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	574.3	574.3	574.3	574.3	574.3	574.3	574.3	574.3	574.3	574.3	574.3
2.5°	574.3	574.3	578.0	579.8	583.5	585.3	589.1	592.7	603.8	605.7	609.3
5°	559.5	566.9	590.9	600.1	626.0	661.0	675.8	699.8	749.7	764.4	773.7
7.5°	537.3	553.9	613.0	627.8	692.5	784.8	823.5	875.3	954.7	993.4	1024.8
10°	502.3	537.3	642.6	677.7	782.9	923.3	995.2	1067.3	1187.3	1240.9	1261.2
12.5°	463.4	520.7	674.0	722.0	873.4	1078.4	1165.2	1244.6	1381.2	1453.3	1464.3
15°	419.2	496.7	703.5	773.7	969.5	1207.6	1303.7	1401.5	1529.0	1580.6	1593.6
17.5°	380.4	478.2	731.2	805.1	1043.3	1324.0	1421.8	1503.1	1606.5	1641.6	1650.8
20°	332.4	448.8	749.7	845.7	1120.9	1408.9	1503.1	1565.9	1636.1	1658.2	1661.9
22.5°	297.3	417.3	760.8	860.5	1172.5	1460.6	1540.0	1589.9	1637.9	1645.2	1647.1
25°	267.8	382.2	758.9	877.1	1216.9	1492.0	1552.9	1589.9	1617.5	1621.3	1621.3
27.5°	240.1	343.5	751.5	880.8	1250.1	1499.4	1547.4	1573.2	1586.1	1593.6	1593.6
30°	216.0	306.5	733.1	873.4	1264.9	1492.0	1530.8	1543.7	1556.6	1567.7	1573.2
32.5°	197.6	271.5	705.3	858.6	1266.7	1473.5	1501.3	1508.6	1527.0	1552.9	1562.2
35°	181.0	236.4	674.0	838.3	1255.7	1444.0	1462.4	1469.9	1506.8	1545.6	1558.4
37.5°	164.4	210.5	633.4	803.3	1239.0	1408.9	1421.8	1434.7	1492.0	1538.1	1552.9
40°	147.7	188.3	585.3	764.4	1213.2	1366.4	1377.6	1397.8	1473.5	1527.0	1541.8
42.5°	134.8	169.9	533.6	723.9	1180.0	1318.5	1335.1	1364.6	1451.3	1508.6	1525.2
45°	123.7	151.4	478.2	668.4	1137.5	1268.5	1292.6	1333.2	1425.5	1480.9	1495.7
47.5°	112.6	138.5	421.0	611.2	1091.3	1218.7	1250.1	1296.2	1390.4	1444.0	1456.9
50°	103.4	125.5	363.8	550.2	1041.4	1165.2	1202.1	1250.1	1346.2	1396.0	1412.6
52.5°	96.0	114.5	310.2	489.3	984.2	1109.8	1152.3	1202.1	1292.6	1340.6	1351.7
55°	88.6	105.3	264.0	424.7	925.1	1050.7	1096.8	1144.8	1233.5	1274.1	1281.5
57.5°	85.0	97.8	225.3	363.8	862.4	984.2	1035.9	1080.2	1163.3	1194.7	1202.1
60°	79.4	92.3	195.7	312.1	794.0	921.5	965.8	1010.0	1080.2	1106.1	1111.6
62.5°	73.9	88.6	173.5	262.2	723.9	847.6	891.9	932.5	991.6	1010.0	1017.4
65°	70.2	85.0	156.9	225.3	651.8	770.0	814.4	849.4	897.4	915.9	919.5
67.5°	66.4	81.2	144.0	193.9	579.8	692.5	725.7	758.9	795.8	814.4	816.2
70°	60.9	77.5	133.0	171.7	505.9	603.8	631.6	666.6	696.2	705.3	710.9
72.5°	57.3	72.0	125.5	155.1	430.2	518.9	544.7	565.0	590.9	600.1	600.1
75°	51.7	64.6	118.2	138.5	352.7	424.7	446.8	467.2	487.5	491.2	485.6
77.5°	46.2	57.3	101.6	116.4	275.1	336.1	354.5	365.6	382.2	385.9	387.7
80°	38.8	49.8	79.4	90.5	199.4	247.4	260.4	269.6	284.4	284.4	288.1
82.5°	29.5	38.8	57.3	64.6	134.8	169.9	181.0	186.5	195.7	195.7	195.7
85°	18.4	24.0	36.9	42.5	81.2	103.4	110.8	112.6	120.0	121.9	121.9
87.5°	9.3	12.9	24.0	25.9	42.5	53.6	53.6	57.3	57.3	55.4	53.6
90°	5.7	10.2	14.8	15.9	25.0	37.1	43.1	38.4	28.7	21.6	21.6
92.5°	22.7	61.2	99.8	109.5	153.9	213.2	242.8	212.8	152.8	107.8	103.5
95°	54.5	125.1	195.7	213.4	378.8	599.5	709.8	633.4	480.6	366.0	352.9
97.5°	94.2	156.5	218.8	234.4	510.3	878.2	1062.2	1014.0	917.3	844.9	820.2
100°	124.8	181.3	237.8	251.9	558.1	966.4	1170.6	1174.1	1181.2	1186.5	1157.0
102.5°	151.0	203.6	256.3	269.5	580.1	994.2	1201.3	1262.7	1385.8	1478.1	1452.9
105°	195.2	239.8	284.4	295.6	596.3	997.4	1197.9	1335.8	1611.7	1818.6	1805.0
107.5°	240.6	282.2	323.9	334.2	599.4	953.0	1129.8	1322.2	1707.1	1995.7	1999.0
110°	271.3	308.8	346.4	355.8	594.8	913.7	1073.1	1288.2	1718.4	2041.0	2055.2



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
112.5°	301.3	337.1	372.9	381.9	595.0	879.2	1021.4	1241.5	1681.9	2012.1	2033.8
115°	346.7	379.7	412.8	421.0	600.5	839.9	959.5	1171.6	1595.8	1913.9	1944.0
117.5°	391.5	421.5	451.5	459.0	611.6	815.2	917.0	1108.4	1491.2	1778.3	1811.6
120°	417.6	445.9	474.1	481.1	620.7	806.9	900.0	1074.9	1424.6	1687.0	1719.4
122.5°	443.2	471.7	500.1	507.3	633.9	802.5	886.9	1044.3	1359.4	1595.6	1627.5
125°	482.3	508.3	534.3	540.8	651.5	798.9	872.7	1006.5	1274.0	1474.7	1504.2
127.5°	514.1	540.3	566.6	573.1	669.0	796.8	860.8	975.7	1205.4	1377.7	1402.6
130°	531.2	559.4	587.6	594.7	681.8	798.1	856.3	958.5	1163.1	1316.4	1339.4
132.5°	548.7	577.0	605.2	612.3	692.3	798.9	852.3	943.8	1126.9	1264.2	1284.8
135°	574.8	600.5	626.2	632.7	703.6	798.2	845.5	922.2	1075.5	1190.5	1208.2
137.5°	601.5	627.0	652.5	658.8	720.7	803.2	844.4	909.2	1038.8	1136.0	1150.5
140°	623.6	647.1	670.5	676.3	731.0	803.9	840.3	896.3	1008.4	1092.3	1105.9
142.5°	640.6	662.3	684.0	689.5	739.8	806.8	840.3	889.5	987.9	1061.7	1073.3
145°	666.7	685.6	704.5	709.3	751.1	806.8	834.7	874.9	955.4	1015.7	1024.5
147.5°	692.9	711.2	729.7	734.2	767.7	812.4	834.7	866.4	929.7	977.2	984.5
150°	709.8	726.4	743.1	747.3	776.5	815.3	834.7	861.4	914.9	955.0	960.9
152.5°	727.5	740.0	752.7	755.8	782.2	817.2	834.7	857.6	903.2	937.4	941.9
155°	753.5	762.9	772.2	774.5	794.6	821.3	834.7	852.9	889.2	916.4	919.3
157.5°	772.9	782.0	791.0	793.3	807.1	825.6	834.7	848.9	877.0	898.2	900.4
160°	785.9	793.0	800.0	801.8	812.8	827.4	834.7	846.8	871.0	889.2	890.3
162.5°	798.9	804.3	809.6	810.9	818.9	829.4	834.7	844.9	865.3	880.6	881.7
165°	813.2	817.9	822.7	823.9	827.5	832.3	834.7	842.1	856.7	867.6	868.8
167.5°	826.2	828.4	830.7	831.2	834.3	838.3	840.3	845.1	854.7	861.9	862.4
170°	834.7	836.9	839.2	839.8	840.0	840.2	840.3	845.1	854.7	861.9	861.9
172.5°	839.2	839.7	840.2	840.3	840.3	840.3	840.3	844.1	851.7	857.4	856.9
175°	845.5	845.5	845.5	845.5	843.7	841.4	840.3	842.7	847.6	851.2	851.2
177.5°	845.5	845.5	845.5	845.5	844.2	842.4	841.5	843.5	847.2	850.1	849.5
180°	845.5	845.5	845.5	845.5	845.5	845.5	845.5	845.5	845.5	845.5	845.5



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**CANDELA DISTRIBUTION (continued):**

	80°	90°
0°	574.3	574.3
2.5°	613.0	609.3
5°	788.5	792.2
7.5°	1061.8	1059.9
10°	1320.3	1336.9
12.5°	1508.6	1512.3
15°	1623.1	1630.5
17.5°	1667.5	1669.3
20°	1669.3	1665.6
22.5°	1648.9	1645.2
25°	1625.0	1623.1
27.5°	1602.8	1604.7
30°	1593.6	1599.1
32.5°	1593.6	1602.8
35°	1597.2	1606.5
37.5°	1595.4	1606.5
40°	1588.0	1600.9
42.5°	1567.7	1577.0
45°	1536.3	1547.4
47.5°	1495.7	1503.1
50°	1444.0	1451.3
52.5°	1379.4	1381.2
55°	1301.8	1309.2
57.5°	1218.7	1220.5
60°	1126.4	1131.9
62.5°	1028.6	1028.6
65°	925.1	928.8
67.5°	818.0	827.2
70°	709.1	710.9
72.5°	602.0	602.0
75°	491.2	493.0
77.5°	385.9	385.9
80°	286.2	288.1
82.5°	197.6	201.3
85°	123.7	123.7
87.5°	57.3	51.7
90°	21.6	21.6
92.5°	86.4	69.2
95°	301.0	249.1
97.5°	721.3	622.5
100°	1039.3	921.5
102.5°	1352.0	1251.2
105°	1750.9	1696.6
107.5°	2012.0	2025.2
110°	2111.6	2168.1





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**CANDELA DISTRIBUTION (continued):**

	80°	90°
112.5°	2120.6	2207.3
115°	2064.4	2184.7
117.5°	1945.1	2078.5
120°	1849.1	1978.6
122.5°	1755.5	1883.3
125°	1621.9	1739.8
127.5°	1501.9	1601.3
130°	1431.2	1523.0
132.5°	1367.0	1449.2
135°	1279.1	1349.9
137.5°	1208.5	1266.5
140°	1160.1	1214.3
142.5°	1120.0	1166.7
145°	1059.8	1095.2
147.5°	1013.7	1043.0
150°	984.6	1008.4
152.5°	959.8	977.7
155°	931.3	943.1
157.5°	908.6	917.0
160°	895.2	900.0
162.5°	886.3	890.9
165°	873.6	878.4
167.5°	864.5	866.5
170°	861.9	861.9
172.5°	855.2	853.5
175°	851.2	851.2
177.5°	847.5	845.5
180°	845.5	845.5



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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	2.51	3.36	3.50	4.37	5.71	15.70	16.55	16.70	17.56	18.90
	3H	3.21	3.98	4.22	5.00	6.36	17.55	18.31	18.55	19.33	20.69
	4H	3.51	4.24	4.53	5.26	6.63	18.19	18.92	19.21	19.94	21.31
	6H	3.76	4.43	4.79	5.46	6.84	18.63	19.30	19.66	20.32	21.70
	8H	3.83	4.47	4.86	5.51	6.89	18.75	19.39	19.78	20.43	21.81
	12H	3.85	4.45	4.88	5.49	6.89	18.82	19.43	19.86	20.46	21.87
4H	2H	9.73	10.46	10.76	11.48	12.85	15.98	16.70	17.00	17.72	19.09
	3H	11.30	11.90	12.33	12.95	14.34	18.02	18.63	19.06	19.68	21.06
	4H	11.39	11.95	12.43	12.99	14.39	18.79	19.35	19.83	20.39	21.80
	6H	11.40	11.88	12.45	12.95	14.35	19.34	19.82	20.39	20.88	22.28
	8H	11.38	11.83	12.43	12.88	14.30	19.50	19.95	20.55	21.01	22.42
	12H	11.33	11.74	12.40	12.81	14.23	19.60	20.00	20.67	21.08	22.50
8H	4H	12.84	13.29	13.89	14.35	15.76	18.85	19.30	19.90	20.36	21.78
	6H	13.08	13.45	14.16	14.55	15.97	19.49	19.86	20.56	20.96	22.37
	8H	13.10	13.43	14.18	14.51	15.94	19.71	20.04	20.79	21.12	22.55
	12H	13.07	13.35	14.15	14.43	15.91	19.86	20.14	20.94	21.22	22.70
12H	4H	12.98	13.39	14.05	14.46	15.88	18.81	19.21	19.88	20.28	21.71
	6H	13.34	13.67	14.42	14.75	16.18	19.47	19.80	20.55	20.88	22.31
	8H	13.41	13.70	14.50	14.78	16.25	19.70	19.99	20.79	21.07	22.54