

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: NEO-RAY

Report Number: P1051134

Luminaire Tested: S122DR-B1005DB2750-4F0-XX-W2A-W_3500K

Issue Date: 7/9/2025

Test Information

Test Method: LM-79-2019
Report Number: P1051134
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2308-143-1)
Test Lab: INNOVATION CENTER
Issue Date: 7/9/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122DR-B1005DB2750-4F0-XX-W2A-W_3500K
Description: Define 2 Direct Recessed with 3500K BioUP LEDs {m-DER=0.721} {m-EER=0.792}
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4602.0 lumens
Efficiency: N/A
Efficacy: 75.1 lumens/watt
Spacing Criteria (0/90/45): 1.11 / 0.9 / 1.12
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Direct

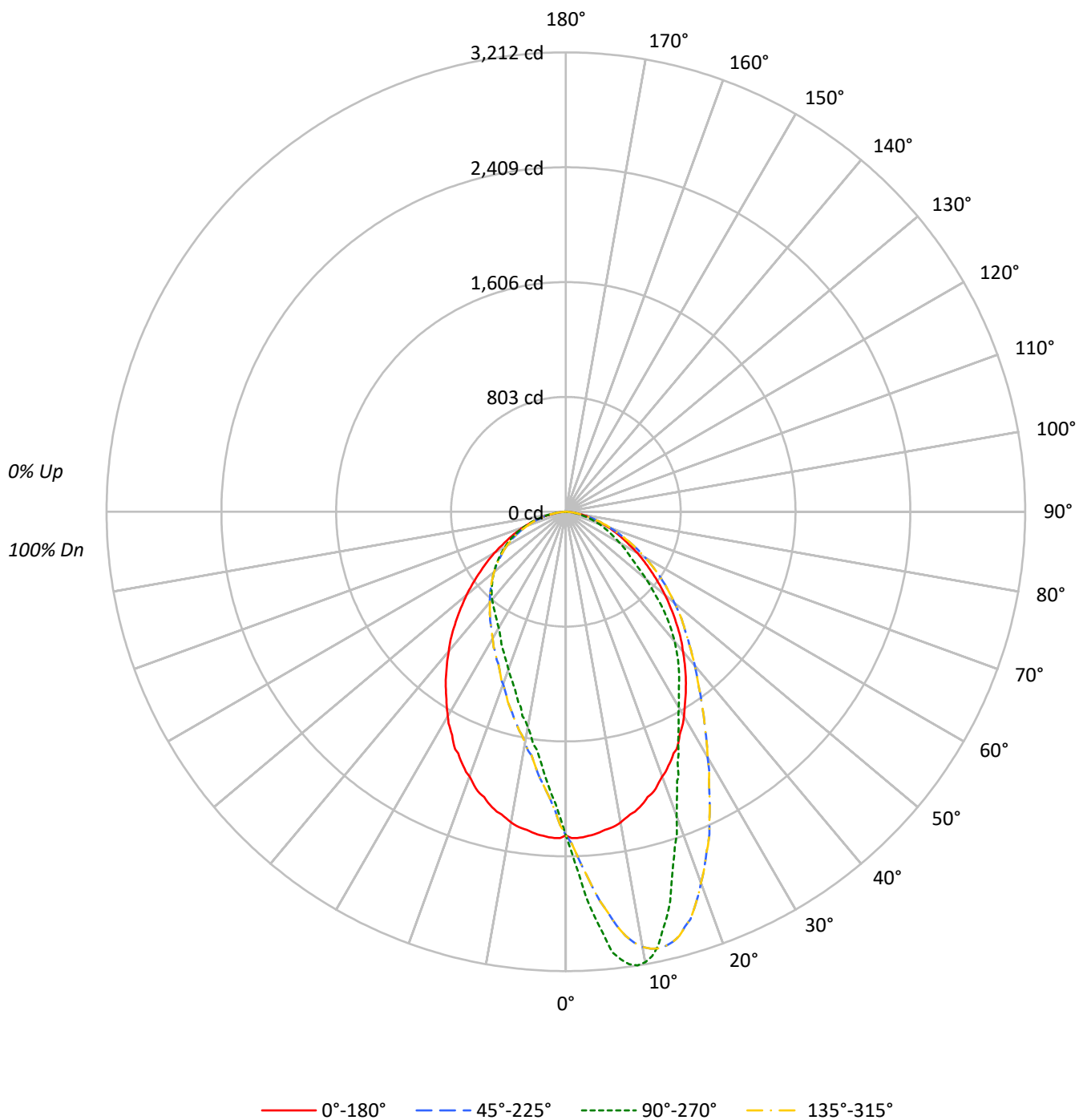
Input Watts (W): 61.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100		
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86		
2	101	94	87	82	98	92	86	81	88	83	79	85	81	78	82	79	76	74		
3	93	83	76	70	91	82	75	69	79	73	68	76	71	67	74	69	66	64		
4	86	75	67	60	83	73	66	60	71	64	59	69	63	58	67	62	58	56		
5	79	67	59	53	77	66	58	53	64	57	52	62	56	52	61	55	51	49		
6	74	61	53	47	72	60	52	47	59	52	46	57	51	46	55	50	46	44		
7	69	56	48	42	67	55	47	42	54	47	42	52	46	41	51	45	41	39		
8	64	51	43	38	63	51	43	38	50	43	38	48	42	37	47	41	37	35		
9	60	48	40	35	59	47	40	34	46	39	34	45	39	34	44	38	34	32		
10	57	44	37	32	55	44	36	32	43	36	31	42	36	31	41	35	31	30		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	35803	35803	35803	35803
5°	35989	46956	35989	28802
10°	35456	51397	35456	24586
15°	34493	46236	34493	21807
20°	33178	38153	33178	19771
25°	32011	32608	32011	18327
30°	30175	28839	30175	17161
35°	28298	26675	28298	16673
40°	26340	24412	26340	16574
45°	24360	21506	24360	16355
50°	22319	18107	22319	16155
55°	20163	15231	20163	15874
60°	18308	13730	18308	15551
65°	16304	12461	16304	15256
70°	14676	11223	14676	14463
75°	12550	9792	12550	13217
80°	10200	8222	10200	11057
85°	7628	6211	7628	7901

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°

Vertical Angle: 45°

Luminance: 38835 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	222.6	4.8
10°-20°	610.9	13.3
20°-30°	801.2	17.4
30°-40°	846.8	18.4
40°-50°	786.2	17.1
50°-60°	629.2	13.7
60°-70°	430.4	9.4
70°-80°	222.1	4.8
80°-90°	52.8	1.1
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1634.7	35.5
0°-40°	2481.4	53.9
0°-60°	3896.9	84.7
0°-90°	4602.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4602.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2262	2262	2262	2262	2262	
5°	2265	2955	2265	1813	2265	214
15°	2105	2821	2105	1331	2105	592
25°	1833	1867	1833	1049	1833	838
35°	1464	1380	1464	863	1464	914
45°	1088	961	1088	731	1088	840
55°	731	552	731	575	731	657
65°	435	333	435	407	435	434
75°	205	160	205	216	205	220
85°	42	34	42	44	42	52
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	2261.8	2261.8	2261.8	2261.8	2261.8	2261.8	2261.8	2261.8	2261.8	2261.8	2261.8
1°	2282.0	2322.4	2319.3	2373.7	2386.2	2373.7	2319.3	2322.4	2282.0	2236.9	2195.0
2°	2282.0	2373.7	2415.7	2501.2	2526.1	2501.2	2415.7	2373.7	2282.0	2185.6	2098.6
3°	2278.9	2418.8	2518.3	2636.5	2695.5	2636.5	2518.3	2418.8	2278.9	2139.0	2019.3
4°	2271.1	2465.5	2622.5	2779.5	2832.3	2779.5	2622.5	2465.5	2271.1	2093.9	1958.7
5°	2264.9	2524.5	2731.3	2920.9	2955.1	2920.9	2731.3	2524.5	2264.9	2050.4	1899.6
6°	2254.0	2583.6	2818.3	3026.6	3096.6	3026.6	2818.3	2583.6	2254.0	2008.4	1846.8
7°	2240.1	2622.5	2916.3	3110.6	3154.1	3110.6	2916.3	2622.5	2240.1	1960.2	1779.9
8°	2233.8	2686.2	2994.0	3177.4	3194.5	3177.4	2994.0	2686.2	2233.8	1915.2	1720.8
9°	2223.0	2712.6	3050.0	3197.6	3211.6	3197.6	3050.0	2712.6	2223.0	1891.8	1691.3
10°	2205.9	2753.0	3090.4	3203.9	3197.6	3203.9	3090.4	2753.0	2205.9	1843.7	1641.6
11°	2184.1	2799.7	3112.1	3180.5	3165.0	3180.5	3112.1	2799.7	2184.1	1804.8	1596.5
12°	2163.9	2832.3	3121.5	3137.0	3102.8	3137.0	3121.5	2832.3	2163.9	1770.6	1565.4
13°	2151.4	2846.3	3115.2	3082.6	3006.4	3082.6	3115.2	2846.3	2151.4	1731.7	1526.5
14°	2129.7	2877.4	3098.1	2998.7	2919.4	2998.7	3098.1	2877.4	2129.7	1688.2	1490.8
15°	2104.8	2886.7	3070.2	2913.2	2821.4	2913.2	3070.2	2886.7	2104.8	1652.4	1453.5
16°	2075.3	2897.6	3018.9	2807.5	2684.6	2807.5	3018.9	2897.6	2075.3	1612.0	1419.3
17°	2059.7	2903.8	2980.0	2703.3	2571.2	2703.3	2980.0	2903.8	2059.7	1580.9	1389.7
18°	2034.9	2899.2	2910.0	2616.2	2467.0	2616.2	2910.0	2899.2	2034.9	1545.2	1346.2
19°	2000.7	2888.3	2840.1	2505.9	2384.6	2505.9	2840.1	2888.3	2000.7	1511.0	1313.6
20°	1969.6	2883.6	2762.4	2404.8	2264.9	2404.8	2762.4	2883.6	1969.6	1479.9	1282.5
21°	1947.8	2868.1	2690.9	2308.5	2165.4	2308.5	2690.9	2868.1	1947.8	1450.4	1259.2
22.5°	1899.6	2838.5	2571.2	2160.8	2034.9	2160.8	2571.2	2838.5	1899.6	1400.6	1207.9
23°	1885.6	2829.2	2540.1	2126.6	2019.3	2126.6	2540.1	2829.2	1885.6	1389.7	1190.8
24°	1849.9	2799.7	2467.0	2034.9	1921.4	2034.9	2467.0	2799.7	1849.9	1355.5	1162.8
25°	1832.8	2771.7	2376.9	1960.2	1867.0	1960.2	2376.9	2771.7	1832.8	1324.4	1144.1
26°	1795.5	2731.3	2296.0	1898.1	1790.8	1898.1	2296.0	2731.3	1795.5	1296.5	1114.6
27°	1751.9	2701.7	2212.1	1825.0	1734.8	1825.0	2212.1	2701.7	1751.9	1266.9	1091.3
28°	1720.8	2653.6	2131.2	1767.5	1680.4	1767.5	2131.2	2653.6	1720.8	1234.3	1074.2
29°	1691.3	2616.2	2065.9	1700.6	1624.5	1700.6	2065.9	2616.2	1691.3	1206.3	1047.7
30°	1650.9	2566.5	1983.6	1647.8	1577.8	1647.8	1983.6	2566.5	1650.9	1173.7	1024.4
32.5°	1554.5	2448.4	1815.7	1529.6	1470.6	1529.6	1815.7	2448.4	1554.5	1108.4	968.5
35°	1464.4	2316.2	1661.8	1419.3	1380.4	1419.3	1661.8	2316.2	1464.4	1038.4	923.4
37.5°	1369.5	2177.9	1521.9	1322.9	1285.6	1322.9	1521.9	2177.9	1369.5	974.7	872.1
40°	1274.7	2041.1	1402.2	1231.2	1181.4	1231.2	1402.2	2041.1	1274.7	912.5	827.0
42.5°	1186.1	1881.0	1285.6	1134.8	1077.3	1134.8	1285.6	1881.0	1186.1	853.4	783.5
45°	1088.2	1734.8	1181.4	1033.8	960.7	1033.8	1181.4	1734.8	1088.2	797.5	739.9
47.5°	994.9	1584.0	1091.3	932.7	839.4	932.7	1091.3	1584.0	994.9	741.5	698.0
50°	906.3	1437.9	990.2	819.2	735.3	819.2	990.2	1437.9	906.3	690.2	654.4
52.5°	816.1	1301.1	901.6	716.6	632.7	716.6	901.6	1301.1	816.1	643.6	612.5
55°	730.6	1158.1	813.0	617.1	551.9	617.1	813.0	1158.1	730.6	589.2	564.3
57.5°	651.3	1021.3	726.0	539.4	495.9	539.4	726.0	1021.3	651.3	536.3	520.8
60°	578.3	895.4	640.5	467.9	433.7	467.9	640.5	895.4	578.3	485.0	477.2
62.5°	499.0	781.9	559.6	407.3	377.7	407.3	559.6	781.9	499.0	435.3	432.2
65°	435.3	666.9	475.7	352.9	332.7	352.9	475.7	666.9	435.3	385.5	384.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	371.5	558.1	402.6	301.6	286.0	301.6	402.6	558.1	371.5	335.8	335.8
70°	317.1	460.1	332.7	254.9	242.5	254.9	332.7	460.1	317.1	286.0	287.6
72.5°	256.5	370.0	270.5	208.3	197.4	208.3	270.5	370.0	256.5	239.4	244.1
75°	205.2	292.2	213.0	167.9	160.1	167.9	213.0	292.2	205.2	191.2	197.4
77.5°	157.0	214.5	157.0	129.0	122.8	129.0	157.0	214.5	157.0	149.2	155.5
80°	111.9	150.8	111.9	91.7	90.2	91.7	111.9	150.8	111.9	107.3	115.0
82.5°	74.6	96.4	73.1	62.2	59.1	62.2	73.1	96.4	74.6	73.1	76.2
85°	42.0	52.9	40.4	35.8	34.2	35.8	40.4	52.9	42.0	42.0	45.1
87.5°	18.7	20.2	17.1	15.5	14.0	15.5	17.1	20.2	18.7	20.2	20.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2261.8	2261.8	2261.8	2261.8	2261.8	2261.8
1°	2168.5	2146.8	2168.5	2195.0	2236.9	2282.0
2°	2075.3	2045.7	2075.3	2098.6	2185.6	2282.0
3°	1977.3	1972.7	1977.3	2019.3	2139.0	2278.9
4°	1913.6	1891.8	1913.6	1958.7	2093.9	2271.1
5°	1837.4	1812.6	1837.4	1899.6	2050.4	2264.9
6°	1772.1	1737.9	1772.1	1846.8	2008.4	2254.0
7°	1699.1	1674.2	1699.1	1779.9	1960.2	2240.1
8°	1671.1	1641.6	1671.1	1720.8	1915.2	2233.8
9°	1608.9	1576.3	1608.9	1691.3	1891.8	2223.0
10°	1570.1	1529.6	1570.1	1641.6	1843.7	2205.9
11°	1523.4	1484.6	1523.4	1596.5	1804.8	2184.1
12°	1495.4	1461.2	1495.4	1565.4	1770.6	2163.9
13°	1445.7	1402.2	1445.7	1526.5	1731.7	2151.4
14°	1409.9	1372.6	1409.9	1490.8	1688.2	2129.7
15°	1364.9	1330.7	1364.9	1453.5	1652.4	2104.8
16°	1335.3	1290.2	1335.3	1419.3	1612.0	2075.3
17°	1290.2	1260.7	1290.2	1389.7	1580.9	2059.7
18°	1257.6	1229.6	1257.6	1346.2	1545.2	2034.9
19°	1234.3	1201.6	1234.3	1313.6	1511.0	2000.7
20°	1201.6	1173.7	1201.6	1282.5	1479.9	1969.6
21°	1170.5	1145.7	1170.5	1259.2	1450.4	1947.8
22.5°	1141.0	1106.8	1141.0	1207.9	1400.6	1899.6
23°	1123.9	1095.9	1123.9	1190.8	1389.7	1885.6
24°	1103.7	1071.1	1103.7	1162.8	1355.5	1849.9
25°	1077.3	1049.3	1077.3	1144.1	1324.4	1832.8
26°	1054.0	1027.5	1054.0	1114.6	1296.5	1795.5
27°	1030.6	998.0	1030.6	1091.3	1266.9	1751.9
28°	1010.4	979.3	1010.4	1074.2	1234.3	1720.8
29°	984.0	954.5	984.0	1047.7	1206.3	1691.3
30°	965.4	938.9	965.4	1024.4	1173.7	1650.9
32.5°	914.1	898.5	914.1	968.5	1108.4	1554.5
35°	870.5	862.8	870.5	923.4	1038.4	1464.4
37.5°	837.9	831.7	837.9	872.1	974.7	1369.5
40°	800.6	802.1	800.6	827.0	912.5	1274.7
42.5°	764.8	767.9	764.8	783.5	853.4	1186.1
45°	730.6	730.6	730.6	739.9	797.5	1088.2
47.5°	691.8	694.9	691.8	698.0	741.5	994.9
50°	652.9	656.0	652.9	654.4	690.2	906.3
52.5°	612.5	615.6	612.5	612.5	643.6	816.1
55°	569.0	575.2	569.0	564.3	589.2	730.6
57.5°	523.9	531.6	523.9	520.8	536.3	651.3
60°	483.5	491.2	483.5	477.2	485.0	578.3
62.5°	441.5	449.3	441.5	432.2	435.3	499.0
65°	398.0	407.3	398.0	384.0	385.5	435.3



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	351.3	359.1	351.3	335.8	335.8	371.5
70°	306.2	312.5	306.2	287.6	286.0	317.1
72.5°	259.6	265.8	259.6	244.1	239.4	256.5
75°	211.4	216.1	211.4	197.4	191.2	205.2
77.5°	167.9	167.9	167.9	155.5	149.2	157.0
80°	121.3	121.3	121.3	115.0	107.3	111.9
82.5°	80.8	80.8	80.8	76.2	73.1	74.6
85°	45.1	43.5	45.1	45.1	42.0	42.0
87.5°	17.1	18.7	17.1	20.2	20.2	18.7
90°	0.0	0.0	0.0	0.0	0.0	0.0

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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	23.29	24.82	23.66	25.13	25.44	20.61	22.13	20.97	22.44	22.76
	3H	24.51	25.88	24.89	26.20	26.57	21.94	23.30	22.31	23.63	23.99
	4H	24.91	26.19	25.30	26.54	26.91	22.39	23.67	22.79	24.02	24.40
	6H	25.15	26.33	25.56	26.70	27.09	22.70	23.88	23.11	24.25	24.64
	8H	25.21	26.33	25.63	26.72	27.12	22.78	23.90	23.20	24.29	24.70
	12H	25.23	26.31	25.66	26.69	27.12	22.82	23.90	23.25	24.28	24.71
4H	2H	23.58	24.86	23.98	25.21	25.59	21.57	22.85	21.97	23.20	23.58
	3H	25.08	26.14	25.49	26.54	26.94	23.04	24.10	23.45	24.50	24.90
	4H	25.63	26.59	26.07	27.01	27.45	23.55	24.51	23.99	24.93	25.37
	6H	26.00	26.84	26.46	27.28	27.74	23.93	24.76	24.38	25.20	25.66
	8H	26.09	26.87	26.56	27.32	27.78	24.03	24.81	24.49	25.25	25.72
	12H	26.15	26.84	26.63	27.32	27.79	24.09	24.79	24.57	25.26	25.74
8H	4H	25.77	26.55	26.24	27.00	27.47	23.96	24.74	24.42	25.18	25.65
	6H	26.24	26.88	26.73	27.37	27.85	24.41	25.05	24.90	25.54	26.02
	8H	26.39	26.96	26.90	27.47	27.96	24.55	25.13	25.07	25.64	26.13
	12H	26.49	27.00	27.00	27.49	28.06	24.66	25.17	25.17	25.66	26.22
12H	4H	25.77	26.47	26.25	26.95	27.42	24.00	24.70	24.49	25.18	25.65
	6H	26.24	26.82	26.76	27.33	27.82	24.47	25.05	24.98	25.56	26.04
	8H	26.43	26.94	26.94	27.43	28.00	24.66	25.17	25.17	25.66	26.22