

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: P1051135

Luminaire Tested: S122DR-B1005DB2750-4F0-XX-W2A-W_4000K

Issue Date: 7/9/2025

Test Information

Test Method: LM-79-2019
Report Number: P1051135
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_4000K
Description: Define 2 Direct Recessed with 4000K BioUP LEDs {m-DER=0.865} {m-EER=0.951}
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4556.0 lumens
Efficiency: N/A
Efficacy: 74.3 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

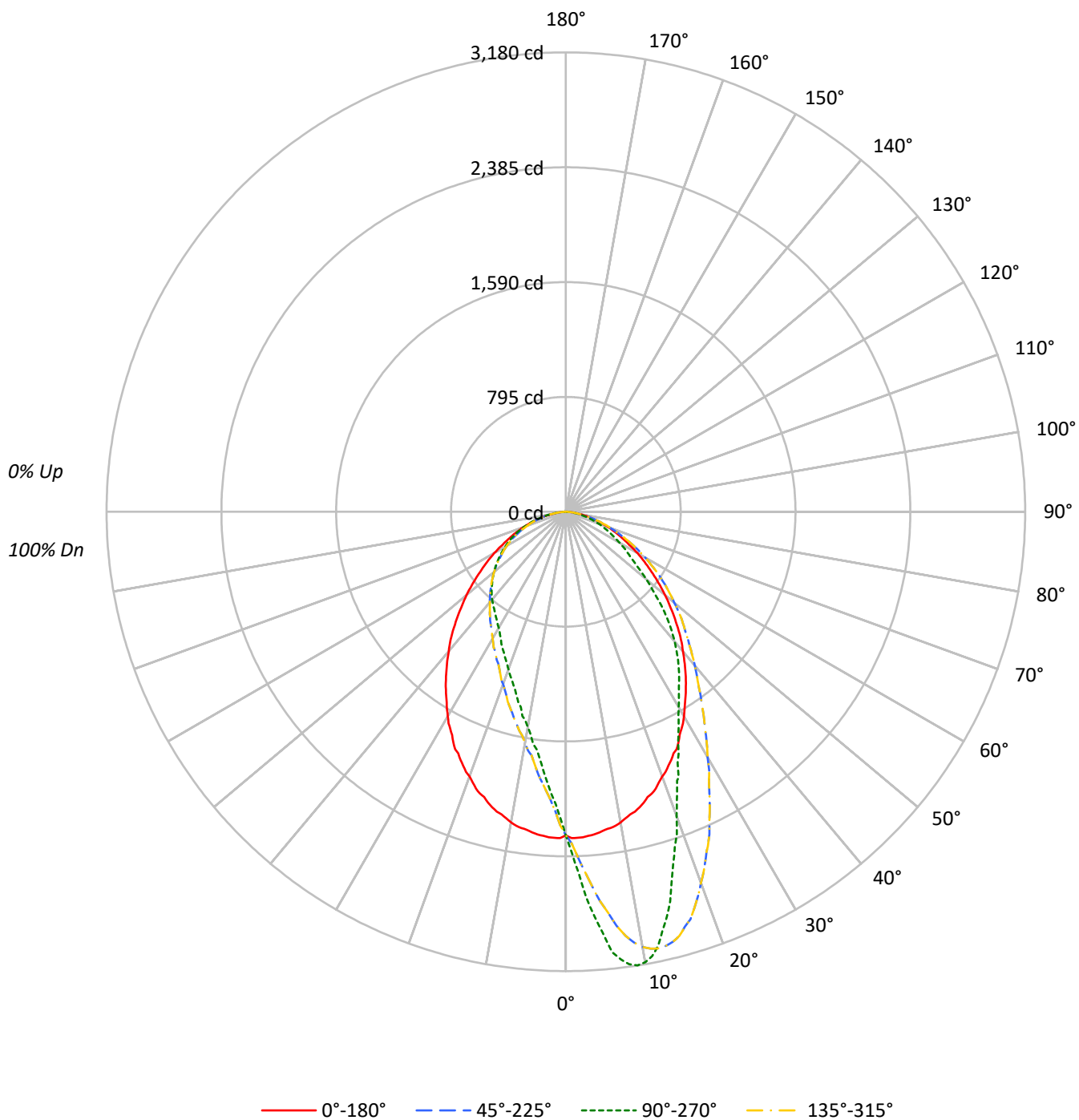
Input Watts (W): 61.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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				0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0			
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°	35445	35445	35445	35445
5°	35630	46487	35630	28513
10°	35101	50884	35101	24342
15°	34149	45774	34149	21589
20°	32846	37772	32846	19572
25°	31691	32282	31691	18143
30°	29874	28552	29874	16989
35°	28014	26408	28014	16505
40°	26078	24168	26078	16409
45°	24116	21291	24116	16192
50°	22094	17925	22094	15992
55°	19961	15077	19961	15714
60°	18125	13594	18125	15396
65°	16139	12334	16139	15102
70°	14532	11112	14532	14315
75°	12422	9694	12422	13082
80°	10100	8140	10100	10939
85°	7555	6157	7555	7828

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°

Vertical Angle: 45°

Luminance: 38448 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	220.4	4.8
10°-20°	604.8	13.3
20°-30°	793.1	17.4
30°-40°	838.3	18.4
40°-50°	778.3	17.1
50°-60°	622.9	13.7
60°-70°	426.0	9.4
70°-80°	219.8	4.8
80°-90°	52.2	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°	1618.3	35.5
0°-40°	2456.6	53.9
0°-60°	3857.9	84.7
0°-90°	4556.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4556.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2239	2239	2239	2239	2239	
5°	2242	2926	2242	1794	2242	212
15°	2084	2793	2084	1317	2084	586
25°	1814	1848	1814	1039	1814	830
35°	1450	1367	1450	854	1450	905
45°	1077	951	1077	723	1077	832
55°	723	546	723	569	723	650
65°	431	329	431	403	431	429
75°	203	158	203	214	203	217
85°	42	34	42	43	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°	2239.2	2239.2	2239.2	2239.2	2239.2	2239.2	2239.2	2239.2	2239.2	2239.2	2239.2
1°	2259.2	2299.2	2296.2	2350.0	2362.3	2350.0	2296.2	2299.2	2259.2	2214.6	2173.0
2°	2259.2	2350.0	2391.6	2476.2	2500.8	2476.2	2391.6	2350.0	2259.2	2163.8	2077.6
3°	2256.1	2394.6	2493.1	2610.1	2668.6	2610.1	2493.1	2394.6	2256.1	2117.6	1999.1
4°	2248.4	2440.8	2596.3	2751.7	2804.0	2751.7	2596.3	2440.8	2248.4	2073.0	1939.1
5°	2242.3	2499.3	2704.0	2891.7	2925.6	2891.7	2704.0	2499.3	2242.3	2029.9	1880.6
6°	2231.5	2557.8	2790.2	2996.4	3065.6	2996.4	2790.2	2557.8	2231.5	1988.4	1828.3
7°	2217.7	2596.3	2887.1	3079.5	3122.6	3079.5	2887.1	2596.3	2217.7	1940.6	1762.1
8°	2211.5	2659.3	2964.1	3145.7	3162.6	3145.7	2964.1	2659.3	2211.5	1896.0	1703.6
9°	2200.7	2685.5	3019.5	3165.7	3179.5	3165.7	3019.5	2685.5	2200.7	1872.9	1674.4
10°	2183.8	2725.5	3059.5	3171.8	3165.7	3171.8	3059.5	2725.5	2183.8	1825.2	1625.2
11°	2162.3	2771.7	3081.0	3148.7	3133.4	3148.7	3081.0	2771.7	2162.3	1786.7	1580.5
12°	2142.3	2804.0	3090.3	3105.7	3071.8	3105.7	3090.3	2804.0	2142.3	1752.9	1549.7
13°	2129.9	2817.9	3084.1	3051.8	2976.4	3051.8	3084.1	2817.9	2129.9	1714.4	1511.3
14°	2108.4	2848.6	3067.2	2968.7	2890.2	2968.7	3067.2	2848.6	2108.4	1671.3	1475.9
15°	2083.8	2857.9	3039.5	2884.0	2793.2	2884.0	3039.5	2857.9	2083.8	1635.9	1438.9
16°	2054.5	2868.6	2988.7	2779.4	2657.8	2779.4	2988.7	2868.6	2054.5	1595.9	1405.1
17°	2039.1	2874.8	2950.2	2676.3	2545.5	2676.3	2950.2	2874.8	2039.1	1565.1	1375.8
18°	2014.5	2870.2	2881.0	2590.1	2442.4	2590.1	2881.0	2870.2	2014.5	1529.7	1332.8
19°	1980.7	2859.4	2811.7	2480.8	2360.8	2480.8	2811.7	2859.4	1980.7	1495.9	1300.4
20°	1949.9	2854.8	2734.8	2380.8	2242.3	2380.8	2734.8	2854.8	1949.9	1465.1	1269.7
21°	1928.3	2839.4	2664.0	2285.4	2143.8	2285.4	2664.0	2839.4	1928.3	1435.9	1246.6
22.5°	1880.6	2810.2	2545.5	2139.2	2014.5	2139.2	2545.5	2810.2	1880.6	1386.6	1195.8
23°	1866.8	2800.9	2514.7	2105.3	1999.1	2105.3	2514.7	2800.9	1866.8	1375.8	1178.9
24°	1831.4	2771.7	2442.4	2014.5	1902.2	2014.5	2442.4	2771.7	1831.4	1342.0	1151.2
25°	1814.5	2744.0	2353.1	1940.6	1848.3	1940.6	2353.1	2744.0	1814.5	1311.2	1132.7
26°	1777.5	2704.0	2273.1	1879.1	1772.9	1879.1	2273.1	2704.0	1777.5	1283.5	1103.4
27°	1734.4	2674.7	2190.0	1806.8	1717.5	1806.8	2190.0	2674.7	1734.4	1254.3	1080.4
28°	1703.6	2627.0	2109.9	1749.8	1663.6	1749.8	2109.9	2627.0	1703.6	1221.9	1063.4
29°	1674.4	2590.1	2045.3	1683.6	1608.2	1683.6	2045.3	2590.1	1674.4	1194.2	1037.3
30°	1634.4	2540.8	1963.7	1631.3	1562.1	1631.3	1963.7	2540.8	1634.4	1161.9	1014.2
32.5°	1539.0	2423.9	1797.5	1514.4	1455.9	1514.4	1797.5	2423.9	1539.0	1097.3	958.8
35°	1449.7	2293.1	1645.2	1405.1	1366.6	1405.1	1645.2	2293.1	1449.7	1028.0	914.2
37.5°	1355.8	2156.1	1506.7	1309.7	1272.7	1309.7	1506.7	2156.1	1355.8	964.9	863.4
40°	1262.0	2020.7	1388.2	1218.9	1169.6	1218.9	1388.2	2020.7	1262.0	903.4	818.7
42.5°	1174.2	1862.2	1272.7	1123.5	1066.5	1123.5	1272.7	1862.2	1174.2	844.9	775.6
45°	1077.3	1717.5	1169.6	1023.4	951.1	1023.4	1169.6	1717.5	1077.3	789.5	732.6
47.5°	984.9	1568.2	1080.4	923.4	831.0	923.4	1080.4	1568.2	984.9	734.1	691.0
50°	897.2	1423.6	980.3	811.0	727.9	811.0	980.3	1423.6	897.2	683.3	647.9
52.5°	808.0	1288.1	892.6	709.5	626.4	709.5	892.6	1288.1	808.0	637.1	606.4
55°	723.3	1146.5	804.9	611.0	546.3	611.0	804.9	1146.5	723.3	583.3	558.6
57.5°	644.8	1011.1	718.7	534.0	490.9	534.0	718.7	1011.1	644.8	530.9	515.6
60°	572.5	886.4	634.1	463.2	429.4	463.2	634.1	886.4	572.5	480.2	472.5
62.5°	494.0	774.1	554.0	403.2	374.0	403.2	554.0	774.1	494.0	430.9	427.8
65°	430.9	660.2	470.9	349.3	329.3	349.3	470.9	660.2	430.9	381.7	380.1



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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°	367.8	552.5	398.6	298.6	283.2	298.6	398.6	552.5	367.8	332.4	332.4
70°	314.0	455.5	329.3	252.4	240.1	252.4	329.3	455.5	314.0	283.2	284.7
72.5°	253.9	366.3	267.8	206.2	195.4	206.2	267.8	366.3	253.9	237.0	241.6
75°	203.1	289.3	210.8	166.2	158.5	166.2	210.8	289.3	203.1	189.3	195.4
77.5°	155.4	212.4	155.4	127.7	121.6	127.7	155.4	212.4	155.4	147.7	153.9
80°	110.8	149.3	110.8	90.8	89.3	90.8	110.8	149.3	110.8	106.2	113.9
82.5°	73.9	95.4	72.3	61.6	58.5	61.6	72.3	95.4	73.9	72.3	75.4
85°	41.6	52.3	40.0	35.4	33.9	35.4	40.0	52.3	41.6	41.6	44.6
87.5°	18.5	20.0	16.9	15.4	13.9	15.4	16.9	20.0	18.5	20.0	20.0
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°	2239.2	2239.2	2239.2	2239.2	2239.2	2239.2
1°	2146.9	2125.3	2146.9	2173.0	2214.6	2259.2
2°	2054.5	2025.3	2054.5	2077.6	2163.8	2259.2
3°	1957.6	1953.0	1957.6	1999.1	2117.6	2256.1
4°	1894.5	1872.9	1894.5	1939.1	2073.0	2248.4
5°	1819.1	1794.4	1819.1	1880.6	2029.9	2242.3
6°	1754.4	1720.6	1754.4	1828.3	1988.4	2231.5
7°	1682.1	1657.5	1682.1	1762.1	1940.6	2217.7
8°	1654.4	1625.2	1654.4	1703.6	1896.0	2211.5
9°	1592.8	1560.5	1592.8	1674.4	1872.9	2200.7
10°	1554.4	1514.4	1554.4	1625.2	1825.2	2183.8
11°	1508.2	1469.7	1508.2	1580.5	1786.7	2162.3
12°	1480.5	1446.6	1480.5	1549.7	1752.9	2142.3
13°	1431.2	1388.2	1431.2	1511.3	1714.4	2129.9
14°	1395.8	1358.9	1395.8	1475.9	1671.3	2108.4
15°	1351.2	1317.4	1351.2	1438.9	1635.9	2083.8
16°	1322.0	1277.3	1322.0	1405.1	1595.9	2054.5
17°	1277.3	1248.1	1277.3	1375.8	1565.1	2039.1
18°	1245.0	1217.3	1245.0	1332.8	1529.7	2014.5
19°	1221.9	1189.6	1221.9	1300.4	1495.9	1980.7
20°	1189.6	1161.9	1189.6	1269.7	1465.1	1949.9
21°	1158.8	1134.2	1158.8	1246.6	1435.9	1928.3
22.5°	1129.6	1095.7	1129.6	1195.8	1386.6	1880.6
23°	1112.7	1085.0	1112.7	1178.9	1375.8	1866.8
24°	1092.7	1060.4	1092.7	1151.2	1342.0	1831.4
25°	1066.5	1038.8	1066.5	1132.7	1311.2	1814.5
26°	1043.4	1017.3	1043.4	1103.4	1283.5	1777.5
27°	1020.3	988.0	1020.3	1080.4	1254.3	1734.4
28°	1000.3	969.6	1000.3	1063.4	1221.9	1703.6
29°	974.2	944.9	974.2	1037.3	1194.2	1674.4
30°	955.7	929.5	955.7	1014.2	1161.9	1634.4
32.5°	904.9	889.5	904.9	958.8	1097.3	1539.0
35°	861.8	854.1	861.8	914.2	1028.0	1449.7
37.5°	829.5	823.4	829.5	863.4	964.9	1355.8
40°	792.6	794.1	792.6	818.7	903.4	1262.0
42.5°	757.2	760.3	757.2	775.6	844.9	1174.2
45°	723.3	723.3	723.3	732.6	789.5	1077.3
47.5°	684.8	687.9	684.8	691.0	734.1	984.9
50°	646.4	649.4	646.4	647.9	683.3	897.2
52.5°	606.4	609.4	606.4	606.4	637.1	808.0
55°	563.3	569.4	563.3	558.6	583.3	723.3
57.5°	518.6	526.3	518.6	515.6	530.9	644.8
60°	478.6	486.3	478.6	472.5	480.2	572.5
62.5°	437.1	444.8	437.1	427.8	430.9	494.0
65°	394.0	403.2	394.0	380.1	381.7	430.9



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	347.8	355.5	347.8	332.4	332.4	367.8
70°	303.2	309.3	303.2	284.7	283.2	314.0
72.5°	257.0	263.2	257.0	241.6	237.0	253.9
75°	209.3	213.9	209.3	195.4	189.3	203.1
77.5°	166.2	166.2	166.2	153.9	147.7	155.4
80°	120.0	120.0	120.0	113.9	106.2	110.8
82.5°	80.0	80.0	80.0	75.4	72.3	73.9
85°	44.6	43.1	44.6	44.6	41.6	41.6
87.5°	16.9	18.5	16.9	20.0	20.0	18.5
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	23.26	24.78	23.62	25.10	25.41	20.57	22.10	20.94	22.41	22.72
	3H	24.48	25.84	24.85	26.17	26.53	21.90	23.27	22.28	23.59	23.96
	4H	24.87	26.15	25.27	26.50	26.88	22.36	23.64	22.76	23.99	24.37
	6H	25.11	26.30	25.53	26.66	27.06	22.66	23.85	23.07	24.21	24.60
	8H	25.17	26.30	25.60	26.69	27.09	22.74	23.87	23.17	24.26	24.66
	12H	25.20	26.28	25.63	26.66	27.09	22.78	23.86	23.21	24.25	24.67
4H	2H	23.55	24.83	23.94	25.18	25.55	21.54	22.82	21.93	23.17	23.54
	3H	25.04	26.11	25.45	26.51	26.91	23.00	24.07	23.41	24.47	24.87
	4H	25.60	26.56	26.03	26.97	27.41	23.52	24.48	23.95	24.89	25.33
	6H	25.97	26.80	26.42	27.24	27.70	23.89	24.72	24.35	25.17	25.63
	8H	26.06	26.84	26.52	27.28	27.75	23.99	24.77	24.46	25.22	25.68
	12H	26.11	26.81	26.59	27.29	27.76	24.06	24.75	24.54	25.23	25.70
8H	4H	25.74	26.52	26.20	26.96	27.43	23.93	24.70	24.39	25.15	25.62
	6H	26.20	26.85	26.70	27.34	27.81	24.37	25.02	24.87	25.51	25.99
	8H	26.35	26.93	26.86	27.44	27.92	24.52	25.09	25.03	25.60	26.09
	12H	26.45	26.96	26.96	27.46	28.02	24.62	25.13	25.13	25.62	26.19
12H	4H	25.74	26.43	26.22	26.91	27.38	23.97	24.67	24.45	25.14	25.61
	6H	26.21	26.78	26.72	27.29	27.78	24.43	25.01	24.95	25.52	26.01
	8H	26.40	26.91	26.91	27.40	27.96	24.62	25.13	25.13	25.63	26.19