

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: P1051140

Luminaire Tested: S122DR-B1005DB50-4F0-XX-W2A-W

Issue Date: 7/9/2025

Test Information

Test Method: LM-79-2019
Report Number: P1051140
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-B1005DB50-4F0-XX-W2A-W
Description: Define 2 Direct Recessed with 5000K BioUP LEDs {m-DER=1.015} {m-EER=1.115}
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4406.0 lumens
Efficiency: N/A
Efficacy: 71.9 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

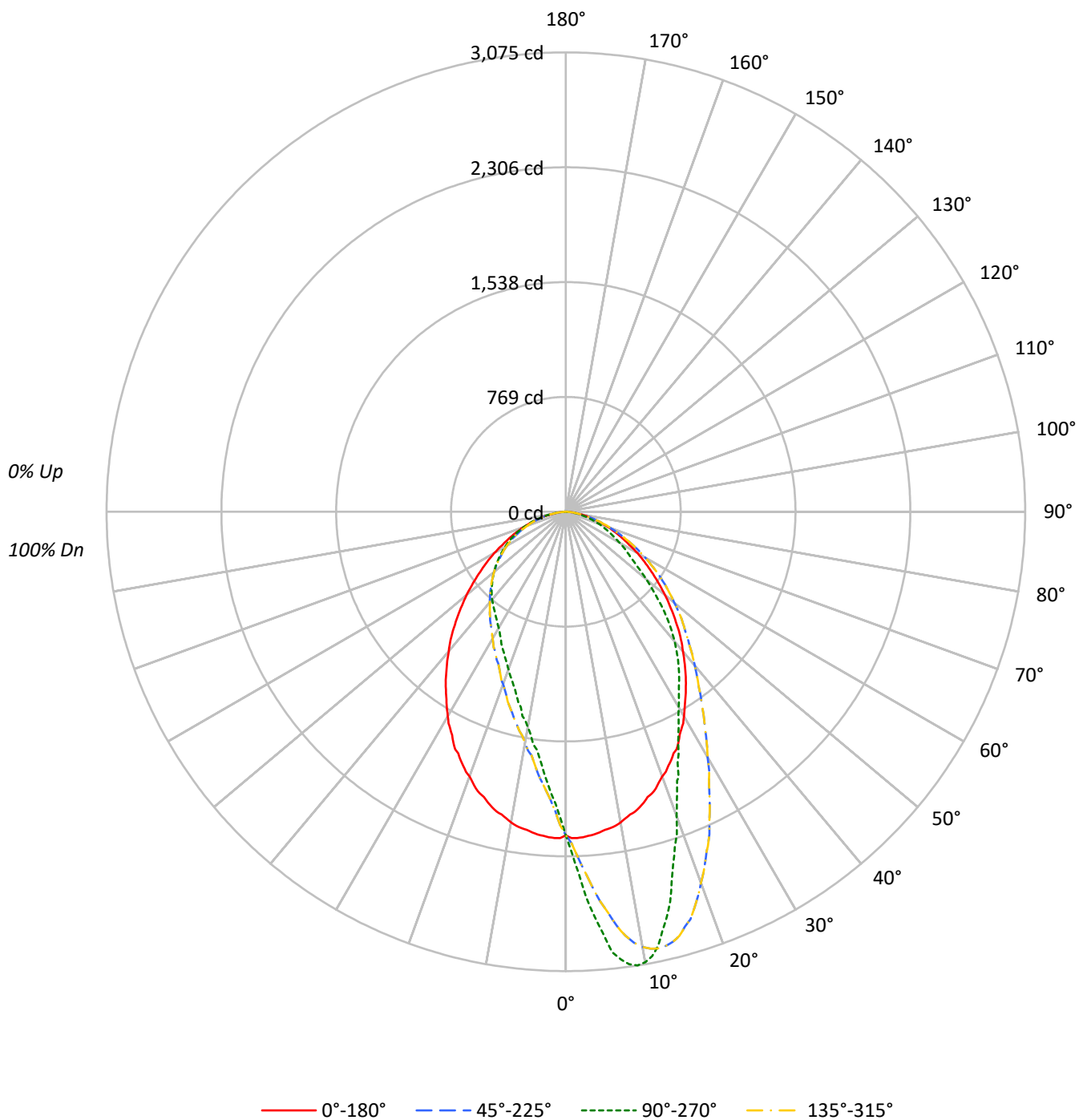
Input Watts (W): 61.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	34278	34278	34278	34278
5°	34457	44957	34457	27575
10°	33946	49207	33946	23540
15°	33024	44268	33024	20878
20°	31765	36529	31765	18929
25°	30647	31220	30647	17546
30°	28890	27611	28890	16430
35°	27092	25539	27092	15962
40°	25218	23373	25218	15870
45°	23322	20591	23322	15659
50°	21368	17337	21368	15468
55°	19304	14580	19304	15198
60°	17526	13145	17526	14889
65°	15608	11930	15608	14604
70°	14051	10747	14051	13843
75°	12018	9376	12018	12654
80°	9772	7867	9772	10583
85°	7301	5939	7301	7574

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°

Vertical Angle: 45°

Luminance: 37181 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	213.1	4.8
10°-20°	584.9	13.3
20°-30°	767.0	17.4
30°-40°	810.7	18.4
40°-50°	752.7	17.1
50°-60°	602.4	13.7
60°-70°	412.0	9.4
70°-80°	212.6	4.8
80°-90°	50.5	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°	1565.0	35.5
0°-40°	2375.7	53.9
0°-60°	3730.9	84.7
0°-90°	4406.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4406.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2166	2166	2166	2166	2166	
5°	2168	2829	2168	1735	2168	205
15°	2015	2701	2015	1274	2015	566
25°	1755	1788	1755	1005	1755	802
35°	1402	1322	1402	826	1402	875
45°	1042	920	1042	700	1042	804
55°	700	528	700	551	700	629
65°	417	318	417	390	417	415
75°	196	153	196	207	196	210
85°	40	33	40	42	40	50
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°	2165.5	2165.5	2165.5	2165.5	2165.5	2165.5	2165.5	2165.5	2165.5	2165.5	2165.5
1°	2184.8	2223.5	2220.6	2272.6	2284.5	2272.6	2220.6	2223.5	2184.8	2141.7	2101.5
2°	2184.8	2272.6	2312.8	2394.7	2418.5	2394.7	2312.8	2272.6	2184.8	2092.6	2009.2
3°	2181.9	2315.8	2411.1	2524.2	2580.7	2524.2	2411.1	2315.8	2181.9	2047.9	1933.3
4°	2174.4	2360.5	2510.8	2661.1	2711.7	2661.1	2510.8	2360.5	2174.4	2004.7	1875.3
5°	2168.5	2417.0	2615.0	2796.5	2829.3	2796.5	2615.0	2417.0	2168.5	1963.1	1818.7
6°	2158.0	2473.6	2698.3	2897.7	2964.7	2897.7	2698.3	2473.6	2158.0	1922.9	1768.1
7°	2144.6	2510.8	2792.1	2978.1	3019.8	2978.1	2792.1	2510.8	2144.6	1876.8	1704.1
8°	2138.7	2571.8	2866.5	3042.1	3058.5	3042.1	2866.5	2571.8	2138.7	1833.6	1647.6
9°	2128.3	2597.1	2920.1	3061.4	3074.8	3061.4	2920.1	2597.1	2128.3	1811.3	1619.3
10°	2111.9	2635.8	2958.8	3067.4	3061.4	3067.4	2958.8	2635.8	2111.9	1765.1	1571.7
11°	2091.1	2680.4	2979.6	3045.1	3030.2	3045.1	2979.6	2680.4	2091.1	1727.9	1528.5
12°	2071.7	2711.7	2988.5	3003.4	2970.7	3003.4	2988.5	2711.7	2071.7	1695.2	1498.7
13°	2059.8	2725.1	2982.6	2951.3	2878.4	2951.3	2982.6	2725.1	2059.8	1658.0	1461.5
14°	2039.0	2754.9	2966.2	2870.9	2795.0	2870.9	2966.2	2754.9	2039.0	1616.3	1427.3
15°	2015.2	2763.8	2939.4	2789.1	2701.3	2789.1	2939.4	2763.8	2015.2	1582.1	1391.6
16°	1986.9	2774.2	2890.3	2687.9	2570.3	2687.9	2890.3	2774.2	1986.9	1543.4	1358.8
17°	1972.0	2780.2	2853.1	2588.2	2461.7	2588.2	2853.1	2780.2	1972.0	1513.6	1330.5
18°	1948.2	2775.7	2786.1	2504.8	2361.9	2504.8	2786.1	2775.7	1948.2	1479.4	1288.9
19°	1915.4	2765.3	2719.1	2399.1	2283.1	2399.1	2719.1	2765.3	1915.4	1446.6	1257.6
20°	1885.7	2760.8	2644.7	2302.4	2168.5	2302.4	2644.7	2760.8	1885.7	1416.9	1227.9
21°	1864.8	2745.9	2576.3	2210.1	2073.2	2210.1	2576.3	2745.9	1864.8	1388.6	1205.5
22.5°	1818.7	2717.6	2461.7	2068.7	1948.2	2068.7	2461.7	2717.6	1818.7	1341.0	1156.4
23°	1805.3	2708.7	2431.9	2036.0	1933.3	2036.0	2431.9	2708.7	1805.3	1330.5	1140.0
24°	1771.1	2680.4	2361.9	1948.2	1839.5	1948.2	2361.9	2680.4	1771.1	1297.8	1113.3
25°	1754.7	2653.6	2275.6	1876.8	1787.5	1876.8	2275.6	2653.6	1754.7	1268.0	1095.4
26°	1719.0	2615.0	2198.2	1817.2	1714.5	1817.2	2198.2	2615.0	1719.0	1241.2	1067.1
27°	1677.3	2586.7	2117.9	1747.3	1660.9	1747.3	2117.9	2586.7	1677.3	1213.0	1044.8
28°	1647.6	2540.5	2040.5	1692.2	1608.9	1692.2	2040.5	2540.5	1647.6	1181.7	1028.4
29°	1619.3	2504.8	1978.0	1628.2	1555.3	1628.2	1978.0	2504.8	1619.3	1154.9	1003.1
30°	1580.6	2457.2	1899.1	1577.6	1510.6	1577.6	1899.1	2457.2	1580.6	1123.7	980.8
32.5°	1488.3	2344.1	1738.3	1464.5	1407.9	1464.5	1738.3	2344.1	1488.3	1061.2	927.2
35°	1402.0	2217.6	1591.0	1358.8	1321.6	1358.8	1591.0	2217.6	1402.0	994.2	884.1
37.5°	1311.2	2085.1	1457.1	1266.5	1230.8	1266.5	1457.1	2085.1	1311.2	933.2	834.9
40°	1220.4	1954.1	1342.5	1178.7	1131.1	1178.7	1342.5	1954.1	1220.4	873.6	791.8
42.5°	1135.6	1800.9	1230.8	1086.5	1031.4	1086.5	1230.8	1800.9	1135.6	817.1	750.1
45°	1041.8	1660.9	1131.1	989.7	919.8	989.7	1131.1	1660.9	1041.8	763.5	708.4
47.5°	952.5	1516.6	1044.8	893.0	803.7	893.0	1044.8	1516.6	952.5	709.9	668.2
50°	867.7	1376.7	948.1	784.3	704.0	784.3	948.1	1376.7	867.7	660.8	626.6
52.5°	781.4	1245.7	863.2	686.1	605.7	686.1	863.2	1245.7	781.4	616.2	586.4
55°	699.5	1108.8	778.4	590.9	528.3	590.9	778.4	1108.8	699.5	564.1	540.3
57.5°	623.6	977.8	695.0	516.4	474.8	516.4	695.0	977.8	623.6	513.5	498.6
60°	553.6	857.3	613.2	448.0	415.2	448.0	613.2	857.3	553.6	464.4	456.9
62.5°	477.7	748.6	535.8	389.9	361.7	389.9	535.8	748.6	477.7	416.7	413.7
65°	416.7	638.5	455.4	337.8	318.5	337.8	455.4	638.5	416.7	369.1	367.6



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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°	355.7	534.3	385.5	288.7	273.8	288.7	385.5	534.3	355.7	321.5	321.5
70°	303.6	440.5	318.5	244.1	232.2	244.1	318.5	440.5	303.6	273.8	275.3
72.5°	245.6	354.2	259.0	199.4	189.0	199.4	259.0	354.2	245.6	229.2	233.7
75°	196.5	279.8	203.9	160.7	153.3	160.7	203.9	279.8	196.5	183.1	189.0
77.5°	150.3	205.4	150.3	123.5	117.6	123.5	150.3	205.4	150.3	142.9	148.8
80°	107.2	144.4	107.2	87.8	86.3	87.8	107.2	144.4	107.2	102.7	110.1
82.5°	71.4	92.3	70.0	59.5	56.6	59.5	70.0	92.3	71.4	70.0	72.9
85°	40.2	50.6	38.7	34.2	32.7	34.2	38.7	50.6	40.2	40.2	43.2
87.5°	17.9	19.3	16.4	14.9	13.4	14.9	16.4	19.3	17.9	19.3	19.3
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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CATALOG NUMBER: S122DR-B1005DB50-4F0-XX-W2A-W

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2165.5	2165.5	2165.5	2165.5	2165.5	2165.5
1°	2076.2	2055.4	2076.2	2101.5	2141.7	2184.8
2°	1986.9	1958.6	1986.9	2009.2	2092.6	2184.8
3°	1893.1	1888.7	1893.1	1933.3	2047.9	2181.9
4°	1832.1	1811.3	1832.1	1875.3	2004.7	2174.4
5°	1759.2	1735.4	1759.2	1818.7	1963.1	2168.5
6°	1696.7	1663.9	1696.7	1768.1	1922.9	2158.0
7°	1626.7	1602.9	1626.7	1704.1	1876.8	2144.6
8°	1599.9	1571.7	1599.9	1647.6	1833.6	2138.7
9°	1540.4	1509.1	1540.4	1619.3	1811.3	2128.3
10°	1503.2	1464.5	1503.2	1571.7	1765.1	2111.9
11°	1458.5	1421.3	1458.5	1528.5	1727.9	2091.1
12°	1431.8	1399.0	1431.8	1498.7	1695.2	2071.7
13°	1384.1	1342.5	1384.1	1461.5	1658.0	2059.8
14°	1349.9	1314.2	1349.9	1427.3	1616.3	2039.0
15°	1306.7	1274.0	1306.7	1391.6	1582.1	2015.2
16°	1278.5	1235.3	1278.5	1358.8	1543.4	1986.9
17°	1235.3	1207.0	1235.3	1330.5	1513.6	1972.0
18°	1204.0	1177.3	1204.0	1288.9	1479.4	1948.2
19°	1181.7	1150.5	1181.7	1257.6	1446.6	1915.4
20°	1150.5	1123.7	1150.5	1227.9	1416.9	1885.7
21°	1120.7	1096.9	1120.7	1205.5	1388.6	1864.8
22.5°	1092.4	1059.7	1092.4	1156.4	1341.0	1818.7
23°	1076.0	1049.3	1076.0	1140.0	1330.5	1805.3
24°	1056.7	1025.4	1056.7	1113.3	1297.8	1771.1
25°	1031.4	1004.6	1031.4	1095.4	1268.0	1754.7
26°	1009.1	983.8	1009.1	1067.1	1241.2	1719.0
27°	986.7	955.5	986.7	1044.8	1213.0	1677.3
28°	967.4	937.6	967.4	1028.4	1181.7	1647.6
29°	942.1	913.8	942.1	1003.1	1154.9	1619.3
30°	924.2	898.9	924.2	980.8	1123.7	1580.6
32.5°	875.1	860.2	875.1	927.2	1061.2	1488.3
35°	833.5	826.0	833.5	884.1	994.2	1402.0
37.5°	802.2	796.2	802.2	834.9	933.2	1311.2
40°	766.5	768.0	766.5	791.8	873.6	1220.4
42.5°	732.2	735.2	732.2	750.1	817.1	1135.6
45°	699.5	699.5	699.5	708.4	763.5	1041.8
47.5°	662.3	665.3	662.3	668.2	709.9	952.5
50°	625.1	628.1	625.1	626.6	660.8	867.7
52.5°	586.4	589.4	586.4	586.4	616.2	781.4
55°	544.7	550.7	544.7	540.3	564.1	699.5
57.5°	501.6	509.0	501.6	498.6	513.5	623.6
60°	462.9	470.3	462.9	456.9	464.4	553.6
62.5°	422.7	430.1	422.7	413.7	416.7	477.7
65°	381.0	389.9	381.0	367.6	369.1	416.7



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	336.4	343.8	336.4	321.5	321.5	355.7
70°	293.2	299.1	293.2	275.3	273.8	303.6
72.5°	248.5	254.5	248.5	233.7	229.2	245.6
75°	202.4	206.9	202.4	189.0	183.1	196.5
77.5°	160.7	160.7	160.7	148.8	142.9	150.3
80°	116.1	116.1	116.1	110.1	102.7	107.2
82.5°	77.4	77.4	77.4	72.9	70.0	71.4
85°	43.2	41.7	43.2	43.2	40.2	40.2
87.5°	16.4	17.9	16.4	19.3	19.3	17.9
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	23.14	24.67	23.51	24.98	25.29	20.46	21.98	20.82	22.29	22.61
	3H	24.36	25.73	24.74	26.05	26.42	21.78	23.15	22.16	23.48	23.84
	4H	24.75	26.04	25.15	26.38	26.76	22.24	23.52	22.64	23.87	24.25
	6H	25.00	26.18	25.41	26.55	26.94	22.55	23.73	22.96	24.10	24.49
	8H	25.05	26.18	25.48	26.57	26.97	22.63	23.75	23.05	24.14	24.54
	12H	25.08	26.16	25.51	26.54	26.97	22.67	23.75	23.10	24.13	24.56
4H	2H	23.43	24.71	23.83	25.06	25.44	21.42	22.70	21.82	23.05	23.43
	3H	24.92	25.99	25.33	26.39	26.79	22.88	23.95	23.29	24.35	24.75
	4H	25.48	26.44	25.92	26.86	27.30	23.40	24.36	23.83	24.78	25.22
	6H	25.85	26.69	26.31	27.13	27.59	23.77	24.61	24.23	25.05	25.51
	8H	25.94	26.72	26.41	27.17	27.63	23.88	24.65	24.34	25.10	25.57
	12H	26.00	26.69	26.48	27.17	27.64	23.94	24.63	24.42	25.11	25.58
8H	4H	25.62	26.40	26.09	26.85	27.31	23.81	24.59	24.27	25.03	25.50
	6H	26.09	26.73	26.58	27.22	27.70	24.26	24.90	24.75	25.39	25.87
	8H	26.23	26.81	26.75	27.32	27.81	24.40	24.98	24.91	25.49	25.97
	12H	26.34	26.85	26.85	27.34	27.90	24.51	25.01	25.02	25.51	26.07
12H	4H	25.62	26.32	26.10	26.80	27.27	23.85	24.55	24.33	25.03	25.50
	6H	26.09	26.67	26.60	27.18	27.67	24.32	24.90	24.83	25.41	25.89
	8H	26.28	26.79	26.79	27.28	27.85	24.51	25.02	25.02	25.51	26.07