

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: P1051131

Luminaire Tested: S122DR-B1005DB27-4F0-XX-W2A-W

Issue Date: 7/9/2025

Test Information

Test Method: LM-79-2019
Report Number: P1051131
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-B1005DB27-4F0-XX-W2A-W
Description: Define 2 Direct Recessed with 2700K BioUP LEDs {m-DER=0.473} {m-EER=0.52}
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4543.0 lumens
Efficiency: N/A
Efficacy: 74.1 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

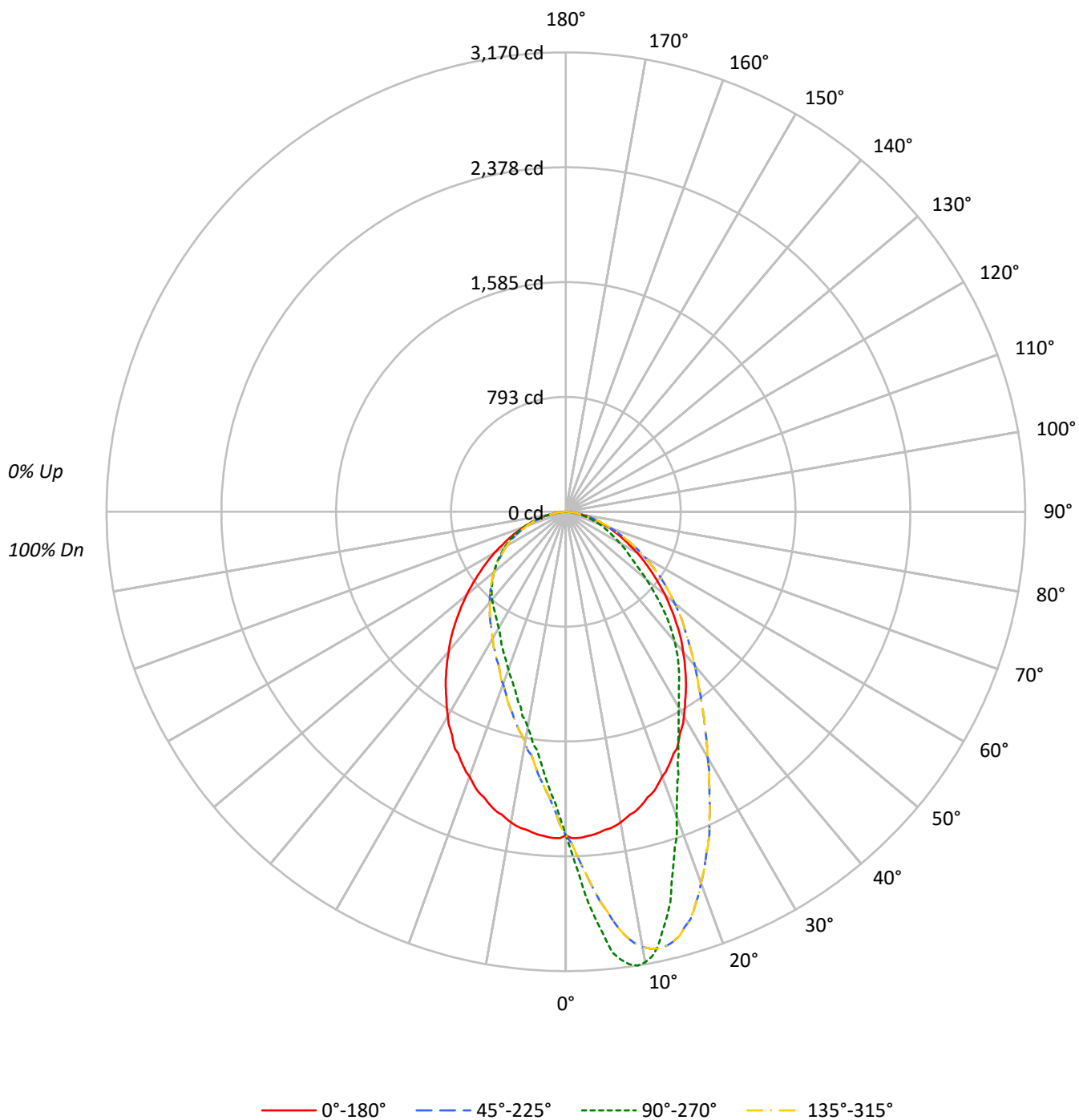
Input Watts (W): 61.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	35344	35344	35344	35344
5°	35528	46354	35528	28432
10°	35002	50738	35002	24271
15°	34050	45645	34050	21527
20°	32752	37664	32752	19517
25°	31601	32189	31601	18091
30°	29788	28470	29788	16942
35°	27935	26333	27935	16458
40°	26003	24100	26003	16361
45°	24047	21231	24047	16147
50°	22033	17876	22033	15948
55°	19906	15035	19906	15670
60°	18074	13553	18074	15351
65°	16095	12300	16095	15061
70°	14491	11080	14491	14278
75°	12391	9669	12391	13045
80°	10073	8113	10073	10912
85°	7519	6139	7519	7810

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°

Vertical Angle: 45°

Luminance: 38338 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	219.7	4.8
10°-20°	603.1	13.3
20°-30°	790.9	17.4
30°-40°	835.9	18.4
40°-50°	776.1	17.1
50°-60°	621.2	13.7
60°-70°	424.8	9.4
70°-80°	219.2	4.8
80°-90°	52.1	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°	1613.7	35.5
0°-40°	2449.6	53.9
0°-60°	3846.9	84.7
0°-90°	4543.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4543.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2233	2233	2233	2233	2233	
5°	2236	2917	2236	1789	2236	211
15°	2078	2785	2078	1314	2078	584
25°	1809	1843	1809	1036	1809	827
35°	1446	1363	1446	852	1446	903
45°	1074	948	1074	721	1074	829
55°	721	545	721	568	721	648
65°	430	328	430	402	430	428
75°	203	158	203	213	203	217
85°	41	34	41	43	41	51
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°	2232.8	2232.8	2232.8	2232.8	2232.8	2232.8	2232.8	2232.8	2232.8	2232.8	2232.8
1°	2252.8	2292.7	2289.6	2343.3	2355.6	2343.3	2289.6	2292.7	2252.8	2208.3	2166.8
2°	2252.8	2343.3	2384.7	2469.1	2493.7	2469.1	2384.7	2343.3	2252.8	2157.6	2071.7
3°	2249.7	2387.8	2486.0	2602.7	2661.0	2602.7	2486.0	2387.8	2249.7	2111.6	1993.4
4°	2242.0	2433.8	2588.8	2743.8	2796.0	2743.8	2588.8	2433.8	2242.0	2067.1	1933.6
5°	2235.9	2492.2	2696.3	2883.5	2917.2	2883.5	2696.3	2492.2	2235.9	2024.1	1875.3
6°	2225.1	2550.5	2782.2	2987.8	3056.9	2987.8	2782.2	2550.5	2225.1	1982.7	1823.1
7°	2211.3	2588.8	2878.9	3070.7	3113.7	3070.7	2878.9	2588.8	2211.3	1935.1	1757.1
8°	2205.2	2651.8	2955.6	3136.7	3153.6	3136.7	2955.6	2651.8	2205.2	1890.6	1698.8
9°	2194.5	2677.8	3010.9	3156.6	3170.4	3156.6	3010.9	2677.8	2194.5	1867.6	1669.6
10°	2177.6	2717.7	3050.8	3162.8	3156.6	3162.8	3050.8	2717.7	2177.6	1820.0	1620.5
11°	2156.1	2763.8	3072.2	3139.8	3124.4	3139.8	3072.2	2763.8	2156.1	1781.7	1576.0
12°	2136.1	2796.0	3081.4	3096.8	3063.0	3096.8	3081.4	2796.0	2136.1	1747.9	1545.3
13°	2123.9	2809.8	3075.3	3043.1	2967.9	3043.1	3075.3	2809.8	2123.9	1709.5	1507.0
14°	2102.4	2840.5	3058.4	2960.2	2881.9	2960.2	3058.4	2840.5	2102.4	1666.6	1471.7
15°	2077.8	2849.7	3030.8	2875.8	2785.3	2875.8	3030.8	2849.7	2077.8	1631.3	1434.8
16°	2048.7	2860.5	2980.2	2771.5	2650.2	2771.5	2980.2	2860.5	2048.7	1591.4	1401.1
17°	2033.3	2866.6	2941.8	2668.6	2538.2	2668.6	2941.8	2866.6	2033.3	1560.7	1371.9
18°	2008.8	2862.0	2872.7	2582.7	2435.4	2582.7	2872.7	2862.0	2008.8	1525.4	1328.9
19°	1975.0	2851.3	2803.7	2473.7	2354.1	2473.7	2803.7	2851.3	1975.0	1491.6	1296.7
20°	1944.3	2846.7	2727.0	2374.0	2235.9	2374.0	2727.0	2846.7	1944.3	1460.9	1266.0
21°	1922.8	2831.3	2656.4	2278.9	2137.7	2278.9	2656.4	2831.3	1922.8	1431.8	1243.0
22.5°	1875.3	2802.1	2538.2	2133.1	2008.8	2133.1	2538.2	2802.1	1875.3	1382.7	1192.4
23°	1861.4	2792.9	2507.5	2099.3	1993.4	2099.3	2507.5	2792.9	1861.4	1371.9	1175.5
24°	1826.2	2763.8	2435.4	2008.8	1896.7	2008.8	2435.4	2763.8	1826.2	1338.2	1147.9
25°	1809.3	2736.2	2346.4	1935.1	1843.0	1935.1	2346.4	2736.2	1809.3	1307.5	1129.5
26°	1772.4	2696.3	2266.6	1873.7	1767.8	1873.7	2266.6	2696.3	1772.4	1279.8	1100.3
27°	1729.5	2667.1	2183.7	1801.6	1712.6	1801.6	2183.7	2667.1	1729.5	1250.7	1077.3
28°	1698.8	2619.5	2103.9	1744.8	1658.9	1744.8	2103.9	2619.5	1698.8	1218.5	1060.4
29°	1669.6	2582.7	2039.5	1678.8	1603.6	1678.8	2039.5	2582.7	1669.6	1190.8	1034.3
30°	1629.7	2533.6	1958.1	1626.7	1557.6	1626.7	1958.1	2533.6	1629.7	1158.6	1011.3
32.5°	1534.6	2417.0	1792.4	1510.0	1451.7	1510.0	1792.4	2417.0	1534.6	1094.2	956.0
35°	1445.6	2286.5	1640.5	1401.1	1362.7	1401.1	1640.5	2286.5	1445.6	1025.1	911.5
37.5°	1352.0	2150.0	1502.4	1305.9	1269.1	1305.9	1502.4	2150.0	1352.0	962.2	860.9
40°	1258.4	2014.9	1384.2	1215.4	1166.3	1215.4	1384.2	2014.9	1258.4	900.8	816.4
42.5°	1170.9	1856.8	1269.1	1120.2	1063.5	1120.2	1269.1	1856.8	1170.9	842.5	773.4
45°	1074.2	1712.6	1166.3	1020.5	948.4	1020.5	1166.3	1712.6	1074.2	787.2	730.5
47.5°	982.1	1563.7	1077.3	920.7	828.7	920.7	1077.3	1563.7	982.1	732.0	689.0
50°	894.7	1419.5	977.5	808.7	725.9	808.7	977.5	1419.5	894.7	681.4	646.1
52.5°	805.7	1284.4	890.1	707.4	624.6	707.4	890.1	1284.4	805.7	635.3	604.6
55°	721.3	1143.3	802.6	609.2	544.8	609.2	802.6	1143.3	721.3	581.6	557.1
57.5°	643.0	1008.2	716.7	532.5	489.5	532.5	716.7	1008.2	643.0	529.4	514.1
60°	570.9	883.9	632.2	461.9	428.1	461.9	632.2	883.9	570.9	478.8	471.1
62.5°	492.6	771.9	552.4	402.1	372.9	402.1	552.4	771.9	492.6	429.7	426.6
65°	429.7	658.3	469.6	348.4	328.4	348.4	469.6	658.3	429.7	380.6	379.0



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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°	366.8	550.9	397.5	297.7	282.4	297.7	397.5	550.9	366.8	331.5	331.5
70°	313.1	454.2	328.4	251.7	239.4	251.7	328.4	454.2	313.1	282.4	283.9
72.5°	253.2	365.2	267.0	205.6	194.9	205.6	267.0	365.2	253.2	236.3	240.9
75°	202.6	288.5	210.2	165.7	158.1	165.7	210.2	288.5	202.6	188.8	194.9
77.5°	155.0	211.8	155.0	127.4	121.2	127.4	155.0	211.8	155.0	147.3	153.5
80°	110.5	148.9	110.5	90.5	89.0	90.5	110.5	148.9	110.5	105.9	113.6
82.5°	73.7	95.1	72.1	61.4	58.3	61.4	72.1	95.1	73.7	72.1	75.2
85°	41.4	52.2	39.9	35.3	33.8	35.3	39.9	52.2	41.4	41.4	44.5
87.5°	18.4	19.9	16.9	15.3	13.8	15.3	16.9	19.9	18.4	19.9	19.9
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-B1005DB27-4F0-XX-W2A-W

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2232.8	2232.8	2232.8	2232.8	2232.8	2232.8
1°	2140.7	2119.3	2140.7	2166.8	2208.3	2252.8
2°	2048.7	2019.5	2048.7	2071.7	2157.6	2252.8
3°	1952.0	1947.4	1952.0	1993.4	2111.6	2249.7
4°	1889.1	1867.6	1889.1	1933.6	2067.1	2242.0
5°	1813.9	1789.3	1813.9	1875.3	2024.1	2235.9
6°	1749.4	1715.7	1749.4	1823.1	1982.7	2225.1
7°	1677.3	1652.7	1677.3	1757.1	1935.1	2211.3
8°	1649.7	1620.5	1649.7	1698.8	1890.6	2205.2
9°	1588.3	1556.1	1588.3	1669.6	1867.6	2194.5
10°	1549.9	1510.0	1549.9	1620.5	1820.0	2177.6
11°	1503.9	1465.5	1503.9	1576.0	1781.7	2156.1
12°	1476.3	1442.5	1476.3	1545.3	1747.9	2136.1
13°	1427.2	1384.2	1427.2	1507.0	1709.5	2123.9
14°	1391.9	1355.0	1391.9	1471.7	1666.6	2102.4
15°	1347.4	1313.6	1347.4	1434.8	1631.3	2077.8
16°	1318.2	1273.7	1318.2	1401.1	1591.4	2048.7
17°	1273.7	1244.5	1273.7	1371.9	1560.7	2033.3
18°	1241.5	1213.9	1241.5	1328.9	1525.4	2008.8
19°	1218.5	1186.2	1218.5	1296.7	1491.6	1975.0
20°	1186.2	1158.6	1186.2	1266.0	1460.9	1944.3
21°	1155.5	1131.0	1155.5	1243.0	1431.8	1922.8
22.5°	1126.4	1092.6	1126.4	1192.4	1382.7	1875.3
23°	1109.5	1081.9	1109.5	1175.5	1371.9	1861.4
24°	1089.6	1057.3	1089.6	1147.9	1338.2	1826.2
25°	1063.5	1035.8	1063.5	1129.5	1307.5	1809.3
26°	1040.4	1014.4	1040.4	1100.3	1279.8	1772.4
27°	1017.4	985.2	1017.4	1077.3	1250.7	1729.5
28°	997.5	966.8	997.5	1060.4	1218.5	1698.8
29°	971.4	942.2	971.4	1034.3	1190.8	1669.6
30°	953.0	926.9	953.0	1011.3	1158.6	1629.7
32.5°	902.3	887.0	902.3	956.0	1094.2	1534.6
35°	859.4	851.7	859.4	911.5	1025.1	1445.6
37.5°	827.1	821.0	827.1	860.9	962.2	1352.0
40°	790.3	791.8	790.3	816.4	900.8	1258.4
42.5°	755.0	758.1	755.0	773.4	842.5	1170.9
45°	721.3	721.3	721.3	730.5	787.2	1074.2
47.5°	682.9	686.0	682.9	689.0	732.0	982.1
50°	644.5	647.6	644.5	646.1	681.4	894.7
52.5°	604.6	607.7	604.6	604.6	635.3	805.7
55°	561.7	567.8	561.7	557.1	581.6	721.3
57.5°	517.2	524.8	517.2	514.1	529.4	643.0
60°	477.3	484.9	477.3	471.1	478.8	570.9
62.5°	435.8	443.5	435.8	426.6	429.7	492.6
65°	392.9	402.1	392.9	379.0	380.6	429.7



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	346.8	354.5	346.8	331.5	331.5	366.8
70°	302.3	308.5	302.3	283.9	282.4	313.1
72.5°	256.3	262.4	256.3	240.9	236.3	253.2
75°	208.7	213.3	208.7	194.9	188.8	202.6
77.5°	165.7	165.7	165.7	153.5	147.3	155.0
80°	119.7	119.7	119.7	113.6	105.9	110.5
82.5°	79.8	79.8	79.8	75.2	72.1	73.7
85°	44.5	43.0	44.5	44.5	41.4	41.4
87.5°	16.9	18.4	16.9	19.9	19.9	18.4
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	23.25	24.77	23.61	25.09	25.40	20.56	22.09	20.93	22.40	22.71
	3H	24.47	25.83	24.84	26.16	26.52	21.89	23.26	22.27	23.58	23.95
	4H	24.86	26.14	25.26	26.49	26.87	22.35	23.63	22.75	23.98	24.36
	6H	25.10	26.29	25.52	26.65	27.05	22.65	23.84	23.06	24.20	24.59
	8H	25.16	26.29	25.59	26.68	27.08	22.73	23.86	23.16	24.25	24.65
	12H	25.19	26.27	25.62	26.65	27.08	22.77	23.85	23.20	24.24	24.66
4H	2H	23.54	24.82	23.94	25.17	25.54	21.53	22.81	21.93	23.16	23.53
	3H	25.03	26.10	25.44	26.50	26.90	22.99	24.06	23.40	24.46	24.86
	4H	25.59	26.55	26.02	26.96	27.40	23.51	24.47	23.94	24.88	25.32
	6H	25.96	26.79	26.41	27.23	27.69	23.88	24.72	24.34	25.16	25.62
	8H	26.05	26.83	26.51	27.27	27.74	23.98	24.76	24.45	25.21	25.67
	12H	26.10	26.80	26.58	27.28	27.75	24.05	24.74	24.53	25.22	25.69
8H	4H	25.73	26.51	26.19	26.95	27.42	23.92	24.70	24.38	25.14	25.61
	6H	26.19	26.84	26.69	27.33	27.81	24.36	25.01	24.86	25.50	25.98
	8H	26.34	26.92	26.85	27.43	27.92	24.51	25.08	25.02	25.59	26.08
	12H	26.45	26.95	26.95	27.45	28.01	24.61	25.12	25.12	25.61	26.18
12H	4H	25.73	26.42	26.21	26.90	27.37	23.96	24.66	24.44	25.13	25.60
	6H	26.20	26.78	26.71	27.28	27.77	24.42	25.00	24.94	25.51	26.00
	8H	26.39	26.90	26.90	27.39	27.95	24.61	25.12	25.12	25.61	26.18