

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: P1051161

Luminaire Tested: S122DR-B675DB27-4F0-XX-W2A-W

Issue Date: 7/9/2025

Test Information

Test Method: LM-79-2019
Report Number: P1051161
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-B675DB27-4F0-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: 3035.0 lumens
Efficiency: N/A
Efficacy: 84.5 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

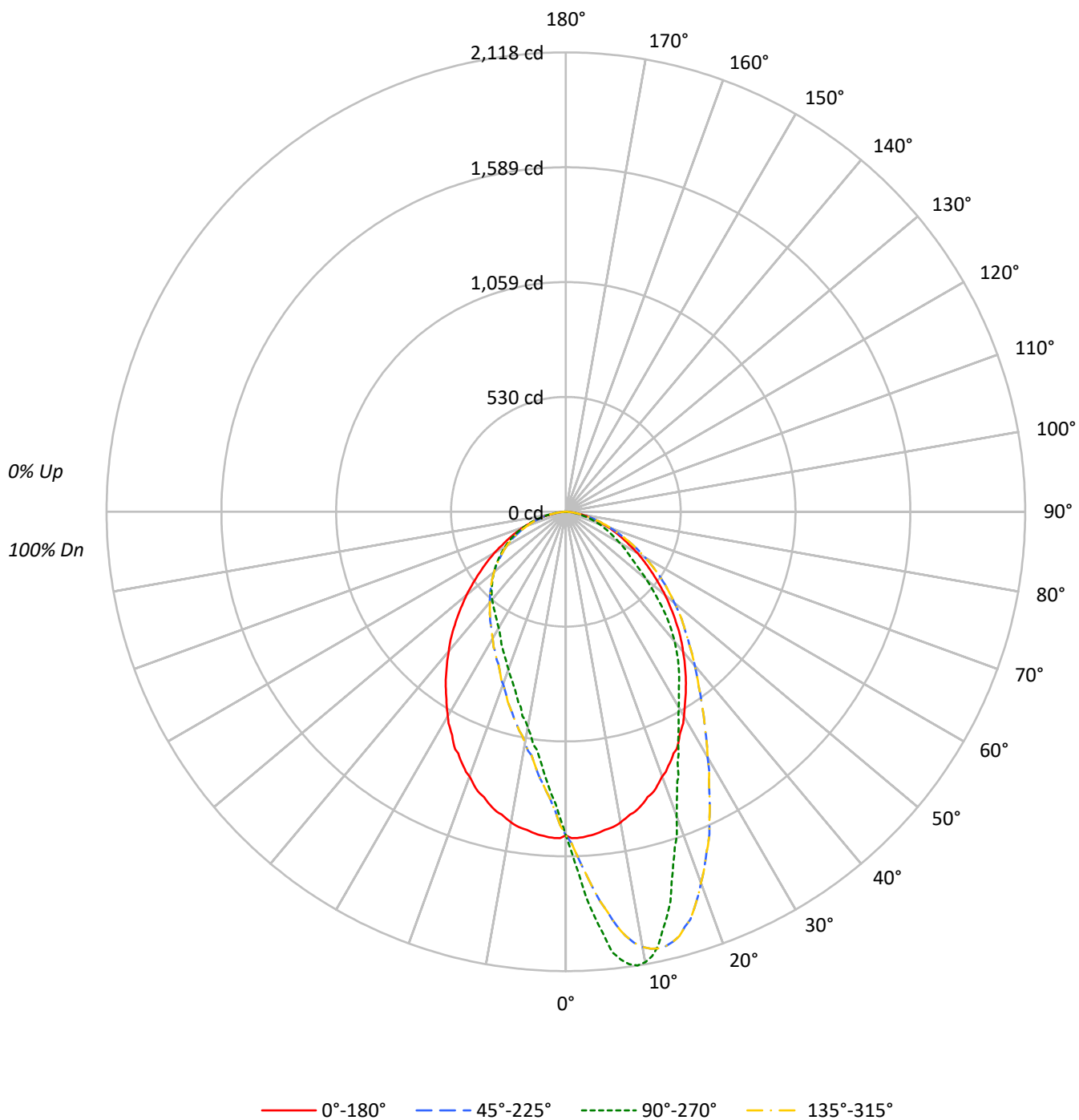
Input Watts (W): 35.9
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P1051161

CATALOG NUMBER: S122DR-B675DB27-4F0-XX-W2A-W

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°	23613	23613	23613	23613
5°	23735	30968	23735	18995
10°	23384	33896	23384	16215
15°	22748	30493	22748	14382
20°	21880	25162	21880	13038
25°	21111	21505	21111	12086
30°	19901	19020	19901	11318
35°	18661	17593	18661	10995
40°	17372	16099	17372	10931
45°	16064	14184	16064	10786
50°	14719	11941	14719	10653
55°	13296	10043	13296	10468
60°	12075	9054	12075	10257
65°	10753	8218	10753	10060
70°	9678	7400	9678	9539
75°	8275	6458	8275	8715
80°	6727	5424	6727	7293
85°	5031	4105	5031	5213

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°

Vertical Angle: 45°

Luminance: 25612 cd/sqm

TEST NUMBER: P1051161

CATALOG NUMBER: S122DR-B675DB27-4F0-XX-W2A-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	146.8	4.8
10°-20°	402.9	13.3
20°-30°	528.4	17.4
30°-40°	558.4	18.4
40°-50°	518.5	17.1
50°-60°	415.0	13.7
60°-70°	283.8	9.4
70°-80°	146.5	4.8
80°-90°	34.8	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°	1078.1	35.5
0°-40°	1636.5	53.9
0°-60°	2569.9	84.7
0°-90°	3035.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3035.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1492	1492	1492	1492	1492	
5°	1494	1949	1494	1195	1494	141
15°	1388	1861	1388	878	1388	390
25°	1209	1231	1209	692	1209	553
35°	966	910	966	569	966	603
45°	718	634	718	482	718	554
55°	482	364	482	379	482	433
65°	287	219	287	269	287	286
75°	135	106	135	142	135	145
85°	28	23	28	29	28	34
90°	0	0	0	0	0	

TEST NUMBER: P1051161

CATALOG NUMBER: S122DR-B675DB27-4F0-XX-W2A-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	1491.7	1491.7	1491.7	1491.7	1491.7	1491.7	1491.7	1491.7	1491.7	1491.7	1491.7
1°	1505.0	1531.6	1529.6	1565.5	1573.7	1565.5	1529.6	1531.6	1505.0	1475.3	1447.6
2°	1505.0	1565.5	1593.2	1649.5	1665.9	1649.5	1593.2	1565.5	1505.0	1441.4	1384.0
3°	1502.9	1595.2	1660.8	1738.7	1777.7	1738.7	1660.8	1595.2	1502.9	1410.7	1331.7
4°	1497.8	1626.0	1729.5	1833.0	1867.9	1833.0	1729.5	1626.0	1497.8	1380.9	1291.7
5°	1493.7	1664.9	1801.3	1926.3	1948.9	1926.3	1801.3	1664.9	1493.7	1352.2	1252.8
6°	1486.5	1703.9	1858.7	1996.1	2042.2	1996.1	1858.7	1703.9	1486.5	1324.6	1217.9
7°	1477.3	1729.5	1923.3	2051.4	2080.1	2051.4	1923.3	1729.5	1477.3	1292.8	1173.8
8°	1473.2	1771.5	1974.5	2095.5	2106.8	2095.5	1974.5	1771.5	1473.2	1263.0	1134.9
9°	1466.0	1789.0	2011.4	2108.8	2118.1	2108.8	2011.4	1789.0	1466.0	1247.7	1115.4
10°	1454.8	1815.6	2038.1	2112.9	2108.8	2112.9	2038.1	1815.6	1454.8	1215.9	1082.6
11°	1440.4	1846.4	2052.4	2097.5	2087.3	2097.5	2052.4	1846.4	1440.4	1190.3	1052.9
12°	1427.1	1867.9	2058.6	2068.8	2046.3	2068.8	2058.6	1867.9	1427.1	1167.7	1032.4
13°	1418.9	1877.1	2054.5	2033.0	1982.7	2033.0	2054.5	1877.1	1418.9	1142.1	1006.7
14°	1404.5	1897.6	2043.2	1977.6	1925.3	1977.6	2043.2	1897.6	1404.5	1113.4	983.2
15°	1388.1	1903.8	2024.8	1921.2	1860.7	1921.2	2024.8	1903.8	1388.1	1089.8	958.6
16°	1368.6	1911.0	1990.9	1851.5	1770.5	1851.5	1990.9	1911.0	1368.6	1063.1	936.0
17°	1358.4	1915.1	1965.3	1782.8	1695.7	1782.8	1965.3	1915.1	1358.4	1042.6	916.5
18°	1342.0	1912.0	1919.2	1725.4	1627.0	1725.4	1919.2	1912.0	1342.0	1019.0	887.8
19°	1319.4	1904.8	1873.0	1652.6	1572.6	1652.6	1873.0	1904.8	1319.4	996.5	866.3
20°	1298.9	1901.7	1821.8	1586.0	1493.7	1586.0	1821.8	1901.7	1298.9	976.0	845.8
21°	1284.6	1891.5	1774.6	1522.4	1428.1	1522.4	1774.6	1891.5	1284.6	956.5	830.4
22.5°	1252.8	1872.0	1695.7	1425.0	1342.0	1425.0	1695.7	1872.0	1252.8	923.7	796.6
23°	1243.6	1865.9	1675.2	1402.5	1331.7	1402.5	1675.2	1865.9	1243.6	916.5	785.3
24°	1220.0	1846.4	1627.0	1342.0	1267.1	1342.0	1627.0	1846.4	1220.0	894.0	766.8
25°	1208.7	1827.9	1567.5	1292.8	1231.3	1292.8	1567.5	1827.9	1208.7	873.5	754.5
26°	1184.1	1801.3	1514.2	1251.8	1181.0	1251.8	1514.2	1801.3	1184.1	855.0	735.1
27°	1155.4	1781.8	1458.9	1203.6	1144.1	1203.6	1458.9	1781.8	1155.4	835.5	719.7
28°	1134.9	1750.0	1405.5	1165.6	1108.2	1165.6	1405.5	1750.0	1134.9	814.0	708.4
29°	1115.4	1725.4	1362.5	1121.6	1071.3	1121.6	1362.5	1725.4	1115.4	795.6	691.0
30°	1088.8	1692.6	1308.1	1086.7	1040.6	1086.7	1308.1	1692.6	1088.8	774.0	675.6
32.5°	1025.2	1614.7	1197.4	1008.8	969.8	1008.8	1197.4	1614.7	1025.2	731.0	638.7
35°	965.7	1527.5	1095.9	936.0	910.4	936.0	1095.9	1527.5	965.7	684.8	609.0
37.5°	903.2	1436.3	1003.7	872.4	847.8	872.4	1003.7	1436.3	903.2	642.8	575.1
40°	840.7	1346.1	924.7	812.0	779.1	812.0	924.7	1346.1	840.7	601.8	545.4
42.5°	782.2	1240.5	847.8	748.4	710.5	748.4	847.8	1240.5	782.2	562.8	516.7
45°	717.6	1144.1	779.1	681.8	633.6	681.8	779.1	1144.1	717.6	525.9	488.0
47.5°	656.1	1044.7	719.7	615.1	553.6	615.1	719.7	1044.7	656.1	489.0	460.3
50°	597.7	948.3	653.0	540.3	484.9	540.3	653.0	948.3	597.7	455.2	431.6
52.5°	538.2	858.1	594.6	472.6	417.3	472.6	594.6	858.1	538.2	424.4	403.9
55°	481.8	763.8	536.2	407.0	363.9	407.0	536.2	763.8	481.8	388.5	372.1
57.5°	429.6	673.6	478.8	355.7	327.0	355.7	478.8	673.6	429.6	353.7	343.4
60°	381.4	590.5	422.4	308.6	286.0	308.6	422.4	590.5	381.4	319.9	314.7
62.5°	329.1	515.7	369.1	268.6	249.1	268.6	369.1	515.7	329.1	287.1	285.0
65°	287.1	439.8	313.7	232.7	219.4	232.7	313.7	439.8	287.1	254.2	253.2



TEST NUMBER: P1051161

CATALOG NUMBER: S122DR-B675DB27-4F0-XX-W2A-W

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	245.0	368.0	265.5	198.9	188.6	198.9	265.5	368.0	245.0	221.4	221.4
70°	209.1	303.5	219.4	168.1	159.9	168.1	219.4	303.5	209.1	188.6	189.7
72.5°	169.2	244.0	178.4	137.4	130.2	137.4	178.4	244.0	169.2	157.9	161.0
75°	135.3	192.7	140.5	110.7	105.6	110.7	140.5	192.7	135.3	126.1	130.2
77.5°	103.5	141.5	103.5	85.1	81.0	85.1	103.5	141.5	103.5	98.4	102.5
80°	73.8	99.4	73.8	60.5	59.5	60.5	73.8	99.4	73.8	70.7	75.9
82.5°	49.2	63.6	48.2	41.0	39.0	41.0	48.2	63.6	49.2	48.2	50.2
85°	27.7	34.9	26.7	23.6	22.6	23.6	26.7	34.9	27.7	27.7	29.7
87.5°	12.3	13.3	11.3	10.3	9.2	10.3	11.3	13.3	12.3	13.3	13.3
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-B675DB27-4F0-XX-W2A-W

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	1491.7	1491.7	1491.7	1491.7	1491.7	1491.7
1°	1430.1	1415.8	1430.1	1447.6	1475.3	1505.0
2°	1368.6	1349.2	1368.6	1384.0	1441.4	1505.0
3°	1304.0	1301.0	1304.0	1331.7	1410.7	1502.9
4°	1262.0	1247.7	1262.0	1291.7	1380.9	1497.8
5°	1211.8	1195.4	1211.8	1252.8	1352.2	1493.7
6°	1168.7	1146.2	1168.7	1217.9	1324.6	1486.5
7°	1120.5	1104.1	1120.5	1173.8	1292.8	1477.3
8°	1102.1	1082.6	1102.1	1134.9	1263.0	1473.2
9°	1061.1	1039.5	1061.1	1115.4	1247.7	1466.0
10°	1035.4	1008.8	1035.4	1082.6	1215.9	1454.8
11°	1004.7	979.1	1004.7	1052.9	1190.3	1440.4
12°	986.2	963.7	986.2	1032.4	1167.7	1427.1
13°	953.4	924.7	953.4	1006.7	1142.1	1418.9
14°	929.9	905.2	929.9	983.2	1113.4	1404.5
15°	900.1	877.6	900.1	958.6	1089.8	1388.1
16°	880.6	850.9	880.6	936.0	1063.1	1368.6
17°	850.9	831.4	850.9	916.5	1042.6	1358.4
18°	829.4	810.9	829.4	887.8	1019.0	1342.0
19°	814.0	792.5	814.0	866.3	996.5	1319.4
20°	792.5	774.0	792.5	845.8	976.0	1298.9
21°	772.0	755.6	772.0	830.4	956.5	1284.6
22.5°	752.5	729.9	752.5	796.6	923.7	1252.8
23°	741.2	722.8	741.2	785.3	916.5	1243.6
24°	727.9	706.4	727.9	766.8	894.0	1220.0
25°	710.5	692.0	710.5	754.5	873.5	1208.7
26°	695.1	677.7	695.1	735.1	855.0	1184.1
27°	679.7	658.2	679.7	719.7	835.5	1155.4
28°	666.4	645.9	666.4	708.4	814.0	1134.9
29°	648.9	629.5	648.9	691.0	795.6	1115.4
30°	636.6	619.2	636.6	675.6	774.0	1088.8
32.5°	602.8	592.6	602.8	638.7	731.0	1025.2
35°	574.1	569.0	574.1	609.0	684.8	965.7
37.5°	552.6	548.5	552.6	575.1	642.8	903.2
40°	528.0	529.0	528.0	545.4	601.8	840.7
42.5°	504.4	506.4	504.4	516.7	562.8	782.2
45°	481.8	481.8	481.8	488.0	525.9	717.6
47.5°	456.2	458.3	456.2	460.3	489.0	656.1
50°	430.6	432.6	430.6	431.6	455.2	597.7
52.5°	403.9	406.0	403.9	403.9	424.4	538.2
55°	375.2	379.3	375.2	372.1	388.5	481.8
57.5°	345.5	350.6	345.5	343.4	353.7	429.6
60°	318.8	324.0	318.8	314.7	319.9	381.4
62.5°	291.2	296.3	291.2	285.0	287.1	329.1
65°	262.4	268.6	262.4	253.2	254.2	287.1



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	231.7	236.8	231.7	221.4	221.4	245.0
70°	202.0	206.1	202.0	189.7	188.6	209.1
72.5°	171.2	175.3	171.2	161.0	157.9	169.2
75°	139.4	142.5	139.4	130.2	126.1	135.3
77.5°	110.7	110.7	110.7	102.5	98.4	103.5
80°	80.0	80.0	80.0	75.9	70.7	73.8
82.5°	53.3	53.3	53.3	50.2	48.2	49.2
85°	29.7	28.7	29.7	29.7	27.7	27.7
87.5°	11.3	12.3	11.3	13.3	13.3	12.3
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	21.85	23.37	22.21	23.68	24.00	19.16	20.68	19.53	21.00	21.31
	3H	23.06	24.43	23.44	24.76	25.12	20.49	21.85	20.87	22.18	22.54
	4H	23.46	24.74	23.86	25.09	25.47	20.95	22.23	21.35	22.58	22.96
	6H	23.70	24.89	24.11	25.25	25.64	21.25	22.43	21.66	22.80	23.19
	8H	23.76	24.89	24.19	25.28	25.68	21.33	22.46	21.76	22.85	23.25
	12H	23.79	24.87	24.22	25.25	25.68	21.37	22.45	21.80	22.83	23.26
4H	2H	22.13	23.42	22.53	23.77	24.14	20.12	21.41	20.52	21.75	22.13
	3H	23.63	24.69	24.04	25.09	25.50	21.59	22.65	22.00	23.05	23.46
	4H	24.19	25.15	24.62	25.56	26.00	22.11	23.07	22.54	23.48	23.92
	6H	24.56	25.39	25.01	25.83	26.29	22.48	23.31	22.94	23.76	24.22
	8H	24.65	25.43	25.11	25.87	26.34	22.58	23.36	23.04	23.80	24.27
	12H	24.70	25.40	25.18	25.87	26.35	22.64	23.34	23.13	23.82	24.29
8H	4H	24.33	25.11	24.79	25.55	26.02	22.51	23.29	22.98	23.74	24.20
	6H	24.79	25.43	25.29	25.93	26.40	22.96	23.61	23.46	24.10	24.57
	8H	24.94	25.52	25.45	26.03	26.51	23.10	23.68	23.62	24.19	24.68
	12H	25.04	25.55	25.55	26.04	26.61	23.21	23.72	23.72	24.21	24.78
12H	4H	24.33	25.02	24.81	25.50	25.97	22.56	23.25	23.04	23.73	24.20
	6H	24.80	25.37	25.31	25.88	26.37	23.02	23.60	23.54	24.11	24.60
	8H	24.99	25.50	25.50	25.99	26.55	23.21	23.72	23.72	24.21	24.78