

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: P1051160

Luminaire Tested: S122DR-B485DB50-4F0-XX-W2A-W

Issue Date: 7/9/2025

Test Information

Test Method: LM-79-2019
Report Number: P1051160
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-B485DB50-4F0-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: 2133.0 lumens
Efficiency: N/A
Efficacy: 88.9 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

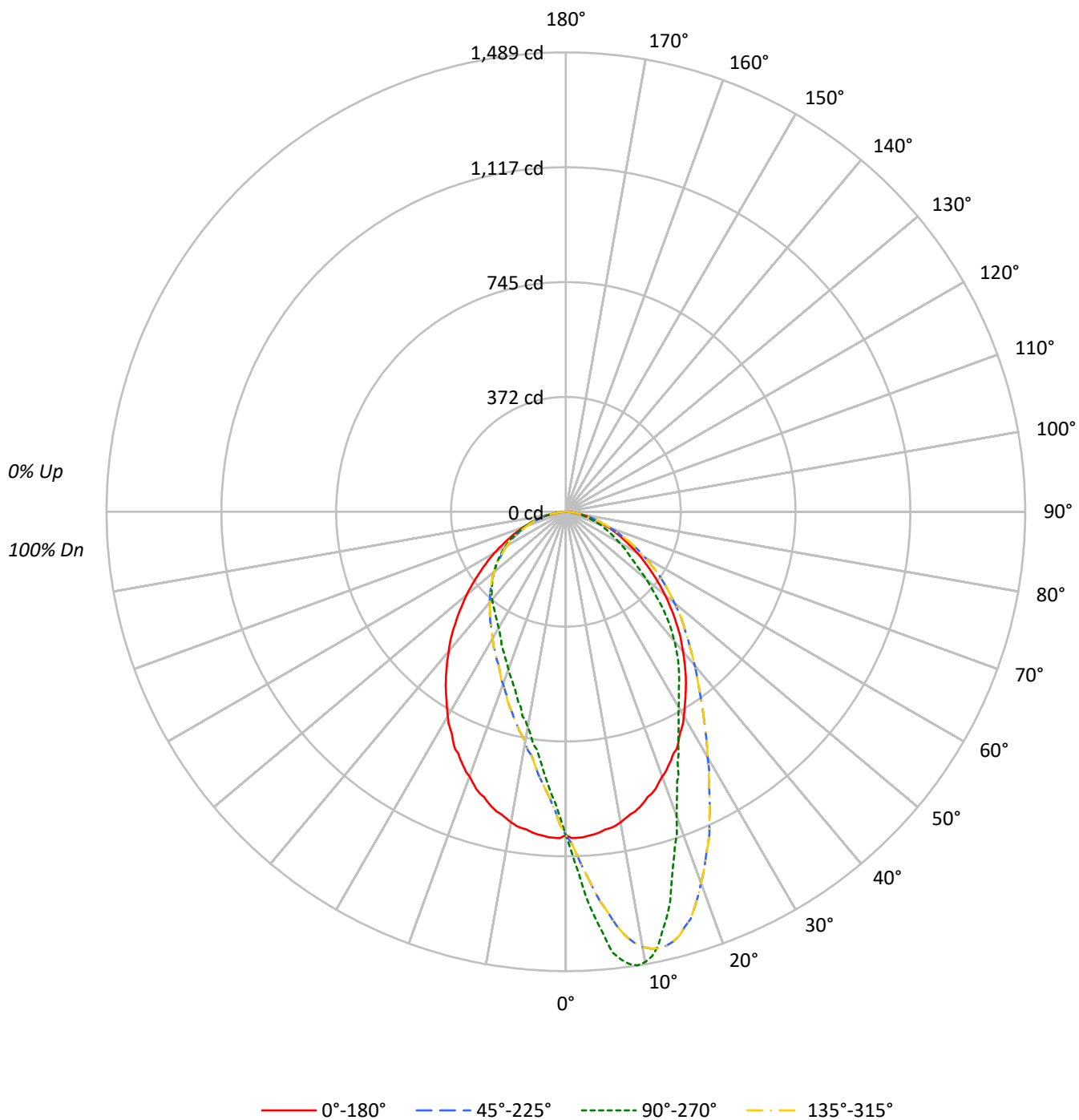
Input Watts (W): 24
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	16594	16594	16594	16594
5°	16681	21764	16681	13349
10°	16434	23823	16434	11396
15°	15988	21430	15988	10108
20°	15378	17684	15378	9164
25°	14837	15113	14837	8494
30°	13986	13367	13986	7955
35°	13115	12363	13115	7728
40°	12208	11315	12208	7683
45°	11291	9968	11291	7580
50°	10345	8393	10345	7489
55°	9345	7059	9345	7357
60°	8484	6363	8484	7209
65°	7555	5776	7555	7072
70°	6803	5202	6803	6702
75°	5816	4538	5816	6128
80°	4731	3810	4731	5123
85°	3542	2888	3542	3669

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°

Vertical Angle: 45°

Luminance: 18001 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	103.2	4.8
10°-20°	283.2	13.3
20°-30°	371.3	17.4
30°-40°	392.5	18.4
40°-50°	364.4	17.1
50°-60°	291.6	13.7
60°-70°	199.5	9.4
70°-80°	102.9	4.8
80°-90°	24.5	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°	757.7	35.5
0°-40°	1150.1	53.9
0°-60°	1806.2	84.7
0°-90°	2133.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2133.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1048	1048	1048	1048	1048	
5°	1050	1370	1050	840	1050	99
15°	976	1308	976	617	976	274
25°	850	865	850	486	850	388
35°	679	640	679	400	679	424
45°	504	445	504	339	504	389
55°	339	256	339	267	339	304
65°	202	154	202	189	202	201
75°	95	74	95	100	95	102
85°	20	16	20	20	20	24
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°	1048.3	1048.3	1048.3	1048.3	1048.3	1048.3	1048.3	1048.3	1048.3	1048.3	1048.3
1°	1057.7	1076.4	1075.0	1100.2	1106.0	1100.2	1075.0	1076.4	1057.7	1036.8	1017.4
2°	1057.7	1100.2	1119.7	1159.3	1170.8	1159.3	1119.7	1100.2	1057.7	1013.0	972.7
3°	1056.3	1121.1	1167.2	1222.0	1249.4	1222.0	1167.2	1121.1	1056.3	991.4	935.9
4°	1052.7	1142.7	1215.5	1288.3	1312.8	1288.3	1215.5	1142.7	1052.7	970.5	907.8
5°	1049.8	1170.1	1265.9	1353.8	1369.7	1353.8	1265.9	1170.1	1049.8	950.3	880.5
6°	1044.7	1197.5	1306.3	1402.8	1435.3	1402.8	1306.3	1197.5	1044.7	930.9	856.0
7°	1038.3	1215.5	1351.7	1441.7	1461.9	1441.7	1351.7	1215.5	1038.3	908.6	825.0
8°	1035.4	1245.0	1387.7	1472.7	1480.6	1472.7	1387.7	1245.0	1035.4	887.7	797.6
9°	1030.3	1257.3	1413.6	1482.1	1488.6	1482.1	1413.6	1257.3	1030.3	876.9	783.9
10°	1022.4	1276.0	1432.4	1485.0	1482.1	1485.0	1432.4	1276.0	1022.4	854.5	760.9
11°	1012.3	1297.6	1442.5	1474.2	1467.0	1474.2	1442.5	1297.6	1012.3	836.5	740.0
12°	1002.9	1312.8	1446.8	1454.0	1438.1	1454.0	1446.8	1312.8	1002.9	820.7	725.6
13°	997.2	1319.2	1443.9	1428.8	1393.5	1428.8	1443.9	1319.2	997.2	802.6	707.5
14°	987.1	1333.7	1436.0	1389.9	1353.1	1389.9	1436.0	1333.7	987.1	782.5	691.0
15°	975.6	1338.0	1423.0	1350.2	1307.7	1350.2	1423.0	1338.0	975.6	765.9	673.7
16°	961.9	1343.0	1399.2	1301.2	1244.3	1301.2	1399.2	1343.0	961.9	747.2	657.8
17°	954.7	1345.9	1381.2	1253.0	1191.7	1253.0	1381.2	1345.9	954.7	732.8	644.1
18°	943.1	1343.7	1348.8	1212.6	1143.4	1212.6	1348.8	1343.7	943.1	716.2	624.0
19°	927.3	1338.7	1316.4	1161.5	1105.3	1161.5	1338.7	1316.4	927.3	700.3	608.8
20°	912.9	1336.5	1280.3	1114.6	1049.8	1114.6	1280.3	1336.5	912.9	685.9	594.4
21°	902.8	1329.3	1247.2	1070.0	1003.7	1070.0	1247.2	1329.3	902.8	672.2	583.6
22.5°	880.5	1315.6	1191.7	1001.5	943.1	1001.5	1191.7	1315.6	880.5	649.2	559.8
23°	874.0	1311.3	1177.3	985.7	935.9	985.7	1177.3	1311.3	874.0	644.1	551.9
24°	857.4	1297.6	1143.4	943.1	890.5	943.1	1143.4	1297.6	857.4	628.3	538.9
25°	849.5	1284.7	1101.7	908.6	865.3	908.6	1101.7	1284.7	849.5	613.9	530.3
26°	832.2	1265.9	1064.2	879.7	830.0	879.7	1064.2	1265.9	832.2	600.9	516.6
27°	812.0	1252.2	1025.3	845.9	804.1	845.9	1025.3	1252.2	812.0	587.2	505.8
28°	797.6	1229.9	987.8	819.2	778.9	819.2	987.8	1229.9	797.6	572.1	497.9
29°	783.9	1212.6	957.6	788.2	752.9	788.2	957.6	1212.6	783.9	559.1	485.6
30°	765.2	1189.6	919.4	763.7	731.3	763.7	919.4	1189.6	765.2	544.0	474.8
32.5°	720.5	1134.8	841.6	709.0	681.6	709.0	841.6	1134.8	720.5	513.7	448.9
35°	678.7	1073.6	770.2	657.8	639.8	657.8	770.2	1073.6	678.7	481.3	428.0
37.5°	634.8	1009.4	705.4	613.2	595.9	613.2	705.4	1009.4	634.8	451.8	404.2
40°	590.8	946.0	649.9	570.6	547.6	570.6	649.9	946.0	590.8	422.9	383.3
42.5°	549.7	871.8	595.9	526.0	499.3	526.0	595.9	871.8	549.7	395.6	363.1
45°	504.4	804.1	547.6	479.1	445.3	479.1	547.6	804.1	504.4	369.6	343.0
47.5°	461.1	734.2	505.8	432.3	389.1	432.3	505.8	734.2	461.1	343.7	323.5
50°	420.1	666.5	459.0	379.7	340.8	379.7	459.0	666.5	420.1	319.9	303.3
52.5°	378.3	603.1	417.9	332.2	293.2	332.2	417.9	603.1	378.3	298.3	283.9
55°	338.6	536.8	376.8	286.0	255.8	286.0	376.8	536.8	338.6	273.1	261.5
57.5°	301.9	473.4	336.5	250.0	229.8	250.0	336.5	473.4	301.9	248.6	241.4
60°	268.0	415.0	296.8	216.9	201.0	216.9	296.8	415.0	268.0	224.8	221.2
62.5°	231.3	362.4	259.4	188.8	175.1	188.8	259.4	362.4	231.3	201.7	200.3
65°	201.7	309.1	220.5	163.6	154.2	163.6	220.5	309.1	201.7	178.7	178.0



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CATALOG NUMBER: S122DR-B485DB50-4F0-XX-W2A-W

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	172.2	258.7	186.6	139.8	132.6	139.8	186.6	258.7	172.2	155.6	155.6
70°	147.0	213.3	154.2	118.2	112.4	118.2	154.2	213.3	147.0	132.6	133.3
72.5°	118.9	171.5	125.4	96.5	91.5	96.5	125.4	171.5	118.9	111.0	113.1
75°	95.1	135.5	98.7	77.8	74.2	77.8	98.7	135.5	95.1	88.6	91.5
77.5°	72.8	99.4	72.8	59.8	56.9	59.8	72.8	99.4	72.8	69.2	72.1
80°	51.9	69.9	51.9	42.5	41.8	42.5	51.9	69.9	51.9	49.7	53.3
82.5°	34.6	44.7	33.9	28.8	27.4	28.8	33.9	44.7	34.6	33.9	35.3
85°	19.5	24.5	18.7	16.6	15.9	16.6	18.7	24.5	19.5	19.5	20.9
87.5°	8.6	9.4	7.9	7.2	6.5	7.2	7.9	9.4	8.6	9.4	9.4
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-B485DB50-4F0-XX-W2A-W

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	1048.3	1048.3	1048.3	1048.3	1048.3	1048.3
1°	1005.1	995.0	1005.1	1017.4	1036.8	1057.7
2°	961.9	948.2	961.9	972.7	1013.0	1057.7
3°	916.5	914.3	916.5	935.9	991.4	1056.3
4°	886.9	876.9	886.9	907.8	970.5	1052.7
5°	851.6	840.1	851.6	880.5	950.3	1049.8
6°	821.4	805.5	821.4	856.0	930.9	1044.7
7°	787.5	776.0	787.5	825.0	908.6	1038.3
8°	774.5	760.9	774.5	797.6	887.7	1035.4
9°	745.7	730.6	745.7	783.9	876.9	1030.3
10°	727.7	709.0	727.7	760.9	854.5	1022.4
11°	706.1	688.1	706.1	740.0	836.5	1012.3
12°	693.1	677.3	693.1	725.6	820.7	1002.9
13°	670.1	649.9	670.1	707.5	802.6	997.2
14°	653.5	636.2	653.5	691.0	782.5	987.1
15°	632.6	616.8	632.6	673.7	765.9	975.6
16°	618.9	598.0	618.9	657.8	747.2	961.9
17°	598.0	584.3	598.0	644.1	732.8	954.7
18°	582.9	569.9	582.9	624.0	716.2	943.1
19°	572.1	557.0	572.1	608.8	700.3	927.3
20°	557.0	544.0	557.0	594.4	685.9	912.9
21°	542.5	531.0	542.5	583.6	672.2	902.8
22.5°	528.9	513.0	528.9	559.8	649.2	880.5
23°	520.9	508.0	520.9	551.9	644.1	874.0
24°	511.6	496.4	511.6	538.9	628.3	857.4
25°	499.3	486.3	499.3	530.3	613.9	849.5
26°	488.5	476.3	488.5	516.6	600.9	832.2
27°	477.7	462.6	477.7	505.8	587.2	812.0
28°	468.3	453.9	468.3	497.9	572.1	797.6
29°	456.1	442.4	456.1	485.6	559.1	783.9
30°	447.4	435.2	447.4	474.8	544.0	765.2
32.5°	423.7	416.5	423.7	448.9	513.7	720.5
35°	403.5	399.9	403.5	428.0	481.3	678.7
37.5°	388.4	385.5	388.4	404.2	451.8	634.8
40°	371.1	371.8	371.1	383.3	422.9	590.8
42.5°	354.5	355.9	354.5	363.1	395.6	549.7
45°	338.6	338.6	338.6	343.0	369.6	504.4
47.5°	320.6	322.1	320.6	323.5	343.7	461.1
50°	302.6	304.1	302.6	303.3	319.9	420.1
52.5°	283.9	285.3	283.9	283.9	298.3	378.3
55°	263.7	266.6	263.7	261.5	273.1	338.6
57.5°	242.8	246.4	242.8	241.4	248.6	301.9
60°	224.1	227.7	224.1	221.2	224.8	268.0
62.5°	204.6	208.2	204.6	200.3	201.7	231.3
65°	184.4	188.8	184.4	178.0	178.7	201.7



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	162.8	166.4	162.8	155.6	155.6	172.2
70°	141.9	144.8	141.9	133.3	132.6	147.0
72.5°	120.3	123.2	120.3	113.1	111.0	118.9
75°	98.0	100.2	98.0	91.5	88.6	95.1
77.5°	77.8	77.8	77.8	72.1	69.2	72.8
80°	56.2	56.2	56.2	53.3	49.7	51.9
82.5°	37.5	37.5	37.5	35.3	33.9	34.6
85°	20.9	20.2	20.9	20.9	19.5	19.5
87.5°	7.9	8.6	7.9	9.4	9.4	8.6
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	20.62	22.15	20.99	22.46	22.77	17.94	19.46	18.30	19.77	20.09
	3H	21.84	23.21	22.22	23.53	23.90	19.26	20.63	19.64	20.96	21.32
	4H	22.23	23.52	22.63	23.86	24.24	19.72	21.00	20.12	21.35	21.73
	6H	22.48	23.66	22.89	24.03	24.42	20.02	21.21	20.44	21.58	21.97
	8H	22.53	23.66	22.96	24.05	24.45	20.11	21.23	20.53	21.62	22.02
	12H	22.56	23.64	22.99	24.02	24.45	20.15	21.23	20.58	21.61	22.04
4H	2H	20.91	22.19	21.31	22.54	22.92	18.90	20.18	19.30	20.53	20.91
	3H	22.40	23.47	22.81	23.87	24.27	20.36	21.43	20.78	21.83	22.23
	4H	22.96	23.92	23.40	24.34	24.78	20.88	21.84	21.31	22.26	22.70
	6H	23.33	24.17	23.79	24.61	25.07	21.25	22.09	21.71	22.53	22.99
	8H	23.42	24.20	23.89	24.65	25.11	21.35	22.13	21.82	22.58	23.05
	12H	23.48	24.17	23.96	24.65	25.12	21.42	22.11	21.90	22.59	23.06
8H	4H	23.10	23.88	23.57	24.33	24.79	21.29	22.07	21.75	22.51	22.98
	6H	23.57	24.21	24.06	24.70	25.18	21.74	22.38	22.23	22.87	23.35
	8H	23.71	24.29	24.23	24.80	25.29	21.88	22.46	22.39	22.97	23.45
	12H	23.82	24.33	24.33	24.82	25.39	21.99	22.50	22.50	22.99	23.55
12H	4H	23.10	23.80	23.58	24.28	24.75	21.33	22.03	21.81	22.51	22.98
	6H	23.57	24.15	24.08	24.66	25.15	21.80	22.38	22.31	22.89	23.37
	8H	23.76	24.27	24.27	24.76	25.33	21.99	22.50	22.50	22.99	23.55