

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: P1051207

Luminaire Tested: S122DS-B485DB30-4F0-XX-W2A-W

Issue Date: 7/9/2025

Test Information

Test Method: LM-79-2019
Report Number: P1051207
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: S122DS-B485DB30-4F0-XX-W2A-W
Description: Define 2 Direct Surface with 3000K BioUP LEDs {m-DER=0.589} {m-EER=0.647}
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2219.0 lumens
Efficiency: N/A
Efficacy: 92.5 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

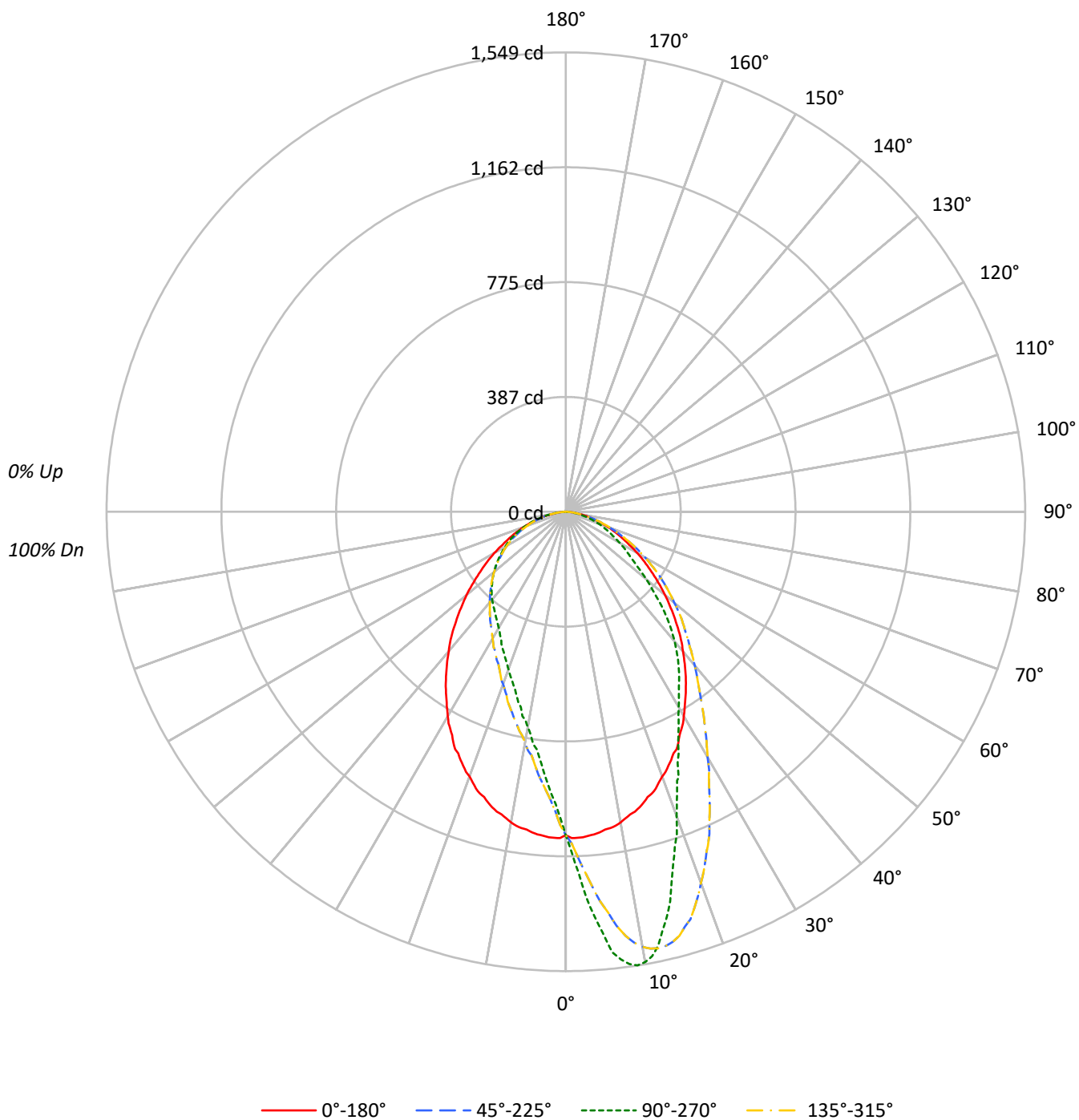
Input Watts (W): 24
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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CATALOG NUMBER: S122DS-B485DB30-4F0-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
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°	17263	17263	17263	17263
5°	17353	22641	17353	13888
10°	17096	24782	17096	11856
15°	16632	22294	16632	10514
20°	15998	18397	15998	9533
25°	15434	15723	15434	8838
30°	14549	13906	14549	8274
35°	13645	12862	13645	8039
40°	12700	11772	12700	7993
45°	11746	10369	11746	7887
50°	10762	8730	10762	7789
55°	9723	7344	9723	7653
60°	8826	6620	8826	7500
65°	7862	6008	7862	7356
70°	7076	5410	7076	6975
75°	6049	4722	6049	6373
80°	4922	3965	4922	5333
85°	3669	2997	3669	3814

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°

Vertical Angle: 45°

Luminance: 18726 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	107.3	4.8
10°-20°	294.6	13.3
20°-30°	386.3	17.4
30°-40°	408.3	18.4
40°-50°	379.1	17.1
50°-60°	303.4	13.7
60°-70°	207.5	9.4
70°-80°	107.1	4.8
80°-90°	25.4	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°	788.2	35.5
0°-40°	1196.5	53.9
0°-60°	1879.0	84.7
0°-90°	2219.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2219.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1091	1091	1091	1091	1091	
5°	1092	1425	1092	874	1092	103
15°	1015	1360	1015	642	1015	285
25°	884	900	884	506	884	404
35°	706	666	706	416	706	441
45°	525	463	525	352	525	405
55°	352	266	352	277	352	317
65°	210	160	210	196	210	209
75°	99	77	99	104	99	106
85°	20	16	20	21	20	25
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°	1090.6	1090.6	1090.6	1090.6	1090.6	1090.6	1090.6	1090.6	1090.6	1090.6	1090.6
1°	1100.4	1119.8	1118.3	1144.6	1150.6	1144.6	1118.3	1119.8	1100.4	1078.6	1058.4
2°	1100.4	1144.6	1164.8	1206.0	1218.0	1206.0	1164.8	1144.6	1100.4	1053.9	1011.9
3°	1098.9	1166.3	1214.3	1271.2	1299.7	1271.2	1214.3	1166.3	1098.9	1031.4	973.7
4°	1095.1	1188.8	1264.5	1340.2	1365.7	1340.2	1264.5	1188.8	1095.1	1009.7	944.4
5°	1092.1	1217.3	1317.0	1408.4	1424.9	1408.4	1317.0	1217.3	1092.1	988.7	916.0
6°	1086.9	1245.8	1358.9	1459.4	1493.1	1459.4	1358.9	1245.8	1086.9	968.4	890.5
7°	1080.1	1264.5	1406.2	1499.9	1520.9	1499.9	1406.2	1264.5	1080.1	945.2	858.2
8°	1077.1	1295.2	1443.6	1532.1	1540.3	1532.1	1443.6	1295.2	1077.1	923.5	829.8
9°	1071.9	1308.0	1470.6	1541.8	1548.6	1541.8	1470.6	1308.0	1071.9	912.2	815.5
10°	1063.6	1327.5	1490.1	1544.8	1541.8	1544.8	1490.1	1327.5	1063.6	889.0	791.5
11°	1053.1	1350.0	1500.6	1533.6	1526.1	1533.6	1500.6	1350.0	1053.1	870.2	769.8
12°	1043.4	1365.7	1505.1	1512.6	1496.1	1512.6	1505.1	1365.7	1043.4	853.7	754.8
13°	1037.4	1372.4	1502.1	1486.4	1449.6	1486.4	1502.1	1372.4	1037.4	835.0	736.1
14°	1026.9	1387.4	1493.9	1445.9	1407.7	1445.9	1493.9	1387.4	1026.9	814.0	718.8
15°	1014.9	1391.9	1480.4	1404.7	1360.4	1404.7	1480.4	1391.9	1014.9	796.8	700.8
16°	1000.7	1397.2	1455.6	1353.7	1294.5	1353.7	1455.6	1397.2	1000.7	777.3	684.3
17°	993.2	1400.2	1436.9	1303.5	1239.8	1303.5	1436.9	1400.2	993.2	762.3	670.1
18°	981.2	1397.9	1403.2	1261.5	1189.5	1261.5	1403.2	1397.9	981.2	745.1	649.1
19°	964.7	1392.7	1369.4	1208.3	1149.8	1208.3	1369.4	1392.7	964.7	728.6	633.4
20°	949.7	1390.4	1332.0	1159.6	1092.1	1159.6	1332.0	1390.4	949.7	713.6	618.4
21°	939.2	1382.9	1297.5	1113.1	1044.1	1113.1	1297.5	1382.9	939.2	699.3	607.1
22.5°	916.0	1368.7	1239.8	1041.9	981.2	1041.9	1239.8	1368.7	916.0	675.4	582.4
23°	909.2	1364.2	1224.8	1025.4	973.7	1025.4	1224.8	1364.2	909.2	670.1	574.2
24°	892.0	1350.0	1189.5	981.2	926.5	981.2	1189.5	1350.0	892.0	653.6	560.7
25°	883.7	1336.5	1146.1	945.2	900.2	945.2	1146.1	1336.5	883.7	638.6	551.7
26°	865.7	1317.0	1107.1	915.2	863.5	915.2	1107.1	1317.0	865.7	625.1	537.4
27°	844.8	1302.7	1066.6	880.0	836.5	880.0	1066.6	1302.7	844.8	610.9	526.2
28°	829.8	1279.5	1027.6	852.2	810.3	852.2	1027.6	1279.5	829.8	595.1	517.9
29°	815.5	1261.5	996.2	820.0	783.3	820.0	996.2	1261.5	815.5	581.7	505.2
30°	796.0	1237.5	956.4	794.5	760.8	794.5	956.4	1237.5	796.0	565.9	494.0
32.5°	749.6	1180.6	875.5	737.6	709.1	737.6	875.5	1180.6	749.6	534.4	467.0
35°	706.1	1116.8	801.3	684.3	665.6	684.3	801.3	1116.8	706.1	500.7	445.2
37.5°	660.4	1050.1	733.8	637.9	619.9	637.9	733.8	1050.1	660.4	470.0	420.5
40°	614.6	984.2	676.1	593.6	569.7	593.6	676.1	984.2	614.6	440.0	398.8
42.5°	571.9	907.0	619.9	547.2	519.4	547.2	619.9	907.0	571.9	411.5	377.8
45°	524.7	836.5	569.7	498.5	463.2	498.5	569.7	836.5	524.7	384.5	356.8
47.5°	479.7	763.8	526.2	449.7	404.8	449.7	526.2	763.8	479.7	357.5	336.6
50°	437.0	693.3	477.5	395.0	354.5	395.0	477.5	693.3	437.0	332.8	315.6
52.5°	393.5	627.4	434.7	345.5	305.1	345.5	434.7	627.4	393.5	310.3	295.3
55°	352.3	558.4	392.0	297.6	266.1	297.6	392.0	558.4	352.3	284.1	272.1
57.5°	314.1	492.5	350.0	260.1	239.1	260.1	350.0	492.5	314.1	258.6	251.1
60°	278.8	431.7	308.8	225.6	209.1	225.6	308.8	431.7	278.8	233.9	230.1
62.5°	240.6	377.0	269.8	196.4	182.1	196.4	269.8	377.0	240.6	209.9	208.4
65°	209.9	321.6	229.4	170.1	160.4	170.1	229.4	321.6	209.9	185.9	185.1



TEST NUMBER: P1051207

CATALOG NUMBER: S122DS-B485DB30-4F0-XX-W2A-W

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	179.1	269.1	194.1	145.4	137.9	145.4	194.1	269.1	179.1	161.9	161.9
70°	152.9	221.9	160.4	122.9	116.9	122.9	160.4	221.9	152.9	137.9	138.7
72.5°	123.7	178.4	130.4	100.4	95.2	100.4	130.4	178.4	123.7	115.4	117.7
75°	98.9	140.9	102.7	81.0	77.2	81.0	102.7	140.9	98.9	92.2	95.2
77.5°	75.7	103.4	75.7	62.2	59.2	62.2	75.7	103.4	75.7	72.0	75.0
80°	54.0	72.7	54.0	44.2	43.5	44.2	54.0	72.7	54.0	51.7	55.5
82.5°	36.0	46.5	35.2	30.0	28.5	30.0	35.2	46.5	36.0	35.2	36.7
85°	20.2	25.5	19.5	17.2	16.5	17.2	19.5	25.5	20.2	20.2	21.7
87.5°	9.0	9.7	8.2	7.5	6.7	7.5	8.2	9.7	9.0	9.7	9.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P1051207

CATALOG NUMBER: S122DS-B485DB30-4F0-XX-W2A-W

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	1090.6	1090.6	1090.6	1090.6	1090.6	1090.6
1°	1045.6	1035.1	1045.6	1058.4	1078.6	1100.4
2°	1000.7	986.4	1000.7	1011.9	1053.9	1100.4
3°	953.4	951.2	953.4	973.7	1031.4	1098.9
4°	922.7	912.2	922.7	944.4	1009.7	1095.1
5°	886.0	874.0	886.0	916.0	988.7	1092.1
6°	854.5	838.0	854.5	890.5	968.4	1086.9
7°	819.3	807.3	819.3	858.2	945.2	1080.1
8°	805.8	791.5	805.8	829.8	923.5	1077.1
9°	775.8	760.1	775.8	815.5	912.2	1071.9
10°	757.1	737.6	757.1	791.5	889.0	1063.6
11°	734.6	715.8	734.6	769.8	870.2	1053.1
12°	721.1	704.6	721.1	754.8	853.7	1043.4
13°	697.1	676.1	697.1	736.1	835.0	1037.4
14°	679.8	661.9	679.8	718.8	814.0	1026.9
15°	658.1	641.6	658.1	700.8	796.8	1014.9
16°	643.9	622.1	643.9	684.3	777.3	1000.7
17°	622.1	607.9	622.1	670.1	762.3	993.2
18°	606.4	592.9	606.4	649.1	745.1	981.2
19°	595.1	579.4	595.1	633.4	728.6	964.7
20°	579.4	565.9	579.4	618.4	713.6	949.7
21°	564.4	552.4	564.4	607.1	699.3	939.2
22.5°	550.2	533.7	550.2	582.4	675.4	916.0
23°	541.9	528.4	541.9	574.2	670.1	909.2
24°	532.2	516.4	532.2	560.7	653.6	892.0
25°	519.4	506.0	519.4	551.7	638.6	883.7
26°	508.2	495.5	508.2	537.4	625.1	865.7
27°	497.0	481.2	497.0	526.2	610.9	844.8
28°	487.2	472.2	487.2	517.9	595.1	829.8
29°	474.5	460.2	474.5	505.2	581.7	815.5
30°	465.5	452.7	465.5	494.0	565.9	796.0
32.5°	440.7	433.2	440.7	467.0	534.4	749.6
35°	419.8	416.0	419.8	445.2	500.7	706.1
37.5°	404.0	401.0	404.0	420.5	470.0	660.4
40°	386.0	386.8	386.0	398.8	440.0	614.6
42.5°	368.8	370.3	368.8	377.8	411.5	571.9
45°	352.3	352.3	352.3	356.8	384.5	524.7
47.5°	333.6	335.1	333.6	336.6	357.5	479.7
50°	314.8	316.3	314.8	315.6	332.8	437.0
52.5°	295.3	296.8	295.3	295.3	310.3	393.5
55°	274.3	277.3	274.3	272.1	284.1	352.3
57.5°	252.6	256.3	252.6	251.1	258.6	314.1
60°	233.1	236.9	233.1	230.1	233.9	278.8
62.5°	212.9	216.6	212.9	208.4	209.9	240.6
65°	191.9	196.4	191.9	185.1	185.9	209.9



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	169.4	173.1	169.4	161.9	161.9	179.1
70°	147.7	150.7	147.7	138.7	137.9	152.9
72.5°	125.2	128.2	125.2	117.7	115.4	123.7
75°	101.9	104.2	101.9	95.2	92.2	98.9
77.5°	81.0	81.0	81.0	75.0	72.0	75.7
80°	58.5	58.5	58.5	55.5	51.7	54.0
82.5°	39.0	39.0	39.0	36.7	35.2	36.0
85°	21.7	21.0	21.7	21.7	20.2	20.2
87.5°	8.2	9.0	8.2	9.7	9.7	9.0
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	20.76	22.28	21.13	22.60	22.91	18.07	19.60	18.44	19.91	20.22
	3H	21.98	23.34	22.35	23.67	24.03	19.40	20.77	19.78	21.09	21.46
	4H	22.37	23.65	22.77	24.00	24.38	19.86	21.14	20.26	21.49	21.87
	6H	22.61	23.80	23.03	24.16	24.56	20.16	21.35	20.57	21.71	22.11
	8H	22.67	23.80	23.10	24.19	24.59	20.24	21.37	20.67	21.76	22.16
	12H	22.70	23.78	23.13	24.16	24.59	20.28	21.36	20.71	21.75	22.18
4H	2H	21.05	22.33	21.45	22.68	23.06	19.04	20.32	19.44	20.67	21.05
	3H	22.54	23.61	22.95	24.01	24.41	20.50	21.57	20.91	21.97	22.37
	4H	23.10	24.06	23.53	24.48	24.91	21.02	21.98	21.45	22.39	22.83
	6H	23.47	24.30	23.92	24.74	25.20	21.39	22.23	21.85	22.67	23.13
	8H	23.56	24.34	24.02	24.78	25.25	21.49	22.27	21.96	22.72	23.18
	12H	23.61	24.31	24.09	24.79	25.26	21.56	22.25	22.04	22.73	23.20
8H	4H	23.24	24.02	23.70	24.46	24.93	21.43	22.21	21.89	22.65	23.12
	6H	23.70	24.35	24.20	24.84	25.32	21.87	22.52	22.37	23.01	23.49
	8H	23.85	24.43	24.36	24.94	25.43	22.02	22.59	22.53	23.10	23.59
	12H	23.96	24.46	24.47	24.96	25.52	22.12	22.63	22.63	23.12	23.69
12H	4H	23.24	23.93	23.72	24.41	24.88	21.47	22.17	21.95	22.64	23.12
	6H	23.71	24.29	24.22	24.80	25.28	21.93	22.51	22.45	23.02	23.51
	8H	23.90	24.41	24.41	24.90	25.46	22.12	22.63	22.63	23.13	23.69