

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: P1051152

Luminaire Tested: S122DR-B485DB2750-4F0-XX-W2A-W_2700K

Issue Date: 7/9/2025

Test Information

Test Method: LM-79-2019
Report Number: P1051152
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-B485DB2750-4F0-XX-W2A-W_2700K
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: 2200.0 lumens
Efficiency: N/A
Efficacy: 91.7 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

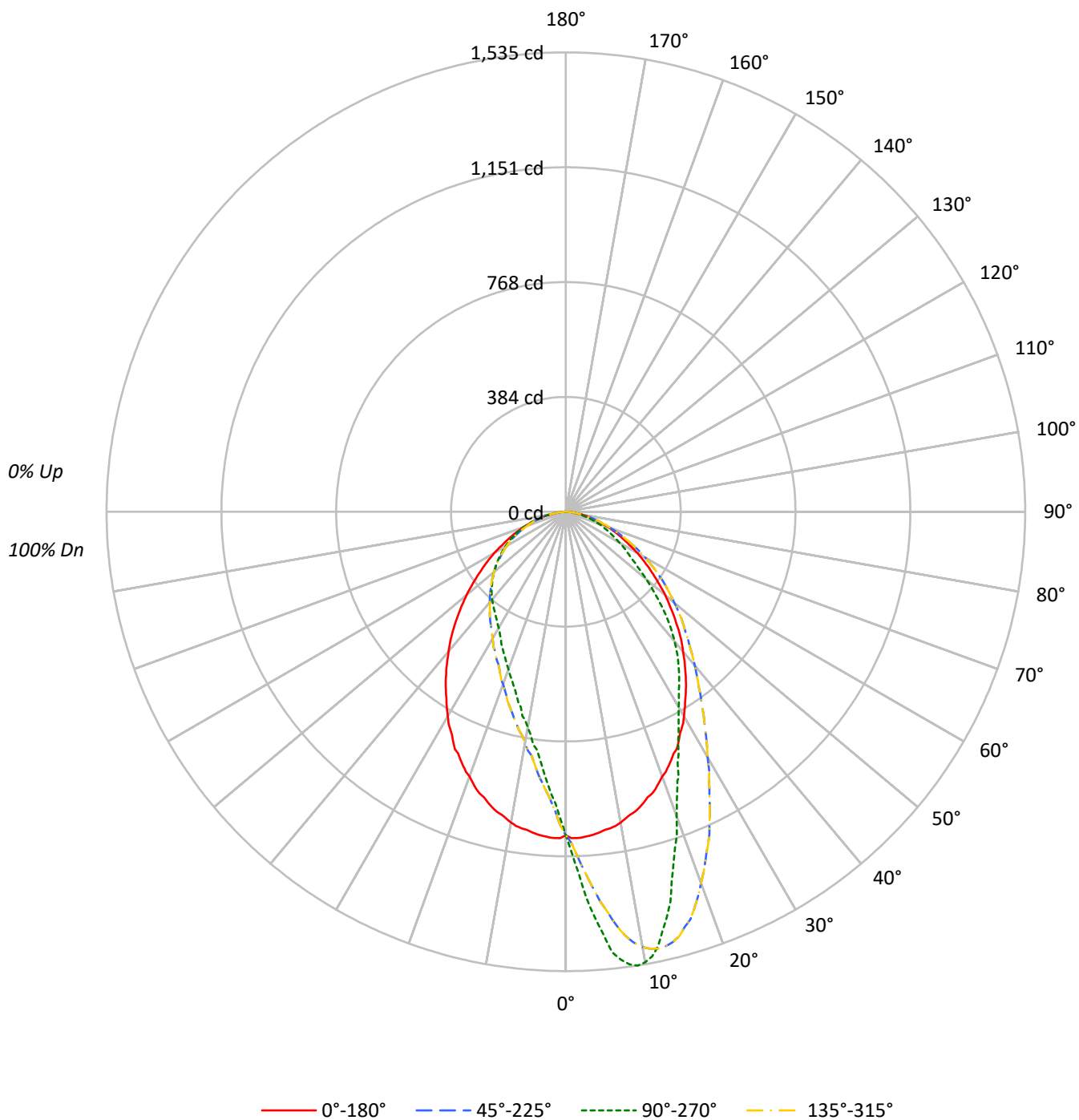
Input Watts (W): 24
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P1051152

CATALOG NUMBER: S122DR-B485DB2750-4F0-XX-W2A-W_2700K

Luminous Intensity Polar Plot





TEST NUMBER: P1051152

CATALOG NUMBER: S122DR-B485DB2750-4F0-XX-W2A-W_2700K

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°	17116	17116	17116	17116
5°	17205	22447	17205	13768
10°	16949	24570	16949	11753
15°	16489	22104	16489	10424
20°	15861	18240	15861	9452
25°	15303	15588	15303	8761
30°	14425	13787	14425	8205
35°	13527	12752	13527	7969
40°	12592	11671	12592	7925
45°	11645	10282	11645	7819
50°	10670	8656	10670	7723
55°	9640	7280	9640	7589
60°	8750	6563	8750	7433
65°	7794	5955	7794	7293
70°	7016	5364	7016	6914
75°	6000	4679	6000	6318
80°	4877	3929	4877	5287
85°	3651	2960	3651	3778

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°

Vertical Angle: 45°

Luminance: 18565 cd/sqm

TEST NUMBER: P1051152

CATALOG NUMBER: S122DR-B485DB2750-4F0-XX-W2A-W_2700K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	106.4	4.8
10°-20°	292.1	13.3
20°-30°	383.0	17.4
30°-40°	404.8	18.4
40°-50°	375.8	17.1
50°-60°	300.8	13.7
60°-70°	205.7	9.4
70°-80°	106.2	4.8
80°-90°	25.2	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°	781.5	35.5
0°-40°	1186.2	53.9
0°-60°	1862.9	84.7
0°-90°	2200.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2200.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1081	1081	1081	1081	1081	
5°	1083	1413	1083	866	1083	102
15°	1006	1349	1006	636	1006	283
25°	876	892	876	502	876	401
35°	700	660	700	412	700	437
45°	520	459	520	349	520	402
55°	349	264	349	275	349	314
65°	208	159	208	195	208	207
75°	98	76	98	103	98	105
85°	20	16	20	21	20	25
90°	0	0	0	0	0	

TEST NUMBER: P1051152

CATALOG NUMBER: S122DR-B485DB2750-4F0-XX-W2A-W_2700K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	1081.3	1081.3	1081.3	1081.3	1081.3	1081.3	1081.3	1081.3	1081.3	1081.3	1081.3
1°	1090.9	1110.3	1108.8	1134.8	1140.7	1134.8	1108.8	1110.3	1090.9	1069.4	1049.3
2°	1090.9	1134.8	1154.8	1195.7	1207.6	1195.7	1154.8	1134.8	1090.9	1044.9	1003.2
3°	1089.4	1156.3	1203.9	1260.4	1288.6	1260.4	1203.9	1156.3	1089.4	1022.6	965.3
4°	1085.7	1178.6	1253.7	1328.7	1354.0	1328.7	1253.7	1178.6	1085.7	1001.0	936.4
5°	1082.8	1206.9	1305.7	1396.4	1412.7	1396.4	1305.7	1206.9	1082.8	980.2	908.1
6°	1077.6	1235.1	1347.3	1446.9	1480.3	1446.9	1347.3	1235.1	1077.6	960.1	882.8
7°	1070.9	1253.7	1394.1	1487.0	1507.8	1487.0	1394.1	1253.7	1070.9	937.1	850.9
8°	1067.9	1284.1	1431.3	1519.0	1527.2	1519.0	1431.3	1284.1	1067.9	915.5	822.7
9°	1062.7	1296.8	1458.0	1528.6	1535.3	1528.6	1458.0	1296.8	1062.7	904.4	808.5
10°	1054.5	1316.1	1477.4	1531.6	1528.6	1531.6	1477.4	1316.1	1054.5	881.4	784.8
11°	1044.1	1338.4	1487.8	1520.5	1513.0	1520.5	1487.8	1338.4	1044.1	862.8	763.2
12°	1034.5	1354.0	1492.2	1499.7	1483.3	1499.7	1492.2	1354.0	1034.5	846.4	748.3
13°	1028.5	1360.7	1489.3	1473.6	1437.2	1473.6	1489.3	1360.7	1028.5	827.9	729.8
14°	1018.1	1375.6	1481.1	1433.5	1395.6	1433.5	1481.1	1375.6	1018.1	807.0	712.7
15°	1006.2	1380.0	1467.7	1392.6	1348.8	1392.6	1467.7	1380.0	1006.2	790.0	694.8
16°	992.1	1385.2	1443.2	1342.1	1283.4	1342.1	1443.2	1385.2	992.1	770.6	678.5
17°	984.7	1388.2	1424.6	1292.3	1229.2	1292.3	1424.6	1388.2	984.7	755.8	664.4
18°	972.8	1386.0	1391.2	1250.7	1179.4	1250.7	1391.2	1386.0	972.8	738.7	643.6
19°	956.4	1380.8	1357.7	1197.9	1140.0	1197.9	1357.7	1380.8	956.4	722.3	628.0
20°	941.6	1378.5	1320.6	1149.6	1082.8	1149.6	1320.6	1378.5	941.6	707.5	613.1
21°	931.2	1371.1	1286.4	1103.6	1035.2	1103.6	1286.4	1371.1	931.2	693.3	601.9
22.5°	908.1	1357.0	1229.2	1033.0	972.8	1033.0	1229.2	1357.0	908.1	669.6	577.4
23°	901.4	1352.5	1214.3	1016.6	965.3	1016.6	1214.3	1352.5	901.4	664.4	569.2
24°	884.3	1338.4	1179.4	972.8	918.5	972.8	1179.4	1338.4	884.3	648.0	555.9
25°	876.2	1325.0	1136.3	937.1	892.5	937.1	1136.3	1325.0	876.2	633.2	547.0
26°	858.3	1305.7	1097.6	907.4	856.1	907.4	1097.6	1305.7	858.3	619.8	532.8
27°	837.5	1291.6	1057.5	872.4	829.3	872.4	1057.5	1291.6	837.5	605.7	521.7
28°	822.7	1268.5	1018.8	844.9	803.3	844.9	1018.8	1268.5	822.7	590.1	513.5
29°	808.5	1250.7	987.6	813.0	776.6	813.0	987.6	1250.7	808.5	576.7	500.9
30°	789.2	1226.9	948.2	787.7	754.3	787.7	948.2	1226.9	789.2	561.1	489.7
32.5°	743.1	1170.4	868.0	731.2	703.0	731.2	868.0	1170.4	743.1	529.9	463.0
35°	700.0	1107.3	794.4	678.5	659.9	678.5	794.4	1107.3	700.0	496.4	441.4
37.5°	654.7	1041.1	727.5	632.4	614.6	632.4	727.5	1041.1	654.7	465.9	416.9
40°	609.4	975.7	670.3	588.6	564.8	588.6	670.3	975.7	609.4	436.2	395.4
42.5°	567.0	899.2	614.6	542.5	515.0	542.5	614.6	899.2	567.0	408.0	374.5
45°	520.2	829.3	564.8	494.2	459.3	494.2	564.8	829.3	520.2	381.2	353.7
47.5°	475.6	757.3	521.7	445.9	401.3	445.9	521.7	757.3	475.6	354.5	333.7
50°	433.3	687.4	473.4	391.6	351.5	391.6	473.4	687.4	433.3	330.0	312.9
52.5°	390.1	622.0	431.0	342.6	302.5	342.6	431.0	622.0	390.1	307.7	292.8
55°	349.3	553.6	388.7	295.0	263.8	295.0	388.7	553.6	349.3	281.6	269.8
57.5°	311.4	488.2	347.0	257.9	237.1	257.9	347.0	488.2	311.4	256.4	249.0
60°	276.4	428.0	306.2	223.7	207.3	223.7	306.2	428.0	276.4	231.9	228.1
62.5°	238.5	373.8	267.5	194.7	180.6	194.7	267.5	373.8	238.5	208.1	206.6
65°	208.1	318.8	227.4	168.7	159.0	168.7	227.4	318.8	208.1	184.3	183.6



TEST NUMBER: P1051152

CATALOG NUMBER: S122DR-B485DB2750-4F0-XX-W2A-W_2700K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	177.6	266.8	192.5	144.2	136.7	144.2	192.5	266.8	177.6	160.5	160.5
70°	151.6	220.0	159.0	121.9	115.9	121.9	159.0	220.0	151.6	136.7	137.5
72.5°	122.6	176.9	129.3	99.6	94.4	99.6	129.3	176.9	122.6	114.4	116.7
75°	98.1	139.7	101.8	80.3	76.5	80.3	101.8	139.7	98.1	91.4	94.4
77.5°	75.1	102.6	75.1	61.7	58.7	61.7	75.1	102.6	75.1	71.3	74.3
80°	53.5	72.1	53.5	43.8	43.1	43.8	53.5	72.1	53.5	51.3	55.0
82.5°	35.7	46.1	34.9	29.7	28.2	29.7	34.9	46.1	35.7	34.9	36.4
85°	20.1	25.3	19.3	17.1	16.3	17.1	19.3	25.3	20.1	20.1	21.6
87.5°	8.9	9.7	8.2	7.4	6.7	7.4	8.2	9.7	8.9	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: P1051152

CATALOG NUMBER: S122DR-B485DB2750-4F0-XX-W2A-W_2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	1081.3	1081.3	1081.3	1081.3	1081.3	1081.3
1°	1036.7	1026.3	1036.7	1049.3	1069.4	1090.9
2°	992.1	978.0	992.1	1003.2	1044.9	1090.9
3°	945.3	943.0	945.3	965.3	1022.6	1089.4
4°	914.8	904.4	914.8	936.4	1001.0	1085.7
5°	878.4	866.5	878.4	908.1	980.2	1082.8
6°	847.2	830.8	847.2	882.8	960.1	1077.6
7°	812.3	800.4	812.3	850.9	937.1	1070.9
8°	798.9	784.8	798.9	822.7	915.5	1067.9
9°	769.1	753.5	769.1	808.5	904.4	1062.7
10°	750.6	731.2	750.6	784.8	881.4	1054.5
11°	728.3	709.7	728.3	763.2	862.8	1044.1
12°	714.9	698.6	714.9	748.3	846.4	1034.5
13°	691.1	670.3	691.1	729.8	827.9	1028.5
14°	674.0	656.2	674.0	712.7	807.0	1018.1
15°	652.5	636.1	652.5	694.8	790.0	1006.2
16°	638.4	616.8	638.4	678.5	770.6	992.1
17°	616.8	602.7	616.8	664.4	755.8	984.7
18°	601.2	587.8	601.2	643.6	738.7	972.8
19°	590.1	574.4	590.1	628.0	722.3	956.4
20°	574.4	561.1	574.4	613.1	707.5	941.6
21°	559.6	547.7	559.6	601.9	693.3	931.2
22.5°	545.5	529.1	545.5	577.4	669.6	908.1
23°	537.3	523.9	537.3	569.2	664.4	901.4
24°	527.6	512.0	527.6	555.9	648.0	884.3
25°	515.0	501.6	515.0	547.0	633.2	876.2
26°	503.8	491.2	503.8	532.8	619.8	858.3
27°	492.7	477.1	492.7	521.7	605.7	837.5
28°	483.0	468.2	483.0	513.5	590.1	822.7
29°	470.4	456.3	470.4	500.9	576.7	808.5
30°	461.5	448.9	461.5	489.7	561.1	789.2
32.5°	437.0	429.5	437.0	463.0	529.9	743.1
35°	416.2	412.4	416.2	441.4	496.4	700.0
37.5°	400.6	397.6	400.6	416.9	465.9	654.7
40°	382.7	383.5	382.7	395.4	436.2	609.4
42.5°	365.6	367.1	365.6	374.5	408.0	567.0
45°	349.3	349.3	349.3	353.7	381.2	520.2
47.5°	330.7	332.2	330.7	333.7	354.5	475.6
50°	312.1	313.6	312.1	312.9	330.0	433.3
52.5°	292.8	294.3	292.8	292.8	307.7	390.1
55°	272.0	275.0	272.0	269.8	281.6	349.3
57.5°	250.4	254.2	250.4	249.0	256.4	311.4
60°	231.1	234.8	231.1	228.1	231.9	276.4
62.5°	211.1	214.8	211.1	206.6	208.1	238.5
65°	190.2	194.7	190.2	183.6	184.3	208.1



TEST NUMBER: P1051152

CATALOG NUMBER: S122DR-B485DB2750-4F0-XX-W2A-W_2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	167.9	171.7	167.9	160.5	160.5	177.6
70°	146.4	149.4	146.4	137.5	136.7	151.6
72.5°	124.1	127.1	124.1	116.7	114.4	122.6
75°	101.1	103.3	101.1	94.4	91.4	98.1
77.5°	80.3	80.3	80.3	74.3	71.3	75.1
80°	58.0	58.0	58.0	55.0	51.3	53.5
82.5°	38.6	38.6	38.6	36.4	34.9	35.7
85°	21.6	20.8	21.6	21.6	20.1	20.1
87.5°	8.2	8.9	8.2	9.7	9.7	8.9
90°	0.0	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P1051152

CATALOG NUMBER: S122DR-B485DB2750-4F0-XX-W2A-W_2700K

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	20.73	22.25	21.10	22.57	22.88	18.05	19.57	18.41	19.88	20.20
	3H	21.95	23.31	22.32	23.64	24.00	19.37	20.74	19.75	21.07	21.43
	4H	22.34	23.62	22.74	23.97	24.35	19.83	21.11	20.23	21.46	21.84
	6H	22.58	23.77	23.00	24.13	24.53	20.13	21.32	20.54	21.68	22.08
	8H	22.64	23.77	23.07	24.16	24.56	20.21	21.34	20.64	21.73	22.13
	12H	22.67	23.75	23.10	24.13	24.56	20.25	21.33	20.68	21.72	22.15
4H	2H	21.02	22.30	21.42	22.65	23.03	19.01	20.29	19.41	20.64	21.02
	3H	22.51	23.58	22.92	23.98	24.38	20.47	21.54	20.88	21.94	22.34
	4H	23.07	24.03	23.50	24.44	24.88	20.99	21.95	21.42	22.36	22.80
	6H	23.44	24.27	23.90	24.71	25.17	21.36	22.20	21.82	22.64	23.10
	8H	23.53	24.31	23.99	24.75	25.22	21.46	22.24	21.93	22.69	23.15
	12H	23.58	24.28	24.07	24.76	25.23	21.53	22.22	22.01	22.70	23.17
8H	4H	23.21	23.99	23.67	24.43	24.90	21.40	22.18	21.86	22.62	23.09
	6H	23.67	24.32	24.17	24.81	25.29	21.84	22.49	22.34	22.98	23.46
	8H	23.82	24.40	24.34	24.91	25.40	21.99	22.56	22.50	23.07	23.56
	12H	23.93	24.44	24.44	24.93	25.49	22.09	22.60	22.60	23.09	23.66
12H	4H	23.21	23.90	23.69	24.38	24.85	21.44	22.14	21.92	22.61	23.09
	6H	23.68	24.26	24.19	24.77	25.25	21.90	22.48	22.42	22.99	23.48
	8H	23.87	24.38	24.38	24.87	25.43	22.09	22.60	22.60	23.10	23.66