

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: P1051159

Luminaire Tested: S122DR-B485DB40-4F0-XX-W2A-W

Issue Date: 7/9/2025

Test Information

Test Method: LM-79-2019
Report Number: P1051159
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-B485DB40-4F0-XX-W2A-W
Description: Define 2 Direct Recessed with 4000K BioUP LEDs {m-DER=0.865} {m-EER=0.951}
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2206.0 lumens
Efficiency: N/A
Efficacy: 91.9 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

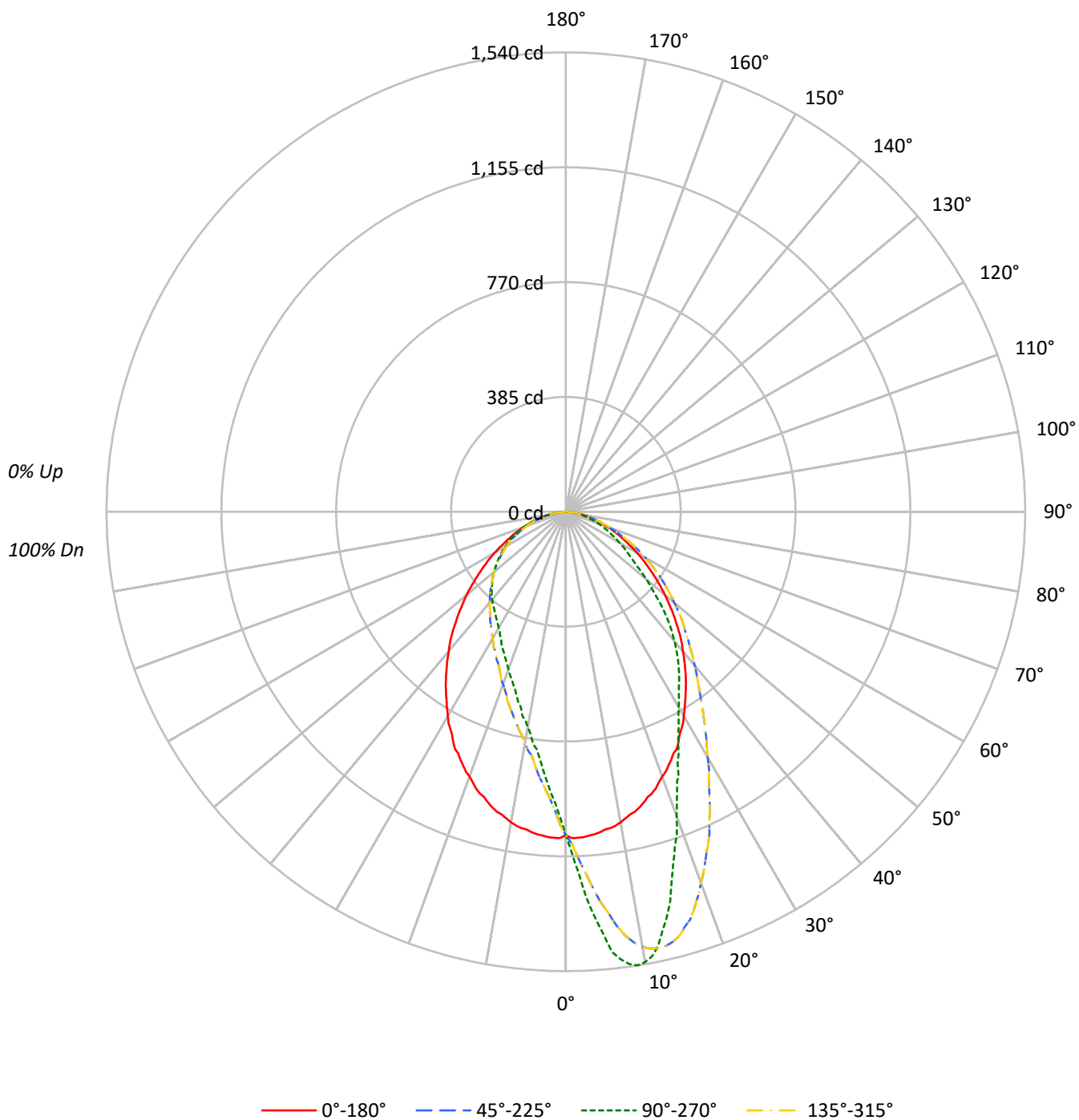
Input Watts (W): 24
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P1051159

CATALOG NUMBER: S122DR-B485DB40-4FO-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°	17162	17162	17162	17162
5°	17252	22509	17252	13807
10°	16996	24637	16996	11785
15°	16535	22164	16535	10454
20°	15904	18289	15904	9477
25°	15345	15630	15345	8785
30°	14465	13824	14465	8227
35°	13564	12787	13564	7992
40°	12626	11702	12626	7945
45°	11677	10309	11677	7840
50°	10698	8681	10698	7745
55°	9665	7300	9665	7609
60°	8776	6582	8776	7456
65°	7813	5974	7813	7311
70°	7035	5378	7035	6933
75°	6018	4697	6018	6336
80°	4895	3938	4895	5296
85°	3651	2979	3651	3796

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°

Vertical Angle: 45°

Luminance: 18616 cd/sqm

TEST NUMBER: P1051159

CATALOG NUMBER: S122DR-B485DB40-4F0-XX-W2A-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	106.7	4.8
10°-20°	292.8	13.3
20°-30°	384.0	17.4
30°-40°	405.9	18.4
40°-50°	376.9	17.1
50°-60°	301.6	13.7
60°-70°	206.3	9.4
70°-80°	106.5	4.8
80°-90°	25.3	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°	783.6	35.5
0°-40°	1189.5	53.9
0°-60°	1868.0	84.7
0°-90°	2206.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2206.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1084	1084	1084	1084	1084	
5°	1086	1417	1086	869	1086	103
15°	1009	1352	1009	638	1009	284
25°	879	895	879	503	879	402
35°	702	662	702	414	702	438
45°	522	460	522	350	522	403
55°	350	264	350	276	350	315
65°	209	160	209	195	209	208
75°	98	77	98	104	98	105
85°	20	16	20	21	20	25
90°	0	0	0	0	0	

TEST NUMBER: P1051159

CATALOG NUMBER: S122DR-B485DB40-4F0-XX-W2A-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	1084.2	1084.2	1084.2	1084.2	1084.2	1084.2	1084.2	1084.2	1084.2	1084.2	1084.2
1°	1093.9	1113.3	1111.8	1137.9	1143.8	1137.9	1111.8	1113.3	1093.9	1072.3	1052.2
2°	1093.9	1137.9	1158.0	1199.0	1210.9	1199.0	1158.0	1137.9	1093.9	1047.7	1006.0
3°	1092.4	1159.5	1207.2	1263.8	1292.1	1263.8	1207.2	1159.5	1092.4	1025.3	968.0
4°	1088.7	1181.8	1257.1	1332.4	1357.7	1332.4	1257.1	1181.8	1088.7	1003.7	938.9
5°	1085.7	1210.2	1309.3	1400.2	1416.6	1400.2	1309.3	1210.2	1085.7	982.9	910.6
6°	1080.5	1238.5	1351.0	1450.8	1484.4	1450.8	1351.0	1238.5	1080.5	962.8	885.3
7°	1073.8	1257.1	1397.9	1491.1	1511.9	1491.1	1397.9	1257.1	1073.8	939.7	853.2
8°	1070.8	1287.6	1435.2	1523.1	1531.3	1523.1	1435.2	1287.6	1070.8	918.0	824.9
9°	1065.6	1300.3	1462.0	1532.8	1539.5	1532.8	1462.0	1300.3	1065.6	906.9	810.7
10°	1057.4	1319.7	1481.4	1535.8	1532.8	1535.8	1481.4	1319.7	1057.4	883.8	786.9
11°	1047.0	1342.0	1491.8	1524.6	1517.2	1524.6	1491.8	1342.0	1047.0	865.1	765.3
12°	1037.3	1357.7	1496.3	1503.7	1487.4	1503.7	1496.3	1357.7	1037.3	848.7	750.4
13°	1031.3	1364.4	1493.3	1477.7	1441.2	1477.7	1493.3	1364.4	1031.3	830.1	731.8
14°	1020.9	1379.3	1485.1	1437.4	1399.4	1437.4	1485.1	1379.3	1020.9	809.3	714.6
15°	1009.0	1383.8	1471.7	1396.4	1352.5	1396.4	1471.7	1383.8	1009.0	792.1	696.7
16°	994.8	1389.0	1447.1	1345.8	1286.9	1345.8	1447.1	1389.0	994.8	772.7	680.3
17°	987.3	1392.0	1428.5	1295.8	1232.5	1295.8	1428.5	1392.0	987.3	757.8	666.2
18°	975.4	1389.7	1395.0	1254.1	1182.6	1254.1	1395.0	1389.7	975.4	740.7	645.3
19°	959.0	1384.5	1361.4	1201.2	1143.1	1201.2	1361.4	1384.5	959.0	724.3	629.7
20°	944.1	1382.3	1324.2	1152.8	1085.7	1152.8	1324.2	1382.3	944.1	709.4	614.8
21°	933.7	1374.8	1289.9	1106.6	1038.0	1106.6	1289.9	1374.8	933.7	695.2	603.6
22.5°	910.6	1360.7	1232.5	1035.8	975.4	1035.8	1232.5	1360.7	910.6	671.4	579.0
23°	903.9	1356.2	1217.6	1019.4	968.0	1019.4	1217.6	1356.2	903.9	666.2	570.8
24°	886.7	1342.0	1182.6	975.4	921.0	975.4	1182.6	1342.0	886.7	649.8	557.4
25°	878.6	1328.6	1139.4	939.7	894.9	939.7	1139.4	1328.6	878.6	634.9	548.4
26°	860.7	1309.3	1100.6	909.8	858.4	909.8	1100.6	1309.3	860.7	621.5	534.3
27°	839.8	1295.1	1060.4	874.8	831.6	874.8	1060.4	1295.1	839.8	607.3	523.1
28°	824.9	1272.0	1021.6	847.3	805.5	847.3	1021.6	1272.0	824.9	591.7	514.9
29°	810.7	1254.1	990.3	815.2	778.7	815.2	990.3	1254.1	810.7	578.2	502.2
30°	791.4	1230.3	950.8	789.9	756.3	789.9	950.8	1230.3	791.4	562.6	491.1
32.5°	745.2	1173.6	870.4	733.2	704.9	733.2	870.4	1173.6	745.2	531.3	464.2
35°	701.9	1110.3	796.6	680.3	661.7	680.3	796.6	1110.3	701.9	497.8	442.6
37.5°	656.5	1044.0	729.5	634.1	616.3	634.1	729.5	1044.0	656.5	467.2	418.0
40°	611.0	978.4	672.1	590.2	566.3	590.2	672.1	978.4	611.0	437.4	396.4
42.5°	568.6	901.7	616.3	544.0	516.4	544.0	616.3	901.7	568.6	409.1	375.6
45°	521.6	831.6	566.3	495.5	460.5	495.5	566.3	831.6	521.6	382.3	354.7
47.5°	476.9	759.3	523.1	447.1	402.4	447.1	523.1	759.3	476.9	355.4	334.6
50°	434.4	689.3	474.7	392.7	352.5	392.7	474.7	689.3	434.4	330.9	313.7
52.5°	391.2	623.7	432.2	343.5	303.3	343.5	432.2	623.7	391.2	308.5	293.6
55°	350.2	555.1	389.7	295.8	264.5	295.8	389.7	555.1	350.2	282.4	270.5
57.5°	312.2	489.6	348.0	258.6	237.7	258.6	348.0	489.6	312.2	257.1	249.6
60°	277.2	429.2	307.0	224.3	207.9	224.3	307.0	429.2	277.2	232.5	228.8
62.5°	239.2	374.8	268.3	195.2	181.1	195.2	268.3	374.8	239.2	208.6	207.2
65°	208.6	319.7	228.0	169.2	159.5	169.2	228.0	319.7	208.6	184.8	184.1



TEST NUMBER: P1051159

CATALOG NUMBER: S122DR-B485DB40-4F0-XX-W2A-W

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	178.1	267.5	193.0	144.6	137.1	144.6	193.0	267.5	178.1	161.0	161.0
70°	152.0	220.6	159.5	122.2	116.2	122.2	159.5	220.6	152.0	137.1	137.9
72.5°	123.0	177.3	129.7	99.9	94.6	99.9	129.7	177.3	123.0	114.8	117.0
75°	98.4	140.1	102.1	80.5	76.8	80.5	102.1	140.1	98.4	91.7	94.6
77.5°	75.3	102.8	75.3	61.8	58.9	61.8	75.3	102.8	75.3	71.5	74.5
80°	53.7	72.3	53.7	44.0	43.2	44.0	53.7	72.3	53.7	51.4	55.1
82.5°	35.8	46.2	35.0	29.8	28.3	29.8	35.0	46.2	35.8	35.0	36.5
85°	20.1	25.3	19.4	17.1	16.4	17.1	19.4	25.3	20.1	20.1	21.6
87.5°	8.9	9.7	8.2	7.5	6.7	7.5	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: P1051159

CATALOG NUMBER: S122DR-B485DB40-4F0-XX-W2A-W

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	1084.2	1084.2	1084.2	1084.2	1084.2	1084.2
1°	1039.5	1029.1	1039.5	1052.2	1072.3	1093.9
2°	994.8	980.6	994.8	1006.0	1047.7	1093.9
3°	947.9	945.6	947.9	968.0	1025.3	1092.4
4°	917.3	906.9	917.3	938.9	1003.7	1088.7
5°	880.8	868.9	880.8	910.6	982.9	1085.7
6°	849.5	833.1	849.5	885.3	962.8	1080.5
7°	814.5	802.5	814.5	853.2	939.7	1073.8
8°	801.1	786.9	801.1	824.9	918.0	1070.8
9°	771.2	755.6	771.2	810.7	906.9	1065.6
10°	752.6	733.2	752.6	786.9	883.8	1057.4
11°	730.3	711.6	730.3	765.3	865.1	1047.0
12°	716.9	700.5	716.9	750.4	848.7	1037.3
13°	693.0	672.1	693.0	731.8	830.1	1031.3
14°	675.9	658.0	675.9	714.6	809.3	1020.9
15°	654.3	637.9	654.3	696.7	792.1	1009.0
16°	640.1	618.5	640.1	680.3	772.7	994.8
17°	618.5	604.3	618.5	666.2	757.8	987.3
18°	602.8	589.4	602.8	645.3	740.7	975.4
19°	591.7	576.0	591.7	629.7	724.3	959.0
20°	576.0	562.6	576.0	614.8	709.4	944.1
21°	561.1	549.2	561.1	603.6	695.2	933.7
22.5°	547.0	530.6	547.0	579.0	671.4	910.6
23°	538.8	525.3	538.8	570.8	666.2	903.9
24°	529.1	513.4	529.1	557.4	649.8	886.7
25°	516.4	503.0	516.4	548.4	634.9	878.6
26°	505.2	492.6	505.2	534.3	621.5	860.7
27°	494.0	478.4	494.0	523.1	607.3	839.8
28°	484.4	469.5	484.4	514.9	591.7	824.9
29°	471.7	457.5	471.7	502.2	578.2	810.7
30°	462.7	450.1	462.7	491.1	562.6	791.4
32.5°	438.2	430.7	438.2	464.2	531.3	745.2
35°	417.3	413.6	417.3	442.6	497.8	701.9
37.5°	401.6	398.7	401.6	418.0	467.2	656.5
40°	383.8	384.5	383.8	396.4	437.4	611.0
42.5°	366.6	368.1	366.6	375.6	409.1	568.6
45°	350.2	350.2	350.2	354.7	382.3	521.6
47.5°	331.6	333.1	331.6	334.6	355.4	476.9
50°	313.0	314.5	313.0	313.7	330.9	434.4
52.5°	293.6	295.1	293.6	293.6	308.5	391.2
55°	272.7	275.7	272.7	270.5	282.4	350.2
57.5°	251.1	254.8	251.1	249.6	257.1	312.2
60°	231.7	235.5	231.7	228.8	232.5	277.2
62.5°	211.6	215.4	211.6	207.2	208.6	239.2
65°	190.8	195.2	190.8	184.1	184.8	208.6



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	168.4	172.1	168.4	161.0	161.0	178.1
70°	146.8	149.8	146.8	137.9	137.1	152.0
72.5°	124.4	127.4	124.4	117.0	114.8	123.0
75°	101.3	103.6	101.3	94.6	91.7	98.4
77.5°	80.5	80.5	80.5	74.5	71.5	75.3
80°	58.1	58.1	58.1	55.1	51.4	53.7
82.5°	38.7	38.7	38.7	36.5	35.0	35.8
85°	21.6	20.9	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

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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	20.74	22.26	21.11	22.58	22.89	18.06	19.58	18.42	19.89	20.20
	3H	21.96	23.32	22.33	23.65	24.01	19.38	20.75	19.76	21.07	21.44
	4H	22.35	23.63	22.75	23.98	24.36	19.84	21.12	20.24	21.47	21.85
	6H	22.59	23.78	23.01	24.14	24.54	20.14	21.33	20.55	21.69	22.09
	8H	22.65	23.78	23.08	24.17	24.57	20.22	21.35	20.65	21.74	22.14
	12H	22.68	23.76	23.11	24.14	24.57	20.26	21.34	20.69	21.73	22.16
4H	2H	21.03	22.31	21.43	22.66	23.04	19.02	20.30	19.42	20.65	21.03
	3H	22.52	23.59	22.93	23.99	24.39	20.48	21.55	20.89	21.95	22.35
	4H	23.08	24.04	23.51	24.46	24.89	21.00	21.96	21.43	22.37	22.81
	6H	23.45	24.28	23.91	24.72	25.18	21.37	22.21	21.83	22.65	23.11
	8H	23.54	24.32	24.00	24.76	25.23	21.47	22.25	21.94	22.70	23.16
	12H	23.59	24.29	24.08	24.77	25.24	21.54	22.23	22.02	22.71	23.18
8H	4H	23.22	24.00	23.68	24.44	24.91	21.41	22.19	21.87	22.63	23.10
	6H	23.68	24.33	24.18	24.82	25.30	21.85	22.50	22.35	22.99	23.47
	8H	23.83	24.41	24.34	24.92	25.41	22.00	22.57	22.51	23.08	23.57
	12H	23.94	24.44	24.45	24.94	25.50	22.10	22.61	22.61	23.10	23.67
12H	4H	23.22	23.91	23.70	24.39	24.86	21.45	22.15	21.93	22.62	23.10
	6H	23.69	24.27	24.20	24.78	25.26	21.91	22.49	22.43	23.00	23.49
	8H	23.88	24.39	24.39	24.88	25.44	22.10	22.61	22.61	23.11	23.67