

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: P1051169

Luminaire Tested: S122DR-B675DB40-4F0-XX-W2A-W

Issue Date: 7/9/2025

Test Information

Test Method: LM-79-2019
Report Number: P1051169
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-B675DB40-4F0-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: 3044.0 lumens
Efficiency: N/A
Efficacy: 84.8 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

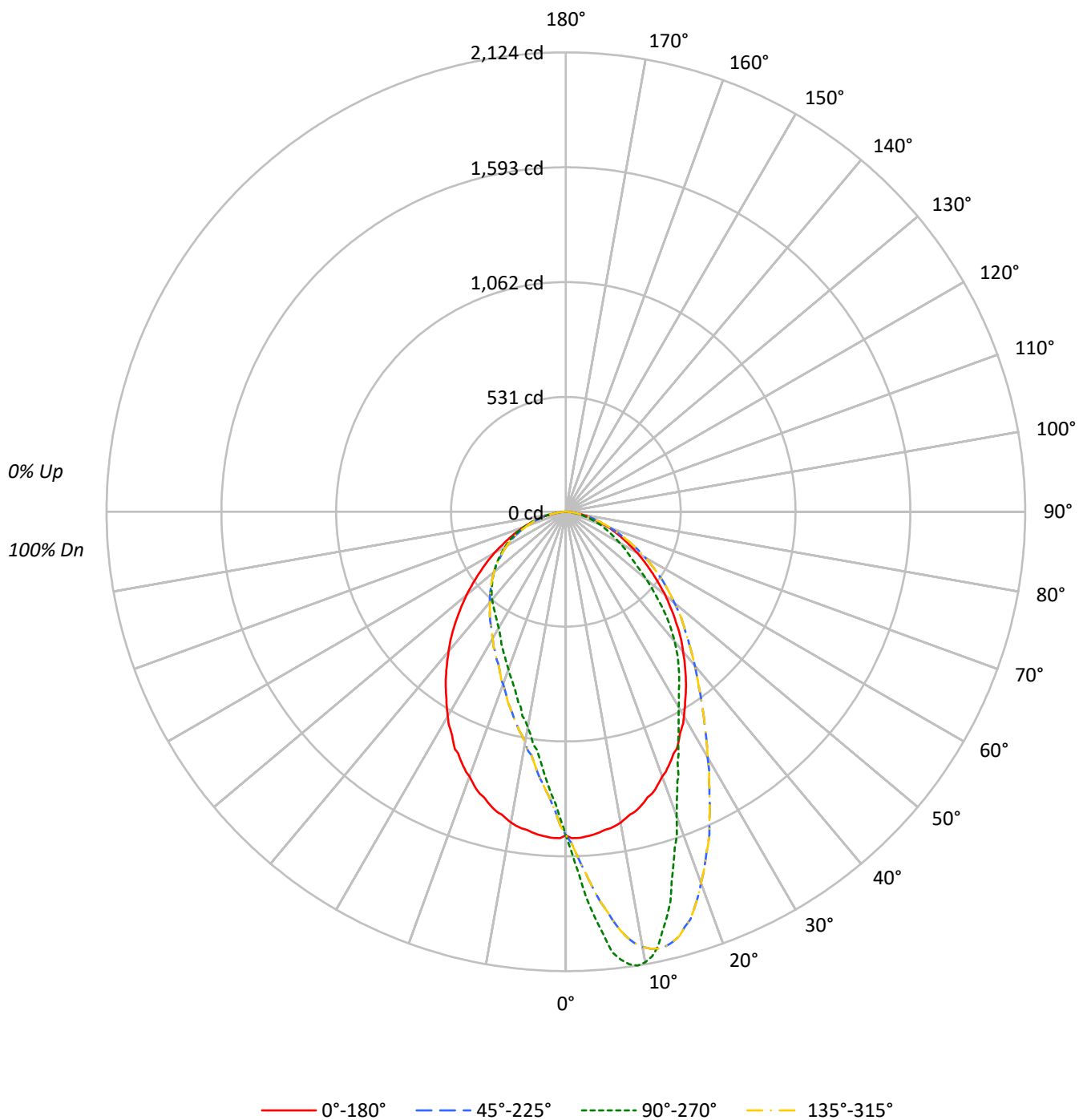
Input Watts (W): 35.9
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P1051169

CATALOG NUMBER: S122DR-B675DB40-4F0-XX-W2A-W

Luminous Intensity Polar Plot



TEST NUMBER: P1051169

CATALOG NUMBER: S122DR-B675DB40-4F0-XX-W2A-W

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°	23682	23682	23682	23682
5°	23804	31060	23804	19050
10°	23453	33997	23453	16263
15°	22815	30583	22815	14424
20°	21946	25236	21946	13077
25°	21174	21568	21174	12123
30°	19960	19077	19960	11353
35°	18717	17645	18717	11028
40°	17424	16149	17424	10964
45°	16113	14224	16113	10819
50°	14763	11978	14763	10685
55°	13338	10073	13338	10498
60°	12109	9083	12109	10286
65°	10783	8240	10783	10090
70°	9710	7424	9710	9566
75°	8299	6477	8299	8740
80°	6746	5433	6746	7311
85°	5049	4105	5049	5231

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°

Vertical Angle: 45°

Luminance: 25688 cd/sqm

TEST NUMBER: P1051169

CATALOG NUMBER: S122DR-B675DB40-4F0-XX-W2A-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	147.2	4.8
10°-20°	404.1	13.3
20°-30°	529.9	17.4
30°-40°	560.1	18.4
40°-50°	520.0	17.1
50°-60°	416.2	13.7
60°-70°	284.7	9.4
70°-80°	146.9	4.8
80°-90°	34.9	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°	1081.2	35.5
0°-40°	1641.3	53.9
0°-60°	2577.6	84.7
0°-90°	3044.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3044.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1496	1496	1496	1496	1496	
5°	1498	1955	1498	1199	1498	142
15°	1392	1866	1392	880	1392	391
25°	1212	1235	1212	694	1212	554
35°	969	913	969	571	969	605
45°	720	635	720	483	720	556
55°	483	365	483	380	483	434
65°	288	220	288	269	288	287
75°	136	106	136	143	136	145
85°	28	23	28	29	28	34
90°	0	0	0	0	0	

TEST NUMBER: P1051169

CATALOG NUMBER: S122DR-B675DB40-4F0-XX-W2A-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	1496.1	1496.1	1496.1	1496.1	1496.1	1496.1	1496.1	1496.1	1496.1	1496.1	1496.1
1°	1509.4	1536.2	1534.1	1570.1	1578.3	1570.1	1534.1	1536.2	1509.4	1479.6	1451.9
2°	1509.4	1570.1	1597.9	1654.4	1670.9	1654.4	1597.9	1570.1	1509.4	1445.7	1388.1
3°	1507.4	1599.9	1665.7	1743.9	1783.0	1743.9	1665.7	1599.9	1507.4	1414.9	1335.7
4°	1502.3	1630.8	1734.6	1838.5	1873.4	1838.5	1734.6	1630.8	1502.3	1385.0	1295.6
5°	1498.1	1669.9	1806.6	1932.1	1954.7	1932.1	1806.6	1669.9	1498.1	1356.2	1256.5
6°	1490.9	1708.9	1864.2	2002.0	2048.2	2002.0	1864.2	1708.9	1490.9	1328.5	1221.5
7°	1481.7	1734.6	1929.0	2057.5	2086.3	2057.5	1929.0	1734.6	1481.7	1296.6	1177.3
8°	1477.6	1776.8	1980.4	2101.7	2113.0	2101.7	1980.4	1776.8	1477.6	1266.8	1138.3
9°	1470.4	1794.3	2017.4	2115.1	2124.3	2115.1	2017.4	1794.3	1470.4	1251.4	1118.7
10°	1459.1	1821.0	2044.1	2119.2	2115.1	2119.2	2044.1	1821.0	1459.1	1219.5	1085.8
11°	1444.7	1851.9	2058.5	2103.8	2093.5	2103.8	2058.5	1851.9	1444.7	1193.8	1056.0
12°	1431.3	1873.4	2064.7	2075.0	2052.4	2075.0	2064.7	1873.4	1431.3	1171.2	1035.4
13°	1423.1	1882.7	2060.6	2039.0	1988.6	2039.0	2060.6	1882.7	1423.1	1145.5	1009.7
14°	1408.7	1903.3	2049.3	1983.5	1931.0	1983.5	2049.3	1903.3	1408.7	1116.7	986.1
15°	1392.2	1909.4	2030.8	1926.9	1866.2	1926.9	2030.8	1909.4	1392.2	1093.0	961.4
16°	1372.7	1916.6	1996.8	1857.0	1775.8	1857.0	1996.8	1916.6	1372.7	1066.3	938.8
17°	1362.4	1920.7	1971.1	1788.1	1700.7	1788.1	1971.1	1920.7	1362.4	1045.7	919.2
18°	1346.0	1917.7	1924.9	1730.5	1631.8	1730.5	1924.9	1917.7	1346.0	1022.1	890.5
19°	1323.3	1910.5	1878.6	1657.5	1577.3	1657.5	1878.6	1910.5	1323.3	999.4	868.9
20°	1302.8	1907.4	1827.2	1590.7	1498.1	1590.7	1827.2	1907.4	1302.8	978.9	848.3
21°	1288.4	1897.1	1779.9	1526.9	1432.3	1526.9	1779.9	1897.1	1288.4	959.3	832.9
22.5°	1256.5	1877.6	1700.7	1429.2	1346.0	1429.2	1700.7	1877.6	1256.5	926.4	798.9
23°	1247.2	1871.4	1680.1	1406.6	1335.7	1406.6	1680.1	1871.4	1247.2	919.2	787.6
24°	1223.6	1851.9	1631.8	1346.0	1270.9	1346.0	1631.8	1851.9	1223.6	896.6	769.1
25°	1212.3	1833.3	1572.2	1296.6	1234.9	1296.6	1572.2	1833.3	1212.3	876.1	756.8
26°	1187.6	1806.6	1518.7	1255.5	1184.5	1255.5	1518.7	1806.6	1187.6	857.5	737.2
27°	1158.8	1787.1	1463.2	1207.1	1147.5	1207.1	1463.2	1787.1	1158.8	838.0	721.8
28°	1138.3	1755.2	1409.7	1169.1	1111.5	1169.1	1409.7	1755.2	1138.3	816.4	710.5
29°	1118.7	1730.5	1366.5	1124.9	1074.5	1124.9	1366.5	1730.5	1118.7	797.9	693.0
30°	1092.0	1697.6	1312.0	1089.9	1043.7	1089.9	1312.0	1697.6	1092.0	776.3	677.6
32.5°	1028.2	1619.5	1201.0	1011.8	972.7	1011.8	1201.0	1619.5	1028.2	733.1	640.6
35°	968.6	1532.1	1099.2	938.8	913.1	938.8	1099.2	1532.1	968.6	686.9	610.8
37.5°	905.9	1440.6	1006.6	875.0	850.4	875.0	1006.6	1440.6	905.9	644.7	576.8
40°	843.2	1350.1	927.5	814.4	781.5	814.4	927.5	1350.1	843.2	603.6	547.0
42.5°	784.5	1244.2	850.4	750.6	712.6	750.6	850.4	1244.2	784.5	564.5	518.2
45°	719.8	1147.5	781.5	683.8	635.4	683.8	781.5	1147.5	719.8	527.5	489.4
47.5°	658.1	1047.8	721.8	616.9	555.2	616.9	721.8	1047.8	658.1	490.5	461.7
50°	599.5	951.1	655.0	541.9	486.4	541.9	655.0	951.1	599.5	456.5	432.9
52.5°	539.8	860.6	596.4	474.0	418.5	474.0	596.4	860.6	539.8	425.7	405.1
55°	483.3	766.0	537.8	408.2	365.0	408.2	537.8	766.0	483.3	389.7	373.2
57.5°	430.8	675.6	480.2	356.8	328.0	356.8	480.2	675.6	430.8	354.7	344.5
60°	382.5	592.3	423.6	309.5	286.9	309.5	423.6	592.3	382.5	320.8	315.7
62.5°	330.1	517.2	370.2	269.4	249.9	269.4	370.2	517.2	330.1	287.9	285.8
65°	287.9	441.1	314.6	233.4	220.0	233.4	314.6	441.1	287.9	255.0	254.0



TEST NUMBER: P1051169

CATALOG NUMBER: S122DR-B675DB40-4F0-XX-W2A-W

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	245.7	369.1	266.3	199.5	189.2	199.5	266.3	369.1	245.7	222.1	222.1
70°	209.8	304.4	220.0	168.6	160.4	168.6	220.0	304.4	209.8	189.2	190.2
72.5°	169.7	244.7	178.9	137.8	130.6	137.8	178.9	244.7	169.7	158.3	161.4
75°	135.7	193.3	140.9	111.0	105.9	111.0	140.9	193.3	135.7	126.5	130.6
77.5°	103.9	141.9	103.9	85.3	81.2	85.3	103.9	141.9	103.9	98.7	102.8
80°	74.0	99.7	74.0	60.7	59.6	60.7	74.0	99.7	74.0	70.9	76.1
82.5°	49.4	63.8	48.3	41.1	39.1	41.1	48.3	63.8	49.4	48.3	50.4
85°	27.8	35.0	26.7	23.6	22.6	23.6	26.7	35.0	27.8	27.8	29.8
87.5°	12.3	13.4	11.3	10.3	9.3	10.3	11.3	13.4	12.3	13.4	13.4
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: P1051169

CATALOG NUMBER: S122DR-B675DB40-4F0-XX-W2A-W

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	1496.1	1496.1	1496.1	1496.1	1496.1	1496.1
1°	1434.4	1420.0	1434.4	1451.9	1479.6	1509.4
2°	1372.7	1353.2	1372.7	1388.1	1445.7	1509.4
3°	1307.9	1304.8	1307.9	1335.7	1414.9	1507.4
4°	1265.8	1251.4	1265.8	1295.6	1385.0	1502.3
5°	1215.4	1198.9	1215.4	1256.5	1356.2	1498.1
6°	1172.2	1149.6	1172.2	1221.5	1328.5	1490.9
7°	1123.9	1107.4	1123.9	1177.3	1296.6	1481.7
8°	1105.4	1085.8	1105.4	1138.3	1266.8	1477.6
9°	1064.2	1042.6	1064.2	1118.7	1251.4	1470.4
10°	1038.5	1011.8	1038.5	1085.8	1219.5	1459.1
11°	1007.7	982.0	1007.7	1056.0	1193.8	1444.7
12°	989.2	966.5	989.2	1035.4	1171.2	1431.3
13°	956.3	927.5	956.3	1009.7	1145.5	1423.1
14°	932.6	907.9	932.6	986.1	1116.7	1408.7
15°	902.8	880.2	902.8	961.4	1093.0	1392.2
16°	883.3	853.4	883.3	938.8	1066.3	1372.7
17°	853.4	833.9	853.4	919.2	1045.7	1362.4
18°	831.8	813.3	831.8	890.5	1022.1	1346.0
19°	816.4	794.8	816.4	868.9	999.4	1323.3
20°	794.8	776.3	794.8	848.3	978.9	1302.8
21°	774.3	757.8	774.3	832.9	959.3	1288.4
22.5°	754.7	732.1	754.7	798.9	926.4	1256.5
23°	743.4	724.9	743.4	787.6	919.2	1247.2
24°	730.0	708.5	730.0	769.1	896.6	1223.6
25°	712.6	694.1	712.6	756.8	876.1	1212.3
26°	697.1	679.7	697.1	737.2	857.5	1187.6
27°	681.7	660.1	681.7	721.8	838.0	1158.8
28°	668.4	647.8	668.4	710.5	816.4	1138.3
29°	650.9	631.3	650.9	693.0	797.9	1118.7
30°	638.5	621.1	638.5	677.6	776.3	1092.0
32.5°	604.6	594.3	604.6	640.6	733.1	1028.2
35°	575.8	570.7	575.8	610.8	686.9	968.6
37.5°	554.2	550.1	554.2	576.8	644.7	905.9
40°	529.5	530.6	529.5	547.0	603.6	843.2
42.5°	505.9	507.9	505.9	518.2	564.5	784.5
45°	483.3	483.3	483.3	489.4	527.5	719.8
47.5°	457.6	459.6	457.6	461.7	490.5	658.1
50°	431.9	433.9	431.9	432.9	456.5	599.5
52.5°	405.1	407.2	405.1	405.1	425.7	539.8
55°	376.3	380.4	376.3	373.2	389.7	483.3
57.5°	346.5	351.7	346.5	344.5	354.7	430.8
60°	319.8	324.9	319.8	315.7	320.8	382.5
62.5°	292.0	297.2	292.0	285.8	287.9	330.1
65°	263.2	269.4	263.2	254.0	255.0	287.9



TEST NUMBER: P1051169

CATALOG NUMBER: S122DR-B675DB40-4F0-XX-W2A-W

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	232.4	237.5	232.4	222.1	222.1	245.7
70°	202.6	206.7	202.6	190.2	189.2	209.8
72.5°	171.7	175.8	171.7	161.4	158.3	169.7
75°	139.8	142.9	139.8	130.6	126.5	135.7
77.5°	111.0	111.0	111.0	102.8	98.7	103.9
80°	80.2	80.2	80.2	76.1	70.9	74.0
82.5°	53.5	53.5	53.5	50.4	48.3	49.4
85°	29.8	28.8	29.8	29.8	27.8	27.8
87.5°	11.3	12.3	11.3	13.4	13.4	12.3
90°	0.0	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P1051169

CATALOG NUMBER: S122DR-B675DB40-4F0-XX-W2A-W

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	21.86	23.38	22.22	23.69	24.01	19.17	20.70	19.54	21.01	21.32
	3H	23.07	24.44	23.45	24.77	25.13	20.50	21.87	20.88	22.19	22.56
	4H	23.47	24.75	23.87	25.10	25.48	20.96	22.24	21.36	22.59	22.97
	6H	23.71	24.90	24.12	25.26	25.66	21.26	22.44	21.67	22.81	23.20
	8H	23.77	24.90	24.20	25.29	25.69	21.34	22.47	21.77	22.86	23.26
	12H	23.80	24.88	24.23	25.26	25.69	21.38	22.46	21.81	22.84	23.27
4H	2H	22.14	23.43	22.54	23.78	24.15	20.13	21.42	20.53	21.77	22.14
	3H	23.64	24.70	24.05	25.10	25.51	21.60	22.66	22.01	23.06	23.47
	4H	24.20	25.16	24.63	25.57	26.01	22.12	23.08	22.55	23.49	23.93
	6H	24.57	25.40	25.02	25.84	26.30	22.49	23.32	22.95	23.77	24.23
	8H	24.66	25.44	25.12	25.88	26.35	22.59	23.37	23.05	23.81	24.28
	12H	24.71	25.41	25.19	25.89	26.36	22.65	23.35	23.14	23.83	24.30
8H	4H	24.34	25.12	24.80	25.56	26.03	22.52	23.30	22.99	23.75	24.21
	6H	24.80	25.45	25.30	25.94	26.41	22.97	23.62	23.47	24.11	24.58
	8H	24.95	25.53	25.46	26.04	26.52	23.11	23.69	23.63	24.20	24.69
	12H	25.05	25.56	25.56	26.06	26.62	23.22	23.73	23.73	24.22	24.79
12H	4H	24.34	25.03	24.82	25.51	25.98	22.57	23.26	23.05	23.74	24.21
	6H	24.81	25.38	25.32	25.89	26.38	23.03	23.61	23.55	24.12	24.61
	8H	25.00	25.51	25.51	26.00	26.56	23.22	23.73	23.73	24.22	24.79