

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: P1051223

Luminaire Tested: S122DS-B865DB2750-4F0-XX-W2A-W_3000K

Issue Date: 7/9/2025

Test Information

Test Method: LM-79-2019
Report Number: P1051223
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-B865DB2750-4F0-XX-W2A-W_3000K
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: 3935.0 lumens
Efficiency: N/A
Efficacy: 84.1 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

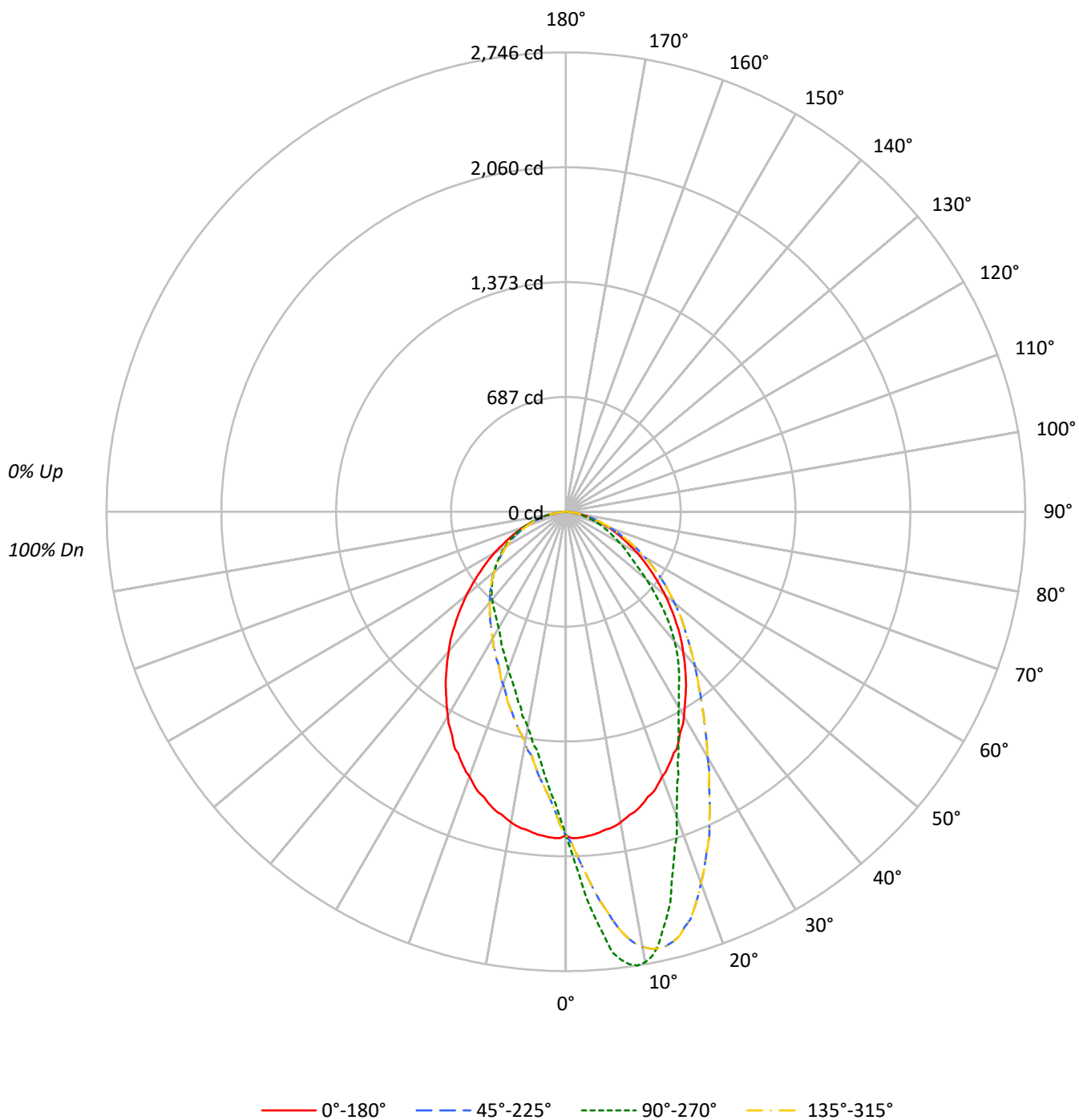
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	30614	30614	30614	30614
5°	30774	40150	30774	24628
10°	30316	43948	30316	21023
15°	29493	39535	29493	18646
20°	28369	32624	28369	16906
25°	27370	27882	27370	15670
30°	25801	24659	25801	14674
35°	24196	22808	24196	14255
40°	22521	20874	22521	14173
45°	20828	18388	20828	13985
50°	19083	15482	19083	13813
55°	17240	13023	17240	13572
60°	15655	11739	15655	13297
65°	13941	10656	13941	13046
70°	12552	9599	12552	12366
75°	10734	8373	10734	11302
80°	8724	7028	8724	9453
85°	6520	5303	6520	6756

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°

Vertical Angle: 45°

Luminance: 33207 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	190.3	4.8
10°-20°	522.4	13.3
20°-30°	685.0	17.4
30°-40°	724.0	18.4
40°-50°	672.2	17.1
50°-60°	538.0	13.7
60°-70°	368.0	9.4
70°-80°	189.9	4.8
80°-90°	45.1	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°	1397.7	35.5
0°-40°	2121.8	53.9
0°-60°	3332.0	84.7
0°-90°	3935.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3935.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1934	1934	1934	1934	1934	
5°	1937	2527	1937	1550	1937	183
15°	1800	2412	1800	1138	1800	506
25°	1567	1596	1567	897	1567	716
35°	1252	1180	1252	738	1252	782
45°	930	821	930	625	930	718
55°	625	472	625	492	625	561
65°	372	284	372	348	372	371
75°	176	137	176	185	176	188
85°	36	29	36	37	36	44
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°	1934.0	1934.0	1934.0	1934.0	1934.0	1934.0	1934.0	1934.0	1934.0	1934.0	1934.0
1°	1951.3	1985.8	1983.2	2029.7	2040.3	2029.7	1983.2	1985.8	1951.3	1912.7	1876.8
2°	1951.3	2029.7	2065.6	2138.7	2160.0	2138.7	2065.6	2029.7	1951.3	1868.9	1794.4
3°	1948.6	2068.2	2153.3	2254.3	2304.8	2254.3	2153.3	2068.2	1948.6	1829.0	1726.6
4°	1942.0	2108.1	2242.4	2376.6	2421.8	2376.6	2242.4	2108.1	1942.0	1790.4	1674.8
5°	1936.7	2158.6	2335.4	2497.6	2526.8	2497.6	2335.4	2158.6	1936.7	1753.2	1624.3
6°	1927.3	2209.1	2409.9	2588.0	2647.8	2588.0	2409.9	2209.1	1927.3	1717.3	1579.1
7°	1915.4	2242.4	2493.6	2659.7	2697.0	2659.7	2493.6	2242.4	1915.4	1676.1	1521.9
8°	1910.1	2296.9	2560.1	2716.9	2731.5	2716.9	2560.1	2296.9	1910.1	1637.6	1471.4
9°	1900.8	2319.5	2607.9	2734.2	2746.1	2734.2	2607.9	2319.5	1900.8	1617.6	1446.2
10°	1886.1	2354.0	2642.5	2739.5	2734.2	2739.5	2642.5	2354.0	1886.1	1576.4	1403.6
11°	1867.5	2393.9	2661.1	2719.6	2706.3	2719.6	2661.1	2393.9	1867.5	1543.2	1365.1
12°	1850.3	2421.8	2669.0	2682.3	2653.1	2682.3	2669.0	2421.8	1850.3	1514.0	1338.5
13°	1839.6	2433.8	2663.7	2635.8	2570.7	2635.8	2663.7	2433.8	1839.6	1480.7	1305.3
14°	1821.0	2460.4	2649.1	2564.0	2496.2	2564.0	2649.1	2460.4	1821.0	1443.5	1274.7
15°	1799.7	2468.3	2625.2	2490.9	2412.5	2490.9	2625.2	2468.3	1799.7	1412.9	1242.8
16°	1774.5	2477.6	2581.3	2400.5	2295.5	2400.5	2581.3	2477.6	1774.5	1378.4	1213.6
17°	1761.2	2483.0	2548.1	2311.5	2198.5	2311.5	2548.1	2483.0	1761.2	1351.8	1188.3
18°	1739.9	2479.0	2488.3	2237.1	2109.5	2237.1	2488.3	2479.0	1739.9	1321.2	1151.1
19°	1710.7	2469.7	2428.5	2142.7	2039.0	2142.7	2428.5	2469.7	1710.7	1292.0	1123.2
20°	1684.1	2465.7	2362.0	2056.3	1936.7	2056.3	2362.0	2465.7	1684.1	1265.4	1096.6
21°	1665.5	2452.4	2300.9	1973.9	1851.6	1973.9	2300.9	2452.4	1665.5	1240.1	1076.7
22.5°	1624.3	2427.1	2198.5	1847.6	1739.9	1847.6	2198.5	2427.1	1624.3	1197.6	1032.8
23°	1612.3	2419.2	2171.9	1818.4	1726.6	1818.4	2171.9	2419.2	1612.3	1188.3	1018.2
24°	1581.8	2393.9	2109.5	1739.9	1642.9	1739.9	2109.5	2393.9	1581.8	1159.1	994.2
25°	1567.1	2370.0	2032.4	1676.1	1596.4	1676.1	2032.4	2370.0	1567.1	1132.5	978.3
26°	1535.2	2335.4	1963.2	1623.0	1531.2	1623.0	1963.2	2335.4	1535.2	1108.6	953.0
27°	1498.0	2310.2	1891.5	1560.5	1483.4	1560.5	1891.5	2310.2	1498.0	1083.3	933.1
28°	1471.4	2269.0	1822.3	1511.3	1436.9	1511.3	1822.3	2269.0	1471.4	1055.4	918.5
29°	1446.2	2237.1	1766.5	1454.2	1389.0	1454.2	1766.5	2237.1	1446.2	1031.5	895.9
30°	1411.6	2194.5	1696.1	1409.0	1349.1	1409.0	1696.1	2194.5	1411.6	1003.6	875.9
32.5°	1329.2	2093.5	1552.5	1307.9	1257.4	1307.9	1552.5	2093.5	1329.2	947.7	828.1
35°	1252.1	1980.5	1420.9	1213.6	1180.3	1213.6	1420.9	1980.5	1252.1	887.9	789.5
37.5°	1171.0	1862.2	1301.3	1131.2	1099.3	1131.2	1301.3	1862.2	1171.0	833.4	745.7
40°	1089.9	1745.2	1198.9	1052.7	1010.2	1052.7	1198.9	1745.2	1089.9	780.2	707.1
42.5°	1014.2	1608.3	1099.3	970.3	921.1	970.3	1099.3	1608.3	1014.2	729.7	669.9
45°	930.4	1483.4	1010.2	883.9	821.4	883.9	1010.2	1483.4	930.4	681.9	632.7
47.5°	850.7	1354.5	933.1	797.5	717.8	797.5	933.1	1354.5	850.7	634.0	596.8
50°	774.9	1229.5	846.7	700.5	628.7	700.5	846.7	1229.5	774.9	590.2	559.6
52.5°	697.8	1112.5	770.9	612.8	541.0	612.8	770.9	1112.5	697.8	550.3	523.7
55°	624.7	990.3	695.2	527.7	471.9	527.7	695.2	990.3	624.7	503.8	482.5
57.5°	556.9	873.3	620.7	461.2	424.0	461.2	620.7	873.3	556.9	458.6	445.3
60°	494.5	765.6	547.6	400.1	370.8	400.1	547.6	765.6	494.5	414.7	408.1
62.5°	426.7	668.6	478.5	348.3	323.0	348.3	478.5	668.6	426.7	372.2	369.5
65°	372.2	570.2	406.7	301.7	284.5	301.7	406.7	570.2	372.2	329.6	328.3



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	317.7	477.2	344.3	257.9	244.6	257.9	344.3	477.2	317.7	287.1	287.1
70°	271.2	393.4	284.5	218.0	207.4	218.0	284.5	393.4	271.2	244.6	245.9
72.5°	219.3	316.4	231.3	178.1	168.8	178.1	231.3	316.4	219.3	204.7	208.7
75°	175.5	249.9	182.1	143.6	136.9	143.6	182.1	249.9	175.5	163.5	168.8
77.5°	134.2	183.4	134.2	110.3	105.0	110.3	134.2	183.4	134.2	127.6	132.9
80°	95.7	128.9	95.7	78.4	77.1	78.4	95.7	128.9	95.7	91.7	98.4
82.5°	63.8	82.4	62.5	53.2	50.5	53.2	62.5	82.4	63.8	62.5	65.1
85°	35.9	45.2	34.6	30.6	29.2	30.6	34.6	45.2	35.9	35.9	38.5
87.5°	16.0	17.3	14.6	13.3	12.0	13.3	14.6	17.3	16.0	17.3	17.3
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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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	1934.0	1934.0	1934.0	1934.0	1934.0	1934.0
1°	1854.2	1835.6	1854.2	1876.8	1912.7	1951.3
2°	1774.5	1749.2	1774.5	1794.4	1868.9	1951.3
3°	1690.8	1686.8	1690.8	1726.6	1829.0	1948.6
4°	1636.3	1617.6	1636.3	1674.8	1790.4	1942.0
5°	1571.1	1549.9	1571.1	1624.3	1753.2	1936.7
6°	1515.3	1486.1	1515.3	1579.1	1717.3	1927.3
7°	1452.8	1431.6	1452.8	1521.9	1676.1	1915.4
8°	1428.9	1403.6	1428.9	1471.4	1637.6	1910.1
9°	1375.7	1347.8	1375.7	1446.2	1617.6	1900.8
10°	1342.5	1307.9	1342.5	1403.6	1576.4	1886.1
11°	1302.6	1269.4	1302.6	1365.1	1543.2	1867.5
12°	1278.7	1249.5	1278.7	1338.5	1514.0	1850.3
13°	1236.2	1198.9	1236.2	1305.3	1480.7	1839.6
14°	1205.6	1173.7	1205.6	1274.7	1443.5	1821.0
15°	1167.0	1137.8	1167.0	1242.8	1412.9	1799.7
16°	1141.8	1103.2	1141.8	1213.6	1378.4	1774.5
17°	1103.2	1078.0	1103.2	1188.3	1351.8	1761.2
18°	1075.3	1051.4	1075.3	1151.1	1321.2	1739.9
19°	1055.4	1027.5	1055.4	1123.2	1292.0	1710.7
20°	1027.5	1003.6	1027.5	1096.6	1265.4	1684.1
21°	1000.9	979.6	1000.9	1076.7	1240.1	1665.5
22.5°	975.6	946.4	975.6	1032.8	1197.6	1624.3
23°	961.0	937.1	961.0	1018.2	1188.3	1612.3
24°	943.7	915.8	943.7	994.2	1159.1	1581.8
25°	921.1	897.2	921.1	978.3	1132.5	1567.1
26°	901.2	878.6	901.2	953.0	1108.6	1535.2
27°	881.3	853.4	881.3	933.1	1083.3	1498.0
28°	864.0	837.4	864.0	918.5	1055.4	1471.4
29°	841.4	816.1	841.4	895.9	1031.5	1446.2
30°	825.4	802.8	825.4	875.9	1003.6	1411.6
32.5°	781.6	768.3	781.6	828.1	947.7	1329.2
35°	744.4	737.7	744.4	789.5	887.9	1252.1
37.5°	716.4	711.1	716.4	745.7	833.4	1171.0
40°	684.5	685.9	684.5	707.1	780.2	1089.9
42.5°	654.0	656.6	654.0	669.9	729.7	1014.2
45°	624.7	624.7	624.7	632.7	681.9	930.4
47.5°	591.5	594.2	591.5	596.8	634.0	850.7
50°	558.3	560.9	558.3	559.6	590.2	774.9
52.5°	523.7	526.4	523.7	523.7	550.3	697.8
55°	486.5	491.8	486.5	482.5	503.8	624.7
57.5°	447.9	454.6	447.9	445.3	458.6	556.9
60°	413.4	420.0	413.4	408.1	414.7	494.5
62.5°	377.5	384.1	377.5	369.5	372.2	426.7
65°	340.3	348.3	340.3	328.3	329.6	372.2



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	300.4	307.0	300.4	287.1	287.1	317.7
70°	261.9	267.2	261.9	245.9	244.6	271.2
72.5°	222.0	227.3	222.0	208.7	204.7	219.3
75°	180.8	184.8	180.8	168.8	163.5	175.5
77.5°	143.6	143.6	143.6	132.9	127.6	134.2
80°	103.7	103.7	103.7	98.4	91.7	95.7
82.5°	69.1	69.1	69.1	65.1	62.5	63.8
85°	38.5	37.2	38.5	38.5	35.9	35.9
87.5°	14.6	16.0	14.6	17.3	17.3	16.0
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	22.75	24.27	23.12	24.59	24.90	20.06	21.59	20.43	21.90	22.21
	3H	23.97	25.33	24.34	25.66	26.02	21.39	22.76	21.77	23.09	23.45
	4H	24.36	25.64	24.76	25.99	26.37	21.85	23.13	22.25	23.48	23.86
	6H	24.60	25.79	25.02	26.16	26.55	22.15	23.34	22.56	23.70	24.10
	8H	24.66	25.79	25.09	26.18	26.58	22.23	23.36	22.66	23.75	24.15
	12H	24.69	25.77	25.12	26.15	26.58	22.27	23.35	22.70	23.74	24.17
4H	2H	23.04	24.32	23.44	24.67	25.05	21.03	22.31	21.43	22.66	23.04
	3H	24.53	25.60	24.94	26.00	26.40	22.49	23.56	22.90	23.96	24.36
	4H	25.09	26.05	25.52	26.47	26.90	23.01	23.97	23.44	24.38	24.82
	6H	25.46	26.29	25.92	26.73	27.19	23.38	24.22	23.84	24.66	25.12
	8H	25.55	26.33	26.01	26.77	27.24	23.48	24.26	23.95	24.71	25.17
	12H	25.60	26.30	26.09	26.78	27.25	23.55	24.24	24.03	24.72	25.19
8H	4H	25.23	26.01	25.69	26.45	26.92	23.42	24.20	23.88	24.64	25.11
	6H	25.69	26.34	26.19	26.83	27.31	23.86	24.51	24.36	25.00	25.48
	8H	25.84	26.42	26.36	26.93	27.42	24.01	24.58	24.52	25.09	25.58
	12H	25.95	26.46	26.46	26.95	27.51	24.11	24.62	24.62	25.11	25.68
12H	4H	25.23	25.92	25.71	26.40	26.87	23.46	24.16	23.94	24.63	25.11
	6H	25.70	26.28	26.21	26.79	27.27	23.92	24.50	24.44	25.01	25.50
	8H	25.89	26.40	26.40	26.89	27.45	24.11	24.62	24.62	25.12	25.68