

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: P1051178

Luminaire Tested: S122DR-B865DB35-4F0-XX-W2A-W

Issue Date: 7/9/2025

Test Information

Test Method: LM-79-2019
Report Number: P1051178
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-B865DB35-4F0-XX-W2A-W
Description: Define 2 Direct Recessed with 3500K BioUP LEDs {m-DER=0.721} {m-EER=0.792}
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3952.0 lumens
Efficiency: N/A
Efficacy: 84.4 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

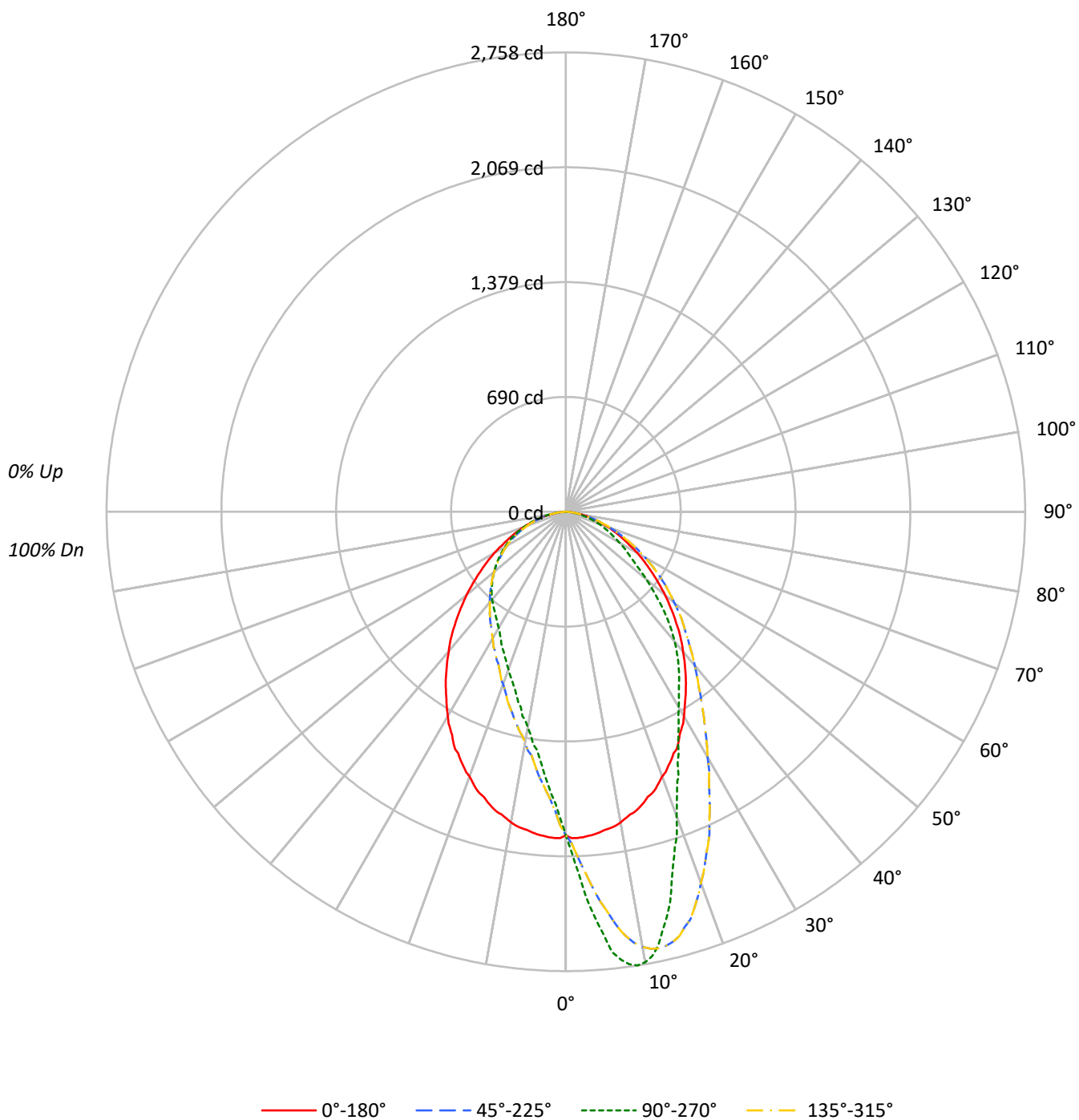
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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
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°	30747	30747	30747	30747
5°	30906	40323	30906	24734
10°	30448	44138	30448	21114
15°	29621	39706	29621	18726
20°	28492	32764	28492	16978
25°	27489	28003	27489	15738
30°	25913	24767	25913	14738
35°	24300	22907	24300	14317
40°	22621	20965	22621	14233
45°	20920	18468	20920	14045
50°	19166	15549	19166	13872
55°	17315	13078	17315	13630
60°	15722	11793	15722	13354
65°	14001	10701	14001	13102
70°	12603	9640	12603	12417
75°	10776	8409	10776	11351
80°	8760	7056	8760	9489
85°	6538	5340	6538	6793

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°

Vertical Angle: 45°

Luminance: 33351 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	191.1	4.8
10°-20°	524.6	13.3
20°-30°	688.0	17.4
30°-40°	727.2	18.4
40°-50°	675.1	17.1
50°-60°	540.4	13.7
60°-70°	369.6	9.4
70°-80°	190.7	4.8
80°-90°	45.3	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°	1403.8	35.5
0°-40°	2130.9	53.9
0°-60°	3346.4	84.7
0°-90°	3952.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3952.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1942	1942	1942	1942	1942	
5°	1945	2538	1945	1557	1945	184
15°	1808	2423	1808	1143	1808	508
25°	1574	1603	1574	901	1574	720
35°	1258	1185	1258	741	1258	785
45°	934	825	934	627	934	721
55°	627	474	627	494	627	564
65°	374	286	374	350	374	372
75°	176	138	176	186	176	189
85°	36	29	36	37	36	45
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°	1942.4	1942.4	1942.4	1942.4	1942.4	1942.4	1942.4	1942.4	1942.4	1942.4	1942.4
1°	1959.7	1994.4	1991.7	2038.5	2049.1	2038.5	1991.7	1994.4	1959.7	1921.0	1884.9
2°	1959.7	2038.5	2074.5	2147.9	2169.3	2147.9	2074.5	2038.5	1959.7	1876.9	1802.2
3°	1957.0	2077.2	2162.6	2264.1	2314.8	2264.1	2162.6	2077.2	1957.0	1836.9	1734.1
4°	1950.4	2117.2	2252.1	2386.9	2432.3	2386.9	2252.1	2117.2	1950.4	1798.2	1682.0
5°	1945.0	2168.0	2345.5	2508.4	2537.7	2508.4	2345.5	2168.0	1945.0	1760.8	1631.3
6°	1935.7	2218.7	2420.3	2599.1	2659.2	2599.1	2420.3	2218.7	1935.7	1724.8	1585.9
7°	1923.7	2252.1	2504.4	2671.2	2708.6	2671.2	2504.4	2252.1	1923.7	1683.4	1528.5
8°	1918.3	2306.8	2571.1	2728.6	2743.3	2728.6	2571.1	2306.8	1918.3	1644.7	1477.8
9°	1909.0	2329.5	2619.2	2746.0	2758.0	2746.0	2619.2	2329.5	1909.0	1624.6	1452.4
10°	1894.3	2364.2	2653.9	2751.3	2746.0	2751.3	2653.9	2364.2	1894.3	1583.2	1409.7
11°	1875.6	2404.2	2672.6	2731.3	2718.0	2731.3	2672.6	2404.2	1875.6	1549.9	1371.0
12°	1858.2	2432.3	2680.6	2693.9	2664.6	2693.9	2680.6	2432.3	1858.2	1520.5	1344.3
13°	1847.6	2444.3	2675.2	2647.2	2581.8	2647.2	2675.2	2444.3	1847.6	1487.1	1310.9
14°	1828.9	2471.0	2660.6	2575.1	2507.0	2575.1	2660.6	2471.0	1828.9	1449.8	1280.2
15°	1807.5	2479.0	2636.5	2501.7	2422.9	2501.7	2636.5	2479.0	1807.5	1419.1	1248.2
16°	1782.2	2488.3	2592.5	2410.9	2305.5	2410.9	2592.5	2488.3	1782.2	1384.3	1218.8
17°	1768.8	2493.7	2559.1	2321.5	2208.0	2321.5	2559.1	2493.7	1768.8	1357.6	1193.4
18°	1747.4	2489.7	2499.0	2246.7	2118.6	2246.7	2499.0	2489.7	1747.4	1326.9	1156.1
19°	1718.1	2480.3	2439.0	2151.9	2047.8	2151.9	2439.0	2480.3	1718.1	1297.6	1128.0
20°	1691.4	2476.3	2372.2	2065.2	1945.0	2065.2	2372.2	2476.3	1691.4	1270.9	1101.3
21°	1672.7	2463.0	2310.8	1982.4	1859.6	1982.4	2310.8	2463.0	1672.7	1245.5	1081.3
22.5°	1631.3	2437.6	2208.0	1855.6	1747.4	1855.6	2208.0	2437.6	1631.3	1202.8	1037.3
23°	1619.3	2429.6	2181.3	1826.2	1734.1	1826.2	2181.3	2429.6	1619.3	1193.4	1022.6
24°	1588.6	2404.2	2118.6	1747.4	1650.0	1747.4	2118.6	2404.2	1588.6	1164.1	998.5
25°	1573.9	2380.2	2041.1	1683.4	1603.3	1683.4	2041.1	2380.2	1573.9	1137.4	982.5
26°	1541.9	2345.5	1971.7	1630.0	1537.9	1630.0	1971.7	2345.5	1541.9	1113.3	957.2
27°	1504.5	2320.1	1899.6	1567.2	1489.8	1567.2	1899.6	2320.1	1504.5	1088.0	937.1
28°	1477.8	2278.8	1830.2	1517.8	1443.1	1517.8	1830.2	2278.8	1477.8	1059.9	922.4
29°	1452.4	2246.7	1774.1	1460.4	1395.0	1460.4	1774.1	2246.7	1452.4	1035.9	899.8
30°	1417.7	2204.0	1703.4	1415.0	1355.0	1415.0	1703.4	2204.0	1417.7	1007.9	879.7
32.5°	1334.9	2102.5	1559.2	1313.6	1262.9	1313.6	1559.2	2102.5	1334.9	951.8	831.7
35°	1257.5	1989.1	1427.1	1218.8	1185.4	1218.8	1427.1	1989.1	1257.5	891.7	793.0
37.5°	1176.1	1870.3	1306.9	1136.0	1104.0	1136.0	1306.9	1870.3	1176.1	837.0	748.9
40°	1094.7	1752.8	1204.1	1057.3	1014.6	1057.3	1204.1	1752.8	1094.7	783.6	710.2
42.5°	1018.6	1615.3	1104.0	974.5	925.1	974.5	1104.0	1615.3	1018.6	732.9	672.8
45°	934.5	1489.8	1014.6	887.7	825.0	887.7	1014.6	1489.8	934.5	684.8	635.4
47.5°	854.4	1360.3	937.1	801.0	720.9	801.0	937.1	1360.3	854.4	636.8	599.4
50°	778.3	1234.8	850.4	703.5	631.4	703.5	850.4	1234.8	778.3	592.7	562.0
52.5°	700.8	1117.4	774.3	615.4	543.3	615.4	774.3	1117.4	700.8	552.7	526.0
55°	627.4	994.5	698.2	530.0	473.9	530.0	698.2	994.5	627.4	505.9	484.6
57.5°	559.3	877.1	623.4	463.2	425.8	463.2	623.4	877.1	559.3	460.6	447.2
60°	496.6	768.9	550.0	401.8	372.5	401.8	550.0	768.9	496.6	416.5	409.8
62.5°	428.5	671.5	480.6	349.8	324.4	349.8	480.6	671.5	428.5	373.8	371.1
65°	373.8	572.7	408.5	303.0	285.7	303.0	408.5	572.7	373.8	331.1	329.7



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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°	319.1	479.2	345.8	259.0	245.6	259.0	345.8	479.2	319.1	288.3	288.3
70°	272.3	395.1	285.7	218.9	208.3	218.9	285.7	395.1	272.3	245.6	247.0
72.5°	220.3	317.7	232.3	178.9	169.5	178.9	232.3	317.7	220.3	205.6	209.6
75°	176.2	251.0	182.9	144.2	137.5	144.2	182.9	251.0	176.2	164.2	169.5
77.5°	134.8	184.2	134.8	110.8	105.5	110.8	134.8	184.2	134.8	128.2	133.5
80°	96.1	129.5	96.1	78.8	77.4	78.8	96.1	129.5	96.1	92.1	98.8
82.5°	64.1	82.8	62.7	53.4	50.7	53.4	62.7	82.8	64.1	62.7	65.4
85°	36.0	45.4	34.7	30.7	29.4	30.7	34.7	45.4	36.0	36.0	38.7
87.5°	16.0	17.4	14.7	13.3	12.0	13.3	14.7	17.4	16.0	17.4	17.4
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°	1942.4	1942.4	1942.4	1942.4	1942.4	1942.4
1°	1862.3	1843.6	1862.3	1884.9	1921.0	1959.7
2°	1782.2	1756.8	1782.2	1802.2	1876.9	1959.7
3°	1698.1	1694.1	1698.1	1734.1	1836.9	1957.0
4°	1643.3	1624.6	1643.3	1682.0	1798.2	1950.4
5°	1577.9	1556.6	1577.9	1631.3	1760.8	1945.0
6°	1521.8	1492.5	1521.8	1585.9	1724.8	1935.7
7°	1459.1	1437.7	1459.1	1528.5	1683.4	1923.7
8°	1435.1	1409.7	1435.1	1477.8	1644.7	1918.3
9°	1381.7	1353.6	1381.7	1452.4	1624.6	1909.0
10°	1348.3	1313.6	1348.3	1409.7	1583.2	1894.3
11°	1308.2	1274.9	1308.2	1371.0	1549.9	1875.6
12°	1284.2	1254.9	1284.2	1344.3	1520.5	1858.2
13°	1241.5	1204.1	1241.5	1310.9	1487.1	1847.6
14°	1210.8	1178.8	1210.8	1280.2	1449.8	1828.9
15°	1172.1	1142.7	1172.1	1248.2	1419.1	1807.5
16°	1146.7	1108.0	1146.7	1218.8	1384.3	1782.2
17°	1108.0	1082.6	1108.0	1193.4	1357.6	1768.8
18°	1080.0	1055.9	1080.0	1156.1	1326.9	1747.4
19°	1059.9	1031.9	1059.9	1128.0	1297.6	1718.1
20°	1031.9	1007.9	1031.9	1101.3	1270.9	1691.4
21°	1005.2	983.9	1005.2	1081.3	1245.5	1672.7
22.5°	979.9	950.5	979.9	1037.3	1202.8	1631.3
23°	965.2	941.1	965.2	1022.6	1193.4	1619.3
24°	947.8	919.8	947.8	998.5	1164.1	1588.6
25°	925.1	901.1	925.1	982.5	1137.4	1573.9
26°	905.1	882.4	905.1	957.2	1113.3	1541.9
27°	885.1	857.0	885.1	937.1	1088.0	1504.5
28°	867.7	841.0	867.7	922.4	1059.9	1477.8
29°	845.0	819.7	845.0	899.8	1035.9	1452.4
30°	829.0	806.3	829.0	879.7	1007.9	1417.7
32.5°	784.9	771.6	784.9	831.7	951.8	1334.9
35°	747.6	740.9	747.6	793.0	891.7	1257.5
37.5°	719.5	714.2	719.5	748.9	837.0	1176.1
40°	687.5	688.8	687.5	710.2	783.6	1094.7
42.5°	656.8	659.5	656.8	672.8	732.9	1018.6
45°	627.4	627.4	627.4	635.4	684.8	934.5
47.5°	594.1	596.7	594.1	599.4	636.8	854.4
50°	560.7	563.3	560.7	562.0	592.7	778.3
52.5°	526.0	528.6	526.0	526.0	552.7	700.8
55°	488.6	493.9	488.6	484.6	505.9	627.4
57.5°	449.9	456.6	449.9	447.2	460.6	559.3
60°	415.2	421.8	415.2	409.8	416.5	496.6
62.5°	379.1	385.8	379.1	371.1	373.8	428.5
65°	341.7	349.8	341.7	329.7	331.1	373.8



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	301.7	308.4	301.7	288.3	288.3	319.1
70°	263.0	268.3	263.0	247.0	245.6	272.3
72.5°	222.9	228.3	222.9	209.6	205.6	220.3
75°	181.6	185.6	181.6	169.5	164.2	176.2
77.5°	144.2	144.2	144.2	133.5	128.2	134.8
80°	104.1	104.1	104.1	98.8	92.1	96.1
82.5°	69.4	69.4	69.4	65.4	62.7	64.1
85°	38.7	37.4	38.7	38.7	36.0	36.0
87.5°	14.7	16.0	14.7	17.4	17.4	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	22.77	24.29	23.13	24.60	24.92	20.08	21.60	20.44	21.92	22.23
	3H	23.98	25.35	24.36	25.68	26.04	21.41	22.77	21.78	23.10	23.46
	4H	24.38	25.66	24.78	26.01	26.39	21.86	23.15	22.26	23.49	23.87
	6H	24.62	25.80	25.03	26.17	26.56	22.17	23.35	22.58	23.72	24.11
	8H	24.68	25.81	25.10	26.19	26.60	22.25	23.38	22.67	23.77	24.17
	12H	24.70	25.78	25.13	26.16	26.59	22.29	23.37	22.72	23.75	24.18
4H	2H	23.05	24.33	23.45	24.68	25.06	21.04	22.32	21.44	22.67	23.05
	3H	24.55	25.61	24.96	26.01	26.41	22.51	23.57	22.92	23.97	24.37
	4H	25.11	26.06	25.54	26.48	26.92	23.02	23.98	23.46	24.40	24.84
	6H	25.47	26.31	25.93	26.75	27.21	23.40	24.23	23.85	24.67	25.13
	8H	25.56	26.34	26.03	26.79	27.26	23.50	24.28	23.96	24.72	25.19
	12H	25.62	26.31	26.10	26.79	27.26	23.56	24.26	24.04	24.74	25.21
8H	4H	25.25	26.03	25.71	26.47	26.94	23.43	24.21	23.89	24.65	25.12
	6H	25.71	26.35	26.21	26.84	27.32	23.88	24.52	24.38	25.01	25.49
	8H	25.86	26.43	26.37	26.94	27.43	24.02	24.60	24.54	25.11	25.60
	12H	25.96	26.47	26.47	26.96	27.53	24.13	24.64	24.64	25.13	25.69
12H	4H	25.24	25.94	25.73	26.42	26.89	23.47	24.17	23.96	24.65	25.12
	6H	25.71	26.29	26.23	26.80	27.29	23.94	24.52	24.45	25.03	25.52
	8H	25.90	26.41	26.41	26.90	27.47	24.13	24.64	24.64	25.13	25.70