

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: P1051229

Luminaire Tested: S122DS-B865DB40-4F0-XX-W2A-W

Issue Date: 7/9/2025

Test Information

Test Method: LM-79-2019
Report Number: P1051229
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-B865DB40-4F0-XX-W2A-W
Description: Define 2 Direct Surface with 4000K BioUP LEDs {m-DER=0.865} {m-EER=0.951}
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3912.0 lumens
Efficiency: N/A
Efficacy: 83.6 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

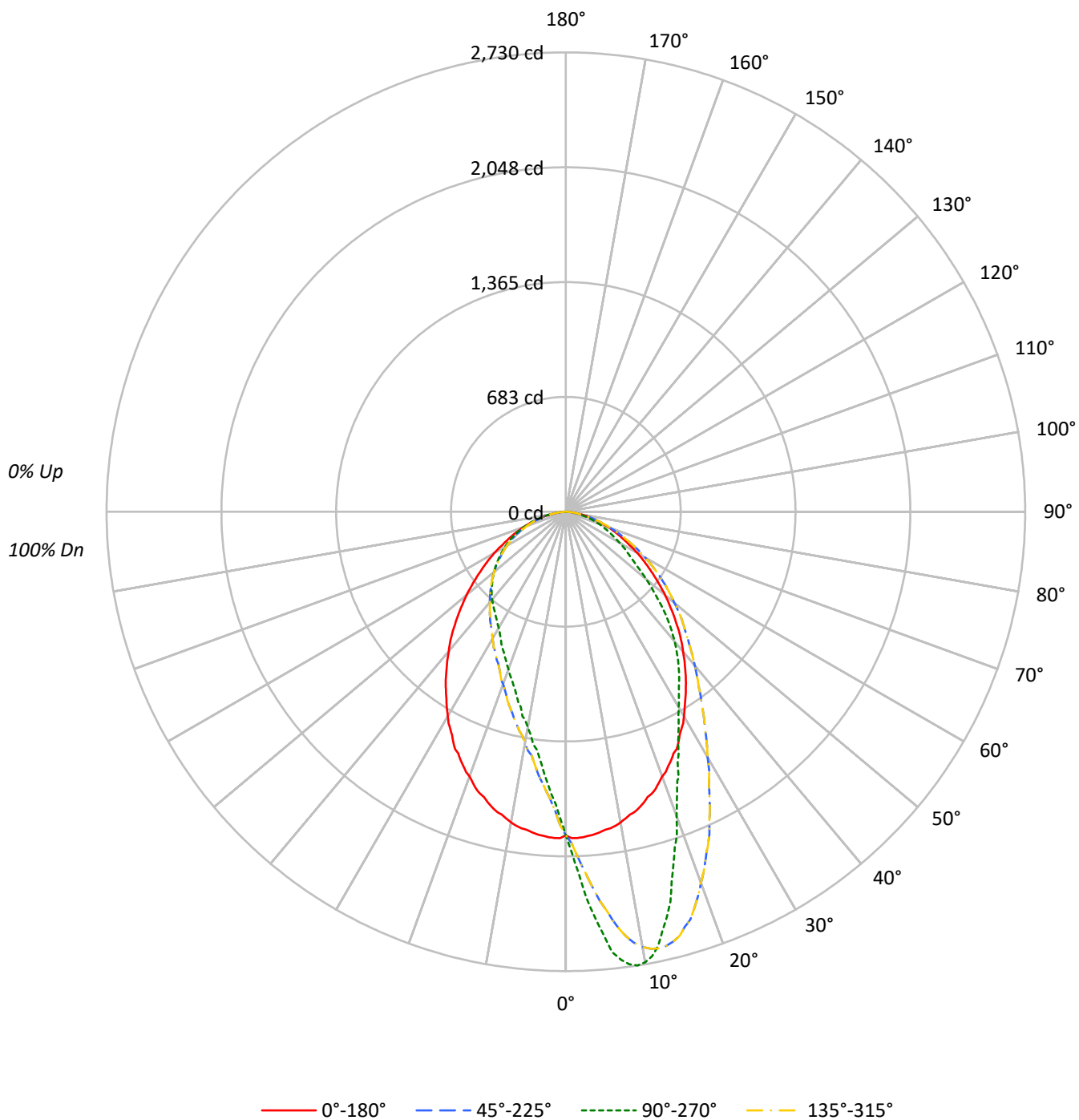
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	30435	30435	30435	30435
5°	30593	39917	30593	24483
10°	30139	43691	30139	20900
15°	29321	39304	29321	18538
20°	28204	32432	28204	16806
25°	27212	27718	27212	15579
30°	25651	24516	25651	14588
35°	24055	22675	24055	14172
40°	22391	20753	22391	14091
45°	20707	18280	20707	13904
50°	18972	15391	18972	13731
55°	17141	12946	17141	13492
60°	15563	11673	15563	13221
65°	13858	10592	13858	12967
70°	12478	9539	12478	12292
75°	10666	8324	10666	11235
80°	8669	6983	8669	9398
85°	6484	5285	6484	6720

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°

Vertical Angle: 45°

Luminance: 33013 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	189.2	4.8
10°-20°	519.3	13.3
20°-30°	681.0	17.4
30°-40°	719.8	18.4
40°-50°	668.3	17.1
50°-60°	534.9	13.7
60°-70°	365.8	9.4
70°-80°	188.8	4.8
80°-90°	44.8	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°	1389.6	35.5
0°-40°	2109.4	53.9
0°-60°	3312.6	84.7
0°-90°	3912.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3912.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1923	1923	1923	1923	1923	
5°	1925	2512	1925	1541	1925	182
15°	1789	2398	1789	1131	1789	503
25°	1558	1587	1558	892	1558	712
35°	1245	1173	1245	733	1245	777
45°	925	817	925	621	925	714
55°	621	469	621	489	621	558
65°	370	283	370	346	370	369
75°	174	136	174	184	174	187
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°	1922.7	1922.7	1922.7	1922.7	1922.7	1922.7	1922.7	1922.7	1922.7	1922.7	1922.7
1°	1939.9	1974.2	1971.6	2017.8	2028.4	2017.8	1971.6	1974.2	1939.9	1901.5	1865.9
2°	1939.9	2017.8	2053.5	2126.2	2147.3	2126.2	2053.5	2017.8	1939.9	1857.9	1783.9
3°	1937.2	2056.2	2140.7	2241.2	2291.4	2241.2	2140.7	2056.2	1937.2	1818.3	1716.5
4°	1930.6	2095.8	2229.3	2362.7	2407.7	2362.7	2229.3	2095.8	1930.6	1780.0	1665.0
5°	1925.3	2146.0	2321.8	2483.0	2512.1	2483.0	2321.8	2146.0	1925.3	1743.0	1614.8
6°	1916.1	2196.2	2395.8	2572.8	2632.3	2572.8	2395.8	2196.2	1916.1	1707.3	1569.9
7°	1904.2	2229.3	2479.0	2644.2	2681.2	2644.2	2479.0	2229.3	1904.2	1666.3	1513.0
8°	1898.9	2283.4	2545.1	2701.0	2715.6	2701.0	2545.1	2283.4	1898.9	1628.0	1462.8
9°	1889.7	2305.9	2592.7	2718.2	2730.1	2718.2	2592.7	2305.9	1889.7	1608.2	1437.7
10°	1875.1	2340.3	2627.0	2723.5	2718.2	2723.5	2627.0	2340.3	1875.1	1567.2	1395.4
11°	1856.6	2379.9	2645.5	2703.7	2690.4	2703.7	2645.5	2379.9	1856.6	1534.2	1357.1
12°	1839.4	2407.7	2653.4	2666.7	2637.6	2666.7	2653.4	2407.7	1839.4	1505.1	1330.7
13°	1828.9	2419.6	2648.2	2620.4	2555.7	2620.4	2648.2	2419.6	1828.9	1472.1	1297.7
14°	1810.4	2446.0	2633.6	2549.1	2481.7	2549.1	2633.6	2446.0	1810.4	1435.1	1267.3
15°	1789.2	2453.9	2609.8	2476.4	2398.4	2476.4	2609.8	2453.9	1789.2	1404.7	1235.5
16°	1764.1	2463.2	2566.2	2386.5	2282.1	2386.5	2566.2	2463.2	1764.1	1370.3	1206.5
17°	1750.9	2468.4	2533.2	2298.0	2185.7	2298.0	2533.2	2468.4	1750.9	1343.9	1181.4
18°	1729.8	2464.5	2473.7	2224.0	2097.1	2224.0	2473.7	2464.5	1729.8	1313.5	1144.4
19°	1700.7	2455.2	2414.3	2130.2	2027.1	2130.2	2414.3	2455.2	1700.7	1284.4	1116.6
20°	1674.3	2451.3	2348.2	2044.3	1925.3	2044.3	2348.2	2451.3	1674.3	1258.0	1090.2
21°	1655.8	2438.1	2287.4	1962.3	1840.8	1962.3	2287.4	2438.1	1655.8	1232.9	1070.4
22.5°	1614.8	2412.9	2185.7	1836.8	1729.8	1836.8	2185.7	2412.9	1614.8	1190.6	1026.8
23°	1602.9	2405.0	2159.2	1807.7	1716.5	1807.7	2159.2	2405.0	1602.9	1181.4	1012.2
24°	1572.5	2379.9	2097.1	1729.8	1633.3	1729.8	2097.1	2379.9	1572.5	1152.3	988.4
25°	1558.0	2356.1	2020.5	1666.3	1587.0	1666.3	2020.5	2356.1	1558.0	1125.9	972.6
26°	1526.3	2321.8	1951.8	1613.5	1522.3	1613.5	1951.8	2321.8	1526.3	1102.1	947.5
27°	1489.3	2296.7	1880.4	1551.4	1474.7	1551.4	1880.4	2296.7	1489.3	1077.0	927.6
28°	1462.8	2255.7	1811.7	1502.5	1428.5	1502.5	1811.7	2255.7	1462.8	1049.2	913.1
29°	1437.7	2224.0	1756.2	1445.7	1380.9	1445.7	1756.2	2224.0	1437.7	1025.4	890.6
30°	1403.4	2181.7	1686.2	1400.7	1341.3	1400.7	1686.2	2181.7	1403.4	997.7	870.8
32.5°	1321.4	2081.3	1543.4	1300.3	1250.1	1300.3	1543.4	2081.3	1321.4	942.2	823.3
35°	1244.8	1968.9	1412.6	1206.5	1173.4	1206.5	1412.6	1968.9	1244.8	882.7	784.9
37.5°	1164.2	1851.3	1293.7	1124.5	1092.8	1124.5	1293.7	1851.3	1164.2	828.5	741.3
40°	1083.6	1735.0	1191.9	1046.6	1004.3	1046.6	1191.9	1735.0	1083.6	775.7	703.0
42.5°	1008.3	1598.9	1092.8	964.6	915.8	964.6	1092.8	1598.9	1008.3	725.5	666.0
45°	925.0	1474.7	1004.3	878.8	816.6	878.8	1004.3	1474.7	925.0	677.9	629.0
47.5°	845.7	1346.5	927.6	792.9	713.6	792.9	927.6	1346.5	845.7	630.3	593.3
50°	770.4	1222.3	841.8	696.4	625.0	696.4	841.8	1222.3	770.4	586.7	556.3
52.5°	693.8	1106.0	766.4	609.2	537.8	609.2	766.4	1106.0	693.8	547.1	520.6
55°	621.1	984.5	691.1	524.6	469.1	524.6	691.1	984.5	621.1	500.8	479.7
57.5°	553.7	868.2	617.1	458.5	421.5	458.5	617.1	868.2	553.7	455.9	442.7
60°	491.6	761.1	544.4	397.8	368.7	397.8	544.4	761.1	491.6	412.3	405.7
62.5°	424.2	664.7	475.7	346.2	321.1	346.2	475.7	664.7	424.2	370.0	367.4
65°	370.0	566.9	404.4	300.0	282.8	300.0	404.4	566.9	370.0	327.7	326.4



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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°	315.8	474.4	342.3	256.4	243.1	256.4	342.3	474.4	315.8	285.4	285.4
70°	269.6	391.1	282.8	216.7	206.1	216.7	282.8	391.1	269.6	243.1	244.5
72.5°	218.0	314.5	229.9	177.1	167.8	177.1	229.9	314.5	218.0	203.5	207.5
75°	174.4	248.4	181.0	142.7	136.1	142.7	181.0	248.4	174.4	162.5	167.8
77.5°	133.5	182.4	133.5	109.7	104.4	109.7	133.5	182.4	133.5	126.9	132.1
80°	95.1	128.2	95.1	78.0	76.6	78.0	95.1	128.2	95.1	91.2	97.8
82.5°	63.4	81.9	62.1	52.9	50.2	52.9	62.1	81.9	63.4	62.1	64.8
85°	35.7	44.9	34.4	30.4	29.1	30.4	34.4	44.9	35.7	35.7	38.3
87.5°	15.9	17.2	14.5	13.2	11.9	13.2	14.5	17.2	15.9	17.2	17.2
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°	1922.7	1922.7	1922.7	1922.7	1922.7	1922.7
1°	1843.4	1824.9	1843.4	1865.9	1901.5	1939.9
2°	1764.1	1739.0	1764.1	1783.9	1857.9	1939.9
3°	1680.9	1676.9	1680.9	1716.5	1818.3	1937.2
4°	1626.7	1608.2	1626.7	1665.0	1780.0	1930.6
5°	1561.9	1540.8	1561.9	1614.8	1743.0	1925.3
6°	1506.4	1477.4	1506.4	1569.9	1707.3	1916.1
7°	1444.3	1423.2	1444.3	1513.0	1666.3	1904.2
8°	1420.5	1395.4	1420.5	1462.8	1628.0	1898.9
9°	1367.7	1339.9	1367.7	1437.7	1608.2	1889.7
10°	1334.7	1300.3	1334.7	1395.4	1567.2	1875.1
11°	1295.0	1262.0	1295.0	1357.1	1534.2	1856.6
12°	1271.2	1242.2	1271.2	1330.7	1505.1	1839.4
13°	1228.9	1191.9	1228.9	1297.7	1472.1	1828.9
14°	1198.5	1166.8	1198.5	1267.3	1435.1	1810.4
15°	1160.2	1131.2	1160.2	1235.5	1404.7	1789.2
16°	1135.1	1096.8	1135.1	1206.5	1370.3	1764.1
17°	1096.8	1071.7	1096.8	1181.4	1343.9	1750.9
18°	1069.0	1045.3	1069.0	1144.4	1313.5	1729.8
19°	1049.2	1021.5	1049.2	1116.6	1284.4	1700.7
20°	1021.5	997.7	1021.5	1090.2	1258.0	1674.3
21°	995.0	973.9	995.0	1070.4	1232.9	1655.8
22.5°	969.9	940.9	969.9	1026.8	1190.6	1614.8
23°	955.4	931.6	955.4	1012.2	1181.4	1602.9
24°	938.2	910.5	938.2	988.4	1152.3	1572.5
25°	915.8	892.0	915.8	972.6	1125.9	1558.0
26°	895.9	873.5	895.9	947.5	1102.1	1526.3
27°	876.1	848.4	876.1	927.6	1077.0	1489.3
28°	858.9	832.5	858.9	913.1	1049.2	1462.8
29°	836.5	811.4	836.5	890.6	1025.4	1437.7
30°	820.6	798.1	820.6	870.8	997.7	1403.4
32.5°	777.0	763.8	777.0	823.3	942.2	1321.4
35°	740.0	733.4	740.0	784.9	882.7	1244.8
37.5°	712.3	707.0	712.3	741.3	828.5	1164.2
40°	680.5	681.9	680.5	703.0	775.7	1083.6
42.5°	650.1	652.8	650.1	666.0	725.5	1008.3
45°	621.1	621.1	621.1	629.0	677.9	925.0
47.5°	588.0	590.7	588.0	593.3	630.3	845.7
50°	555.0	557.6	555.0	556.3	586.7	770.4
52.5°	520.6	523.3	520.6	520.6	547.1	693.8
55°	483.6	488.9	483.6	479.7	500.8	621.1
57.5°	445.3	451.9	445.3	442.7	455.9	553.7
60°	411.0	417.6	411.0	405.7	412.3	491.6
62.5°	375.3	381.9	375.3	367.4	370.0	424.2
65°	338.3	346.2	338.3	326.4	327.7	370.0



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	298.6	305.3	298.6	285.4	285.4	315.8
70°	260.3	265.6	260.3	244.5	243.1	269.6
72.5°	220.7	226.0	220.7	207.5	203.5	218.0
75°	179.7	183.7	179.7	167.8	162.5	174.4
77.5°	142.7	142.7	142.7	132.1	126.9	133.5
80°	103.1	103.1	103.1	97.8	91.2	95.1
82.5°	68.7	68.7	68.7	64.8	62.1	63.4
85°	38.3	37.0	38.3	38.3	35.7	35.7
87.5°	14.5	15.9	14.5	17.2	17.2	15.9
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	22.73	24.25	23.10	24.57	24.88	20.04	21.57	20.41	21.88	22.19
	3H	23.95	25.31	24.32	25.64	26.00	21.37	22.74	21.75	23.06	23.43
	4H	24.34	25.62	24.74	25.97	26.35	21.83	23.11	22.23	23.46	23.84
	6H	24.58	25.77	25.00	26.13	26.53	22.13	23.32	22.54	23.68	24.07
	8H	24.64	25.77	25.07	26.16	26.56	22.21	23.34	22.64	23.73	24.13
	12H	24.67	25.75	25.10	26.13	26.56	22.25	23.33	22.68	23.72	24.14
4H	2H	23.02	24.30	23.42	24.65	25.03	21.01	22.29	21.41	22.64	23.02
	3H	24.51	25.58	24.92	25.98	26.38	22.47	23.54	22.88	23.94	24.34
	4H	25.07	26.03	25.50	26.44	26.88	22.99	23.95	23.42	24.36	24.80
	6H	25.44	26.27	25.89	26.71	27.17	23.36	24.20	23.82	24.64	25.10
	8H	25.53	26.31	25.99	26.75	27.22	23.46	24.24	23.93	24.69	25.15
	12H	25.58	26.28	26.06	26.76	27.23	23.53	24.22	24.01	24.70	25.17
8H	4H	25.21	25.99	25.67	26.43	26.90	23.40	24.18	23.86	24.62	25.09
	6H	25.67	26.32	26.17	26.81	27.29	23.84	24.49	24.34	24.98	25.46
	8H	25.82	26.40	26.33	26.91	27.40	23.99	24.56	24.50	25.07	25.56
	12H	25.93	26.43	26.43	26.93	27.49	24.09	24.60	24.60	25.09	25.66
12H	4H	25.21	25.90	25.69	26.38	26.85	23.44	24.14	23.92	24.61	25.08
	6H	25.68	26.26	26.19	26.77	27.25	23.90	24.48	24.42	24.99	25.48
	8H	25.87	26.38	26.38	26.87	27.43	24.09	24.60	24.60	25.10	25.66