

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: P1051172

Luminaire Tested: S122DR-B865DB2750-4F0-XX-W2A-W_2700K

Issue Date: 7/9/2025

Test Information

Test Method: LM-79-2019
Report Number: P1051172
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-B865DB2750-4F0-XX-W2A-W_2700K
Description: Define 2 Direct Recessed with 2700K BioUP LEDs {m-DER=0.473} {m-EER=0.52}
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3901.0 lumens
Efficiency: N/A
Efficacy: 83.4 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

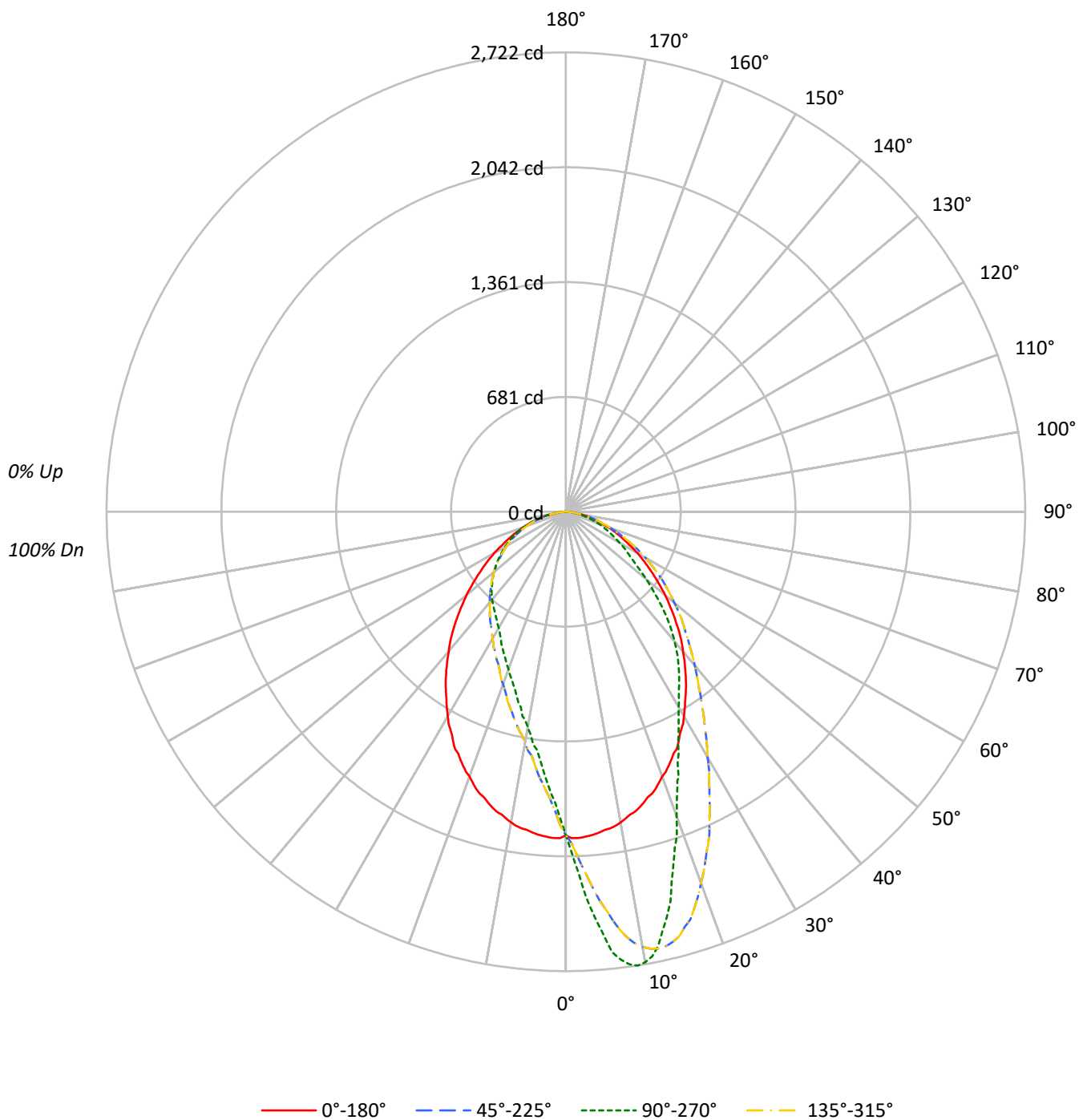
Input Watts (W): 46.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P1051172

CATALOG NUMBER: S122DR-B865DB2750-4F0-XX-W2A-W_2700K

Luminous Intensity Polar Plot



TEST NUMBER: P1051172

CATALOG NUMBER: S122DR-B865DB2750-4F0-XX-W2A-W_2700K

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	30	10	50	30	10
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°	30349	30349	30349	30349
5°	30507	39804	30507	24415
10°	30054	43569	30054	20841
15°	29239	39194	29239	18485
20°	28125	32341	28125	16759
25°	27135	27641	27135	15536
30°	25578	24447	25578	14548
35°	23987	22611	23987	14132
40°	22327	20695	22327	14049
45°	20649	18231	20649	13864
50°	18918	15349	18918	13695
55°	17091	12910	17091	13457
60°	15519	11638	15519	13183
65°	13821	10562	13821	12930
70°	12441	9516	12441	12260
75°	10636	8299	10636	11204
80°	8651	6964	8651	9371
85°	6466	5267	6466	6702

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°

Vertical Angle: 45°

Luminance: 32921 cd/sqm

TEST NUMBER: P1051172

CATALOG NUMBER: S122DR-B865DB2750-4F0-XX-W2A-W_2700K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	188.7	4.8
10°-20°	517.9	13.3
20°-30°	679.1	17.4
30°-40°	717.8	18.4
40°-50°	666.4	17.1
50°-60°	533.4	13.7
60°-70°	364.8	9.4
70°-80°	188.2	4.8
80°-90°	44.7	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°	1385.7	35.5
0°-40°	2103.4	53.9
0°-60°	3303.2	84.7
0°-90°	3901.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3901.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1917	1917	1917	1917	1917	
5°	1920	2505	1920	1536	1920	182
15°	1784	2392	1784	1128	1784	501
25°	1554	1583	1554	890	1554	710
35°	1241	1170	1241	731	1241	775
45°	922	814	922	619	922	712
55°	619	468	619	488	619	557
65°	369	282	369	345	369	367
75°	174	136	174	183	174	186
85°	36	29	36	37	36	44
90°	0	0	0	0	0	

TEST NUMBER: P1051172

CATALOG NUMBER: S122DR-B865DB2750-4F0-XX-W2A-W_2700K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	1917.3	1917.3	1917.3	1917.3	1917.3	1917.3	1917.3	1917.3	1917.3	1917.3	1917.3
1°	1934.4	1968.7	1966.0	2012.2	2022.7	2012.2	1966.0	1968.7	1934.4	1896.2	1860.6
2°	1934.4	2012.2	2047.7	2120.2	2141.3	2120.2	2047.7	2012.2	1934.4	1852.7	1778.9
3°	1931.8	2050.4	2134.7	2234.9	2284.9	2234.9	2134.7	2050.4	1931.8	1813.2	1711.7
4°	1925.2	2089.9	2223.0	2356.1	2400.9	2356.1	2223.0	2089.9	1925.2	1775.0	1660.3
5°	1919.9	2140.0	2315.2	2476.0	2505.0	2476.0	2315.2	2140.0	1919.9	1738.1	1610.3
6°	1910.7	2190.1	2389.0	2565.6	2624.9	2565.6	2389.0	2190.1	1910.7	1702.5	1565.5
7°	1898.8	2223.0	2472.0	2636.8	2673.7	2636.8	2472.0	2223.0	1898.8	1661.6	1508.8
8°	1893.6	2277.0	2537.9	2693.4	2707.9	2693.4	2537.9	2277.0	1893.6	1623.4	1458.7
9°	1884.3	2299.4	2585.4	2710.6	2722.4	2710.6	2585.4	2299.4	1884.3	1603.7	1433.7
10°	1869.8	2333.7	2619.6	2715.8	2710.6	2715.8	2619.6	2333.7	1869.8	1562.8	1391.5
11°	1851.4	2373.2	2638.1	2696.1	2682.9	2696.1	2638.1	2373.2	1851.4	1529.9	1353.3
12°	1834.3	2400.9	2646.0	2659.2	2630.2	2659.2	2646.0	2400.9	1834.3	1500.9	1326.9
13°	1823.7	2412.7	2640.7	2613.0	2548.5	2613.0	2640.7	2412.7	1823.7	1467.9	1294.0
14°	1805.3	2439.1	2626.2	2541.9	2474.7	2541.9	2626.2	2439.1	1805.3	1431.0	1263.7
15°	1784.2	2447.0	2602.5	2469.4	2391.7	2469.4	2602.5	2447.0	1784.2	1400.7	1232.1
16°	1759.2	2456.2	2559.0	2379.8	2275.7	2379.8	2559.0	2456.2	1759.2	1366.5	1203.1
17°	1746.0	2461.5	2526.1	2291.5	2179.5	2291.5	2526.1	2461.5	1746.0	1340.1	1178.0
18°	1724.9	2457.6	2466.8	2217.7	2091.2	2217.7	2466.8	2457.6	1724.9	1309.8	1141.1
19°	1695.9	2448.3	2407.5	2124.2	2021.4	2124.2	2407.5	2448.3	1695.9	1280.8	1113.5
20°	1669.6	2444.4	2341.6	2038.5	1919.9	2038.5	2341.6	2444.4	1669.6	1254.5	1087.1
21°	1651.1	2431.2	2281.0	1956.8	1835.6	1956.8	2281.0	2431.2	1651.1	1229.4	1067.4
22.5°	1610.3	2406.2	2179.5	1831.6	1724.9	1831.6	2179.5	2406.2	1610.3	1187.3	1023.9
23°	1598.4	2398.3	2153.2	1802.6	1711.7	1802.6	2153.2	2398.3	1598.4	1178.0	1009.4
24°	1568.1	2373.2	2091.2	1724.9	1628.7	1724.9	2091.2	2373.2	1568.1	1149.1	985.7
25°	1553.6	2349.5	2014.8	1661.6	1582.6	1661.6	2014.8	2349.5	1553.6	1122.7	969.8
26°	1522.0	2315.2	1946.3	1608.9	1518.0	1608.9	1946.3	2315.2	1522.0	1099.0	944.8
27°	1485.1	2290.2	1875.1	1547.0	1470.6	1547.0	1875.1	2290.2	1485.1	1073.9	925.0
28°	1458.7	2249.4	1806.6	1498.2	1424.5	1498.2	1806.6	2249.4	1458.7	1046.3	910.5
29°	1433.7	2217.7	1751.3	1441.6	1377.0	1441.6	1751.3	2217.7	1433.7	1022.6	888.1
30°	1399.4	2175.6	1681.4	1396.8	1337.5	1396.8	1681.4	2175.6	1399.4	994.9	868.4
32.5°	1317.7	2075.4	1539.1	1296.6	1246.6	1296.6	1539.1	2075.4	1317.7	939.5	820.9
35°	1241.3	1963.4	1408.6	1203.1	1170.1	1203.1	1408.6	1963.4	1241.3	880.2	782.7
37.5°	1160.9	1846.1	1290.0	1121.4	1089.8	1121.4	1290.0	1846.1	1160.9	826.2	739.2
40°	1080.5	1730.2	1188.6	1043.6	1001.5	1043.6	1188.6	1730.2	1080.5	773.5	701.0
42.5°	1005.4	1594.4	1089.8	961.9	913.2	961.9	1089.8	1594.4	1005.4	723.4	664.1
45°	922.4	1470.6	1001.5	876.3	814.4	876.3	1001.5	1470.6	922.4	676.0	627.2
47.5°	843.3	1342.8	925.0	790.6	711.6	790.6	925.0	1342.8	843.3	628.6	591.7
50°	768.2	1218.9	839.4	694.4	623.3	694.4	839.4	1218.9	768.2	585.1	554.8
52.5°	691.8	1102.9	764.3	607.5	536.3	607.5	764.3	1102.9	691.8	545.5	519.2
55°	619.3	981.7	689.2	523.1	467.8	523.1	689.2	981.7	619.3	499.4	478.3
57.5°	552.1	865.7	615.4	457.2	420.4	457.2	615.4	865.7	552.1	454.6	441.4
60°	490.2	759.0	542.9	396.6	367.6	396.6	542.9	759.0	490.2	411.1	404.5
62.5°	423.0	662.8	474.4	345.2	320.2	345.2	474.4	662.8	423.0	369.0	366.3
65°	369.0	565.3	403.2	299.1	282.0	299.1	403.2	565.3	369.0	326.8	325.5



TEST NUMBER: P1051172

CATALOG NUMBER: S122DR-B865DB2750-4F0-XX-W2A-W_2700K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	314.9	473.1	341.3	255.6	242.5	255.6	341.3	473.1	314.9	284.6	284.6
70°	268.8	390.0	282.0	216.1	205.6	216.1	282.0	390.0	268.8	242.5	243.8
72.5°	217.4	313.6	229.3	176.6	167.4	176.6	229.3	313.6	217.4	202.9	206.9
75°	173.9	247.7	180.5	142.3	135.7	142.3	180.5	247.7	173.9	162.1	167.4
77.5°	133.1	181.8	133.1	109.4	104.1	109.4	133.1	181.8	133.1	126.5	131.8
80°	94.9	127.8	94.9	77.7	76.4	77.7	94.9	127.8	94.9	90.9	97.5
82.5°	63.3	81.7	61.9	52.7	50.1	52.7	61.9	81.7	63.3	61.9	64.6
85°	35.6	44.8	34.3	30.3	29.0	30.3	34.3	44.8	35.6	35.6	38.2
87.5°	15.8	17.1	14.5	13.2	11.9	13.2	14.5	17.1	15.8	17.1	17.1
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: P1051172

CATALOG NUMBER: S122DR-B865DB2750-4F0-XX-W2A-W_2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	1917.3	1917.3	1917.3	1917.3	1917.3	1917.3
1°	1838.2	1819.8	1838.2	1860.6	1896.2	1934.4
2°	1759.2	1734.1	1759.2	1778.9	1852.7	1934.4
3°	1676.1	1672.2	1676.1	1711.7	1813.2	1931.8
4°	1622.1	1603.7	1622.1	1660.3	1775.0	1925.2
5°	1557.5	1536.5	1557.5	1610.3	1738.1	1919.9
6°	1502.2	1473.2	1502.2	1565.5	1702.5	1910.7
7°	1440.3	1419.2	1440.3	1508.8	1661.6	1898.8
8°	1416.6	1391.5	1416.6	1458.7	1623.4	1893.6
9°	1363.8	1336.2	1363.8	1433.7	1603.7	1884.3
10°	1330.9	1296.6	1330.9	1391.5	1562.8	1869.8
11°	1291.4	1258.4	1291.4	1353.3	1529.9	1851.4
12°	1267.6	1238.7	1267.6	1326.9	1500.9	1834.3
13°	1225.5	1188.6	1225.5	1294.0	1467.9	1823.7
14°	1195.2	1163.5	1195.2	1263.7	1431.0	1805.3
15°	1157.0	1128.0	1157.0	1232.1	1400.7	1784.2
16°	1131.9	1093.7	1131.9	1203.1	1366.5	1759.2
17°	1093.7	1068.7	1093.7	1178.0	1340.1	1746.0
18°	1066.0	1042.3	1066.0	1141.1	1309.8	1724.9
19°	1046.3	1018.6	1046.3	1113.5	1280.8	1695.9
20°	1018.6	994.9	1018.6	1087.1	1254.5	1669.6
21°	992.2	971.2	992.2	1067.4	1229.4	1651.1
22.5°	967.2	938.2	967.2	1023.9	1187.3	1610.3
23°	952.7	929.0	952.7	1009.4	1178.0	1598.4
24°	935.6	907.9	935.6	985.7	1149.1	1568.1
25°	913.2	889.5	913.2	969.8	1122.7	1553.6
26°	893.4	871.0	893.4	944.8	1099.0	1522.0
27°	873.6	846.0	873.6	925.0	1073.9	1485.1
28°	856.5	830.2	856.5	910.5	1046.3	1458.7
29°	834.1	809.1	834.1	888.1	1022.6	1433.7
30°	818.3	795.9	818.3	868.4	994.9	1399.4
32.5°	774.8	761.6	774.8	820.9	939.5	1317.7
35°	737.9	731.3	737.9	782.7	880.2	1241.3
37.5°	710.3	705.0	710.3	739.2	826.2	1160.9
40°	678.6	679.9	678.6	701.0	773.5	1080.5
42.5°	648.3	651.0	648.3	664.1	723.4	1005.4
45°	619.3	619.3	619.3	627.2	676.0	922.4
47.5°	586.4	589.0	586.4	591.7	628.6	843.3
50°	553.4	556.1	553.4	554.8	585.1	768.2
52.5°	519.2	521.8	519.2	519.2	545.5	691.8
55°	482.3	487.6	482.3	478.3	499.4	619.3
57.5°	444.1	450.7	444.1	441.4	454.6	552.1
60°	409.8	416.4	409.8	404.5	411.1	490.2
62.5°	374.2	380.8	374.2	366.3	369.0	423.0
65°	337.3	345.2	337.3	325.5	326.8	369.0



TEST NUMBER: P1051172

CATALOG NUMBER: S122DR-B865DB2750-4F0-XX-W2A-W_2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	297.8	304.4	297.8	284.6	284.6	314.9
70°	259.6	264.9	259.6	243.8	242.5	268.8
72.5°	220.1	225.3	220.1	206.9	202.9	217.4
75°	179.2	183.2	179.2	167.4	162.1	173.9
77.5°	142.3	142.3	142.3	131.8	126.5	133.1
80°	102.8	102.8	102.8	97.5	90.9	94.9
82.5°	68.5	68.5	68.5	64.6	61.9	63.3
85°	38.2	36.9	38.2	38.2	35.6	35.6
87.5°	14.5	15.8	14.5	17.1	17.1	15.8
90°	0.0	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P1051172

CATALOG NUMBER: S122DR-B865DB2750-4F0-XX-W2A-W_2700K

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	22.72	24.24	23.09	24.56	24.87	20.03	21.56	20.40	21.87	22.18
	3H	23.94	25.30	24.31	25.63	25.99	21.36	22.73	21.74	23.05	23.42
	4H	24.33	25.61	24.73	25.96	26.34	21.82	23.10	22.22	23.45	23.83
	6H	24.57	25.76	24.99	26.12	26.52	22.12	23.31	22.53	23.67	24.07
	8H	24.63	25.76	25.06	26.15	26.55	22.20	23.33	22.63	23.72	24.12
	12H	24.66	25.74	25.09	26.12	26.55	22.24	23.32	22.67	23.71	24.14
4H	2H	23.01	24.29	23.41	24.64	25.02	21.00	22.28	21.40	22.63	23.01
	3H	24.50	25.57	24.91	25.97	26.37	22.46	23.53	22.87	23.93	24.33
	4H	25.06	26.02	25.49	26.43	26.87	22.98	23.94	23.41	24.35	24.79
	6H	25.43	26.26	25.88	26.70	27.16	23.35	24.19	23.81	24.63	25.09
	8H	25.52	26.30	25.98	26.74	27.21	23.45	24.23	23.92	24.68	25.14
	12H	25.57	26.27	26.05	26.75	27.22	23.52	24.21	24.00	24.69	25.16
8H	4H	25.20	25.98	25.66	26.42	26.89	23.39	24.17	23.85	24.61	25.08
	6H	25.66	26.31	26.16	26.80	27.28	23.83	24.48	24.33	24.97	25.45
	8H	25.81	26.39	26.32	26.90	27.39	23.98	24.55	24.49	25.06	25.55
	12H	25.92	26.42	26.43	26.92	27.48	24.08	24.59	24.59	25.08	25.65
12H	4H	25.20	25.89	25.68	26.37	26.84	23.43	24.13	23.91	24.60	25.08
	6H	25.67	26.25	26.18	26.76	27.24	23.89	24.47	24.41	24.98	25.47
	8H	25.86	26.37	26.37	26.86	27.42	24.08	24.59	24.59	25.09	25.65