

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: P997678

Luminaire Tested: SA2XXDP-B865DB40-4F0-XX-W2A-A

Issue Date: 5/2/2025

Test Information

Test Method: LM-79-2019
Report Number: P997678
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-19)
Test Lab: INNOVATION CENTER
Issue Date: 5/2/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: SA2XXDP-B865DB40-4F0-XX-W2A-A
Description: Define 2 Direct Recessed with 4000K BioUP LEDs {m-DER=0.865} {m-EER=0.951}
Light Source: -
Ballast/Driver: -

Summary

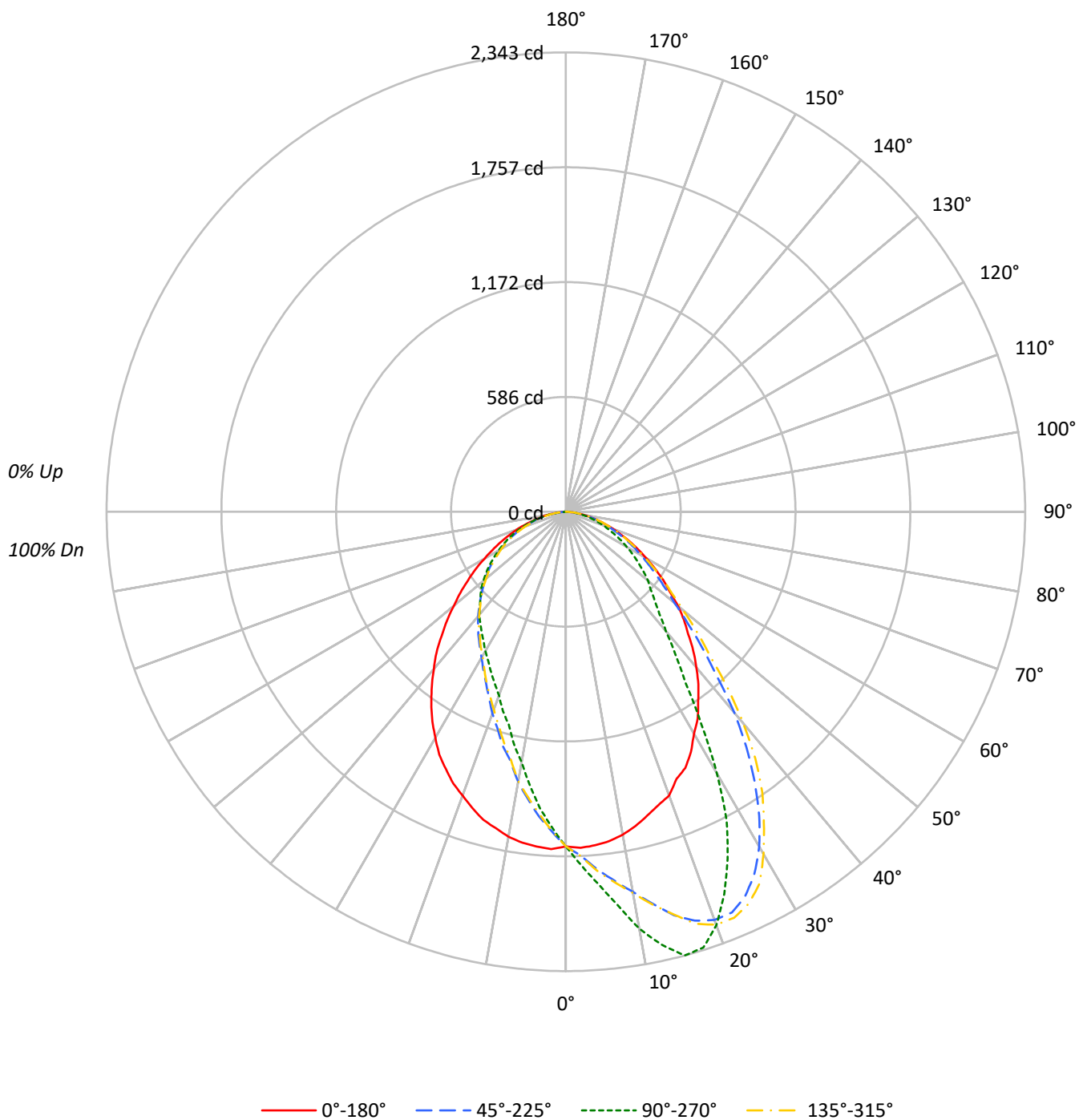
Lumens per Lamp: N/A
Luminaire Lumens: 3765.0 lumens
Efficiency: N/A
Efficacy: 80.4 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 1.09 / 1.23
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P997678

CATALOG NUMBER: SA2XXDP-B865DB40-4F0-XX-W2A-A

Luminous Intensity Polar Plot



TEST NUMBER: P997678

CATALOG NUMBER: SA2XXDP-B865DB40-4F0-XX-W2A-A

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	90	82	75	69	79	73	68		76	71	67		74	69	66	64
4	86	75	66	60	83	73	66	60	71	64	59		69	63	58		66	62	58	55
5	79	67	59	53	77	66	58	52	64	57	52		62	56	51		60	55	51	49
6	74	61	53	47	72	60	52	46	58	51	46		57	51	46		55	50	45	43
7	69	56	48	42	67	55	47	42	54	46	41		52	46	41		51	45	41	39
8	64	51	43	38	63	51	43	38	49	42	37		48	42	37		47	41	37	35
9	60	47	39	34	59	47	39	34	46	39	34		45	38	34		44	38	34	32
10	56	44	36	31	55	43	36	31	42	36	31		41	35	31		41	35	31	29

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	27013	27013	27013	27013
5°	27137	30283	27240	24094
10°	26881	34703	27050	20851
15°	26289	38390	26655	18421
20°	25940	37806	25940	16793
25°	25177	34090	25292	15761
30°	23878	28170	24334	15008
35°	22737	20530	23115	14474
40°	21412	16399	21656	14175
45°	19760	14329	20085	13772
50°	18346	13470	18378	13502
55°	16724	12416	16832	13139
60°	14990	11378	15199	12581
65°	13461	10368	13709	12038
70°	11959	9409	12265	11233
75°	10269	8342	10672	9945
80°	8368	7174	8970	8013
85°	6193	6429	6665	4758

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 155°

Vertical Angle: 45°

Luminance: 35265 cd/sqm

TEST NUMBER: P997678

CATALOG NUMBER: SA2XXDP-B865DB40-4F0-XX-W2A-A

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	162.5	4.3
10°-20°	473.1	12.6
20°-30°	686.6	18.2
30°-40°	723.8	19.2
40°-50°	640.5	17.0
50°-60°	511.4	13.6
60°-70°	347.4	9.2
70°-80°	177.7	4.7
80°-90°	42.0	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°	1322.2	35.1
0°-40°	2046.0	54.3
0°-60°	3197.9	84.9
0°-90°	3765.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3765.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1706	1706	1706	1706	1706	
5°	1708	1906	1714	1516	1708	162
15°	1604	2343	1626	1124	1604	453
25°	1442	1952	1448	902	1442	659
35°	1177	1062	1196	749	1177	736
45°	883	640	897	615	883	685
55°	606	450	610	476	606	541
65°	359	277	366	321	359	357
75°	168	136	174	163	168	180
85°	34	35	37	26	34	42
90°	0	0	0	0	0	

TEST NUMBER: P997678

CATALOG NUMBER: SA2XXDP-B865DB40-4F0-XX-W2A-A

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	1706.5	1706.5	1706.5	1706.5	1706.5	1706.5	1706.5	1706.5	1706.5	1706.5	1706.5
2.5°	1715.7	1719.6	1726.1	1727.5	1740.6	1751.1	1762.9	1762.9	1766.8	1765.5	1755.0
5°	1707.8	1719.6	1736.6	1751.1	1774.7	1785.2	1800.9	1812.7	1823.2	1831.1	1829.8
7.5°	1694.7	1715.7	1740.6	1768.1	1799.6	1818.0	1840.3	1861.2	1875.7	1888.8	1898.0
10°	1672.4	1707.8	1741.9	1778.6	1819.3	1844.2	1870.4	1898.0	1920.3	1945.2	1968.8
12.5°	1642.2	1693.4	1735.3	1783.9	1833.7	1861.2	1903.2	1924.2	1967.5	2030.5	2047.5
15°	1604.2	1673.7	1713.0	1774.7	1840.3	1862.6	1920.3	1954.4	2043.6	2082.9	2130.1
17.5°	1568.7	1646.1	1698.6	1769.4	1833.7	1877.0	1933.4	2002.9	2077.7	2134.1	2186.5
20°	1539.9	1614.7	1677.6	1756.3	1837.6	1892.7	1951.8	2035.7	2117.0	2174.7	2215.4
22.5°	1474.3	1570.1	1643.5	1731.4	1829.8	1905.8	1962.2	2054.1	2141.9	2177.4	2212.8
25°	1441.5	1524.2	1609.4	1709.1	1824.5	1915.0	1963.6	2065.9	2143.3	2156.4	2164.2
27.5°	1381.2	1474.3	1574.0	1688.1	1823.2	1899.3	1960.9	2054.1	2115.7	2106.5	2082.9
30°	1306.4	1420.5	1530.7	1654.0	1804.8	1887.5	1945.2	2030.5	2061.9	2014.7	1972.7
32.5°	1251.3	1358.9	1480.9	1623.8	1783.9	1862.6	1919.0	1985.9	1992.4	1907.2	1836.3
35°	1176.6	1295.9	1433.6	1584.5	1748.4	1819.3	1871.7	1912.4	1880.9	1761.6	1677.6
37.5°	1109.7	1227.7	1374.6	1528.1	1699.9	1769.4	1811.4	1818.0	1740.6	1635.6	1512.3
40°	1036.2	1158.2	1311.7	1473.0	1646.1	1706.5	1732.7	1713.0	1601.5	1479.6	1336.6
42.5°	962.8	1083.4	1248.7	1414.0	1577.9	1629.1	1639.6	1585.8	1449.4	1306.4	1141.1
45°	882.7	1008.7	1173.9	1340.5	1499.2	1528.1	1529.4	1452.0	1290.7	1141.1	987.7
47.5°	817.2	933.9	1097.9	1264.4	1398.2	1417.9	1410.0	1320.8	1145.1	977.2	843.4
50°	745.0	856.5	1019.2	1183.1	1297.2	1302.5	1282.8	1155.6	983.7	830.3	724.0
52.5°	667.6	780.4	930.0	1087.4	1189.7	1181.8	1143.8	1007.4	846.0	718.8	637.5
55°	606.0	705.7	846.0	999.5	1071.6	1049.3	1007.4	868.3	741.1	633.5	562.7
57.5°	537.8	625.7	763.4	897.2	939.2	918.2	876.2	746.3	628.3	547.0	499.7
60°	473.5	553.5	674.2	785.7	818.5	796.2	747.6	630.9	545.7	477.4	442.0
62.5°	414.5	484.0	585.0	687.3	700.4	678.1	636.2	541.7	468.3	414.5	388.3
65°	359.4	425.0	506.3	583.7	595.5	571.9	528.6	460.4	398.7	364.6	339.7
67.5°	305.6	358.1	430.2	486.6	493.2	470.9	435.5	380.4	342.3	305.6	287.3
70°	258.4	297.7	354.1	400.1	402.7	381.7	363.3	313.5	284.6	258.4	244.0
72.5°	212.5	240.0	283.3	317.4	318.7	305.6	288.6	257.1	232.2	213.8	199.4
75°	167.9	191.5	217.7	247.9	246.6	236.1	223.0	203.3	182.3	170.5	164.0
77.5°	128.5	143.0	164.0	183.6	183.6	178.4	170.5	156.1	143.0	131.2	124.6
80°	91.8	101.0	118.0	124.6	127.2	125.9	119.4	108.9	103.6	94.4	91.8
82.5°	59.0	65.6	73.5	80.0	83.9	81.3	80.0	74.8	66.9	64.3	61.6
85°	34.1	36.7	40.7	44.6	45.9	44.6	47.2	43.3	39.3	39.3	38.0
87.5°	14.4	15.7	18.4	18.4	19.7	19.7	18.4	19.7	19.7	18.4	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: P997678

CATALOG NUMBER: SA2XXDP-B865DB40-4F0-XX-W2A-A

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	1706.5	1706.5	1706.5	1706.5	1706.5	1706.5	1706.5	1706.5	1706.5	1706.5	1706.5
2.5°	1773.4	1774.7	1777.3	1790.4	1797.0	1798.3	1793.0	1804.8	1808.8	1804.8	1802.2
5°	1857.3	1865.2	1880.9	1898.0	1896.7	1898.0	1905.8	1913.7	1916.3	1905.8	1909.8
7.5°	1930.8	1946.5	1963.6	1989.8	1989.8	2002.9	2008.2	2014.7	2030.5	2022.6	2020.0
10°	2014.7	2035.7	2067.2	2109.2	2110.5	2123.6	2136.7	2157.7	2164.2	2159.0	2161.6
12.5°	2119.6	2160.3	2162.9	2208.8	2229.8	2232.5	2253.4	2249.5	2262.6	2262.6	2284.9
15°	2165.6	2228.5	2263.9	2308.5	2321.6	2305.9	2323.0	2341.3	2342.6	2342.6	2341.3
17.5°	2248.2	2273.1	2308.5	2332.1	2337.4	2337.4	2338.7	2346.6	2341.3	2330.8	2338.7
20°	2265.2	2275.7	2288.9	2286.2	2288.9	2275.7	2262.6	2249.5	2250.8	2244.3	2263.9
22.5°	2233.8	2231.1	2201.0	2181.3	2181.3	2155.1	2130.1	2118.3	2106.5	2110.5	2117.0
25°	2155.1	2114.4	2077.7	2048.8	2042.3	2000.3	1966.2	1955.7	1936.0	1951.8	1954.4
27.5°	2029.1	1983.2	1924.2	1899.3	1865.2	1848.1	1824.5	1793.0	1752.4	1776.0	1772.1
30°	1894.0	1825.8	1777.3	1717.0	1663.2	1659.3	1614.7	1562.2	1541.2	1541.2	1553.0
32.5°	1743.2	1652.7	1581.9	1496.6	1444.1	1421.8	1368.1	1315.6	1327.4	1288.1	1302.5
35°	1567.4	1448.1	1358.9	1276.2	1236.9	1210.7	1141.1	1112.3	1080.8	1062.4	1096.6
37.5°	1399.5	1261.8	1147.7	1057.2	1042.8	995.6	948.3	930.0	911.6	919.5	918.2
40°	1194.9	1072.9	970.6	899.8	874.9	852.6	821.1	798.8	787.0	793.6	794.9
42.5°	1010.0	907.7	831.6	781.8	760.8	745.0	729.3	710.9	707.0	707.0	712.2
45°	867.0	783.1	731.9	691.2	679.4	667.6	655.8	648.0	645.3	640.1	644.0
47.5°	752.9	686.0	654.5	624.4	611.2	608.6	598.1	594.2	588.9	587.6	588.9
50°	657.1	615.2	586.3	569.3	560.1	556.1	550.9	543.0	540.4	547.0	544.3
52.5°	590.2	550.9	535.2	518.1	512.9	507.6	499.7	501.1	499.7	497.1	497.1
55°	523.4	498.4	482.7	469.6	468.3	463.0	456.5	453.8	452.5	449.9	453.8
57.5°	469.6	449.9	435.5	423.7	418.4	418.4	411.9	406.6	406.6	405.3	406.6
60°	415.8	396.1	386.9	375.1	371.2	369.9	366.0	363.3	359.4	359.4	359.4
62.5°	366.0	350.2	339.7	329.2	330.5	324.0	318.7	316.1	316.1	317.4	317.4
65°	318.7	308.2	295.1	285.9	283.3	282.0	279.4	278.1	274.1	276.8	276.8
67.5°	275.4	261.0	253.2	249.2	245.3	244.0	241.3	238.7	237.4	236.1	238.7
70°	232.2	220.4	213.8	211.2	207.2	205.9	204.6	200.7	202.0	203.3	204.6
72.5°	192.8	182.3	181.0	173.1	173.1	173.1	167.9	170.5	169.2	166.6	169.2
75°	152.2	146.9	144.3	140.3	141.7	140.3	139.0	135.1	135.1	136.4	137.7
77.5°	120.7	115.4	114.1	110.2	107.6	110.2	107.6	106.2	106.2	107.6	107.6
80°	89.2	86.6	82.6	82.6	82.6	81.3	81.3	81.3	80.0	78.7	80.0
82.5°	59.0	59.0	57.7	56.4	57.7	55.1	56.4	56.4	56.4	56.4	56.4
85°	38.0	36.7	36.7	35.4	35.4	35.4	36.7	34.1	34.1	35.4	35.4
87.5°	17.1	17.1	17.1	18.4	17.1	17.1	17.1	18.4	17.1	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: P997678

CATALOG NUMBER: SA2XXDP-B865DB40-4F0-XX-W2A-A

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	1706.5	1706.5	1706.5	1706.5	1706.5	1706.5	1706.5	1706.5	1706.5	1706.5	1706.5
2.5°	1808.8	1799.6	1791.7	1793.0	1799.6	1794.4	1781.2	1764.2	1757.6	1749.8	1757.6
5°	1917.7	1909.8	1894.0	1895.4	1891.4	1886.2	1865.2	1839.0	1839.0	1818.0	1815.3
7.5°	2025.2	2013.4	2002.9	2000.3	1985.9	1975.4	1957.0	1920.3	1905.8	1880.9	1866.5
10°	2145.9	2136.7	2124.9	2110.5	2102.6	2084.2	2054.1	2000.3	1974.1	1939.9	1915.0
12.5°	2267.9	2266.6	2240.3	2211.5	2210.2	2181.3	2160.3	2088.2	2052.8	2006.8	1947.8
15°	2345.3	2338.7	2324.3	2309.8	2313.8	2282.3	2235.1	2149.8	2126.2	2071.1	2008.2
17.5°	2343.9	2343.9	2340.0	2337.4	2333.4	2324.3	2298.0	2241.6	2203.6	2134.1	2075.1
20°	2269.2	2286.2	2290.2	2288.9	2302.0	2308.5	2307.2	2271.8	2241.6	2180.0	2119.6
22.5°	2119.6	2159.0	2176.0	2186.5	2214.1	2228.5	2262.6	2249.5	2241.6	2195.7	2144.6
25°	1980.6	1993.7	2044.9	2047.5	2085.5	2121.0	2155.1	2177.4	2206.2	2189.2	2145.9
27.5°	1800.9	1831.1	1867.8	1895.4	1903.2	1975.4	2031.8	2073.7	2139.3	2144.6	2130.1
30°	1597.6	1612.0	1672.4	1709.1	1751.1	1803.5	1884.9	1957.0	2016.0	2069.8	2088.2
32.5°	1349.7	1408.7	1444.1	1488.7	1525.5	1618.6	1718.3	1811.4	1879.6	1970.1	2009.5
35°	1122.8	1168.7	1229.0	1247.4	1314.3	1393.0	1522.8	1642.2	1745.8	1837.6	1917.7
37.5°	935.2	971.9	1036.2	1065.1	1104.4	1205.4	1314.3	1462.5	1587.1	1699.9	1799.6
40°	806.7	834.2	882.7	891.9	924.7	1016.5	1104.4	1243.5	1408.7	1560.9	1669.7
42.5°	718.8	731.9	764.7	776.5	797.5	859.1	937.8	1069.0	1222.5	1379.9	1533.3
45°	655.8	665.0	684.7	695.2	721.4	749.0	813.2	918.2	1038.8	1197.5	1362.8
47.5°	599.4	611.2	619.1	625.7	640.1	670.3	712.2	789.6	905.0	1050.6	1210.7
50°	552.2	556.1	570.6	571.9	581.1	600.7	640.1	687.3	779.1	897.2	1052.0
52.5°	505.0	508.9	518.1	527.3	531.2	547.0	573.2	612.5	680.8	773.9	911.6
55°	457.8	463.0	472.2	478.8	482.7	495.8	511.5	549.6	603.4	668.9	781.8
57.5°	410.6	422.4	425.0	428.9	435.5	449.9	464.3	486.6	528.6	588.9	671.6
60°	366.0	369.9	379.1	383.0	389.6	397.4	415.8	432.8	463.0	510.2	585.0
62.5°	320.0	329.2	333.2	337.1	342.3	351.5	363.3	381.7	407.9	446.0	505.0
65°	280.7	282.0	289.9	295.1	300.4	306.9	318.7	335.8	351.5	386.9	430.2
67.5°	242.7	245.3	247.9	253.2	259.7	266.3	276.8	285.9	305.6	329.2	363.3
70°	205.9	205.9	212.5	216.4	215.1	223.0	230.9	241.3	255.8	278.1	305.6
72.5°	173.1	171.8	177.1	178.4	181.0	186.3	191.5	202.0	209.9	226.9	247.9
75°	137.7	140.3	143.0	143.0	146.9	150.8	156.1	161.3	170.5	181.0	196.7
77.5°	108.9	108.9	111.5	112.8	116.7	115.4	120.7	125.9	132.5	141.7	153.5
80°	80.0	82.6	82.6	82.6	83.9	85.3	90.5	94.4	98.4	104.9	110.2
82.5°	56.4	56.4	59.0	59.0	59.0	61.6	61.6	63.0	65.6	69.5	73.5
85°	35.4	35.4	35.4	36.7	35.4	36.7	39.3	38.0	39.3	42.0	42.0
87.5°	17.1	17.1	17.1	17.1	17.1	18.4	17.1	18.4	19.7	19.7	19.7
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: P997678

CATALOG NUMBER: SA2XXDP-B865DB40-4F0-XX-W2A-A

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°	185°	190°	195°
0°	1706.5	1706.5	1706.5	1706.5	1706.5	1706.5	1706.5	1706.5	1706.5	1706.5	1706.5
2.5°	1751.1	1744.5	1740.6	1743.2	1735.3	1715.7	1715.7	1722.2	1714.3	1706.5	1694.7
5°	1799.6	1786.5	1778.6	1777.3	1758.9	1727.5	1720.9	1714.3	1697.3	1678.9	1659.3
7.5°	1846.8	1823.2	1810.1	1800.9	1774.7	1734.0	1717.0	1702.5	1675.0	1647.4	1622.5
10°	1886.2	1852.1	1836.3	1821.9	1787.8	1736.6	1709.1	1682.9	1647.4	1612.0	1580.6
12.5°	1917.7	1878.3	1858.6	1837.6	1795.7	1728.8	1694.7	1652.7	1617.3	1570.1	1538.6
15°	1970.1	1888.8	1870.4	1850.8	1807.5	1715.7	1673.7	1626.5	1577.9	1515.0	1480.9
17.5°	2012.1	1903.2	1901.9	1859.9	1803.5	1710.4	1646.1	1584.5	1532.0	1469.1	1415.3
20°	2037.0	1925.5	1904.5	1861.2	1790.4	1675.0	1608.1	1539.9	1483.5	1407.4	1353.6
22.5°	2058.0	1957.0	1901.9	1849.4	1762.9	1663.2	1564.8	1500.5	1423.2	1340.5	1289.4
25°	2065.9	1963.6	1905.8	1845.5	1743.2	1629.1	1517.6	1448.1	1361.5	1286.7	1217.2
27.5°	2067.2	1962.2	1891.4	1828.5	1715.7	1584.5	1470.4	1396.9	1301.2	1214.6	1145.1
30°	2054.1	1947.8	1883.5	1815.3	1689.4	1543.8	1412.7	1331.3	1229.0	1142.5	1070.3
32.5°	2014.7	1919.0	1866.5	1791.7	1655.3	1487.4	1357.6	1267.1	1159.5	1074.3	1004.7
35°	1949.1	1883.5	1825.8	1756.3	1610.7	1435.0	1302.5	1196.2	1087.4	1006.0	940.5
37.5°	1867.8	1832.4	1778.6	1710.4	1559.6	1387.7	1240.8	1122.8	1013.9	935.2	870.9
40°	1757.6	1766.8	1714.3	1652.7	1499.2	1323.5	1160.8	1048.0	945.7	872.3	809.3
42.5°	1638.3	1676.3	1646.1	1587.1	1432.3	1252.6	1101.8	977.2	877.5	801.4	749.0
45°	1509.7	1575.3	1556.9	1513.7	1362.8	1177.9	1017.9	897.2	809.3	735.8	689.9
47.5°	1369.4	1462.5	1462.5	1431.0	1285.4	1103.1	945.7	822.4	735.8	683.4	638.8
50°	1226.4	1331.3	1348.4	1327.4	1198.9	1017.9	857.8	746.3	671.6	620.4	587.6
52.5°	1076.9	1198.9	1230.3	1219.8	1107.0	936.5	785.7	676.8	608.6	564.0	535.2
55°	933.9	1075.6	1109.7	1113.6	1008.7	847.3	705.7	609.9	544.3	514.2	489.3
57.5°	798.8	935.2	973.3	979.8	909.0	766.0	630.9	547.0	487.9	463.0	443.3
60°	683.4	797.5	847.3	861.8	800.1	671.6	561.4	480.1	435.5	411.9	393.5
62.5°	588.9	680.8	733.2	737.2	709.6	588.9	489.3	421.0	383.0	362.0	352.8
65°	497.1	579.8	611.2	627.0	604.7	510.2	422.4	366.0	335.8	317.4	308.2
67.5°	423.7	476.1	502.4	523.4	501.1	430.2	359.4	313.5	291.2	272.8	267.6
70°	347.6	390.9	410.6	431.5	411.9	358.1	306.9	265.0	245.3	230.9	224.3
72.5°	278.1	312.2	330.5	343.7	331.9	287.3	245.3	216.4	202.0	191.5	187.6
75°	220.4	244.0	254.5	263.6	258.4	224.3	198.1	174.5	161.3	152.2	149.5
77.5°	167.9	184.9	196.7	199.4	192.8	170.5	148.2	133.8	123.3	118.0	115.4
80°	119.4	129.9	136.4	140.3	133.8	124.6	108.9	98.4	89.2	82.6	81.3
82.5°	80.0	85.3	90.5	89.2	86.6	78.7	69.5	64.3	60.3	55.1	55.1
85°	45.9	47.2	49.8	51.2	49.8	44.6	39.3	36.7	34.1	30.2	30.2
87.5°	19.7	21.0	21.0	22.3	19.7	19.7	17.1	14.4	14.4	13.1	11.8
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: P997678

CATALOG NUMBER: SA2XXDP-B865DB40-4F0-XX-W2A-A

CANDELA DISTRIBUTION (continued):

	200°	202.5°	205°	210°	215°	220°	225°	230°	235°	240°	245°
0°	1706.5	1706.5	1706.5	1706.5	1706.5	1706.5	1706.5	1706.5	1706.5	1706.5	1706.5
2.5°	1688.1	1694.7	1693.4	1680.2	1665.8	1654.0	1631.7	1634.3	1626.5	1627.8	1635.6
5°	1646.1	1646.1	1640.9	1622.5	1598.9	1585.8	1560.9	1554.3	1538.6	1537.3	1536.0
7.5°	1601.5	1595.0	1588.4	1562.2	1533.3	1512.3	1478.2	1470.4	1454.6	1444.1	1438.9
10°	1549.1	1539.9	1526.8	1496.6	1461.2	1435.0	1399.5	1389.1	1358.9	1345.8	1337.9
12.5°	1491.4	1486.1	1465.1	1440.2	1382.5	1353.6	1302.5	1313.0	1282.8	1256.6	1252.6
15°	1433.6	1414.0	1402.2	1361.5	1292.0	1278.9	1238.2	1217.2	1189.7	1168.7	1168.7
17.5°	1377.2	1347.1	1320.8	1277.6	1226.4	1189.7	1159.5	1149.0	1114.9	1093.9	1090.0
20°	1302.5	1268.4	1261.8	1200.2	1164.8	1124.1	1095.2	1069.0	1044.1	1034.9	1028.3
22.5°	1231.7	1192.3	1181.8	1129.3	1093.9	1053.3	1024.4	1006.0	987.7	981.1	969.3
25°	1155.6	1132.0	1116.2	1059.8	1020.5	982.4	962.8	949.6	932.6	931.3	923.4
27.5°	1082.1	1059.8	1044.1	990.3	961.4	926.0	910.3	895.9	886.7	882.7	878.8
30°	1019.2	994.2	975.9	936.5	901.1	872.3	859.1	850.0	844.7	838.2	836.8
32.5°	949.6	935.2	910.3	880.1	852.6	825.0	817.2	810.6	802.7	800.1	798.8
35°	890.6	870.9	855.2	821.1	809.3	785.7	776.5	771.3	760.8	758.1	755.5
37.5°	832.9	814.5	797.5	776.5	754.2	741.1	735.8	728.0	722.7	724.0	721.4
40°	775.2	760.8	747.6	725.3	712.2	705.7	695.2	687.3	684.7	686.0	684.7
42.5°	718.8	705.7	697.8	680.8	667.6	661.1	654.5	646.6	650.6	650.6	654.5
45°	667.6	655.8	650.6	637.5	629.6	619.1	612.5	611.2	616.5	615.2	615.2
47.5°	615.2	611.2	604.7	592.9	582.4	575.8	574.5	574.5	579.8	582.4	581.1
50°	574.5	566.6	558.8	549.6	541.7	539.1	535.2	537.8	543.0	543.0	545.7
52.5°	523.4	518.1	515.5	507.6	502.4	502.4	502.4	503.7	507.6	511.5	510.2
55°	478.8	474.8	472.2	468.3	461.7	463.0	461.7	464.3	468.3	472.2	474.8
57.5°	431.5	430.2	427.6	421.0	421.0	419.7	423.7	425.0	431.5	434.2	438.1
60°	389.6	385.6	385.6	380.4	380.4	380.4	384.3	388.3	393.5	394.8	397.4
62.5°	345.0	345.0	343.7	339.7	339.7	343.7	345.0	350.2	352.8	352.8	356.8
65°	303.0	301.7	300.4	301.7	303.0	303.0	306.9	309.6	312.2	313.5	314.8
67.5°	261.0	259.7	262.3	261.0	263.6	268.9	267.6	271.5	275.4	275.4	276.8
70°	221.7	224.3	223.0	225.6	224.3	226.9	230.9	232.2	232.2	233.5	237.4
72.5°	184.9	184.9	184.9	183.6	184.9	187.6	190.2	191.5	194.1	195.4	199.4
75°	149.5	149.5	146.9	149.5	149.5	152.2	154.8	154.8	154.8	157.4	161.3
77.5°	112.8	114.1	112.8	115.4	115.4	116.7	119.4	118.0	120.7	122.0	123.3
80°	82.6	81.3	81.3	81.3	82.6	82.6	85.3	86.6	86.6	90.5	87.9
82.5°	52.5	53.8	52.5	53.8	53.8	55.1	53.8	55.1	56.4	59.0	57.7
85°	30.2	28.9	28.9	30.2	28.9	28.9	30.2	28.9	30.2	28.9	30.2
87.5°	11.8	10.5	10.5	10.5	10.5	9.2	9.2	7.9	7.9	7.9	6.6
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: P997678

CATALOG NUMBER: SA2XXDP-B865DB40-4F0-XX-W2A-A

CANDELA DISTRIBUTION (continued):

	247.5°	250°	255°	260°	265°	270°	275°	280°	285°	290°	292.5°
0°	1706.5	1706.5	1706.5	1706.5	1706.5	1706.5	1706.5	1706.5	1706.5	1706.5	1706.5
2.5°	1626.5	1630.4	1621.2	1618.6	1621.2	1612.0	1614.7	1617.3	1617.3	1621.2	1623.8
5°	1532.0	1526.8	1517.6	1515.0	1512.3	1516.3	1513.7	1517.6	1518.9	1528.1	1529.4
7.5°	1438.9	1431.0	1423.2	1415.3	1412.7	1406.1	1412.7	1412.7	1421.8	1419.2	1425.8
10°	1328.7	1327.4	1316.9	1313.0	1307.7	1297.2	1311.7	1307.7	1314.3	1326.1	1328.7
12.5°	1247.4	1233.0	1239.5	1221.2	1227.7	1217.2	1218.5	1218.5	1229.0	1230.3	1227.7
15°	1170.0	1158.2	1141.1	1133.3	1129.3	1124.1	1141.1	1142.5	1134.6	1153.0	1146.4
17.5°	1091.3	1091.3	1075.6	1071.6	1061.1	1066.4	1063.8	1065.1	1062.4	1075.6	1082.1
20°	1023.1	1016.5	1011.3	1012.6	999.5	996.9	994.2	996.9	1006.0	1015.2	1017.9
22.5°	968.0	964.1	951.0	953.6	943.1	947.0	944.4	951.0	952.3	952.3	961.4
25°	915.5	910.3	911.6	906.4	902.4	902.4	898.5	902.4	907.7	910.3	911.6
27.5°	876.2	872.3	865.7	861.8	864.4	857.8	863.1	867.0	867.0	864.4	867.0
30°	829.0	831.6	831.6	818.5	823.7	821.1	825.0	827.7	827.7	829.0	826.3
32.5°	797.5	789.6	788.3	787.0	787.0	781.8	781.8	785.7	787.0	788.3	792.2
35°	755.5	755.5	749.0	752.9	747.6	749.0	747.6	749.0	751.6	747.6	751.6
37.5°	717.5	718.8	716.2	718.8	720.1	717.5	714.9	720.1	717.5	717.5	714.9
40°	684.7	683.4	684.7	684.7	684.7	686.0	683.4	683.4	683.4	680.8	678.1
42.5°	657.1	649.3	651.9	653.2	649.3	649.3	650.6	649.3	653.2	645.3	645.3
45°	617.8	615.2	616.5	616.5	619.1	615.2	617.8	619.1	615.2	613.9	611.2
47.5°	582.4	585.0	582.4	585.0	585.0	587.6	582.4	583.7	585.0	579.8	575.8
50°	547.0	547.0	550.9	549.6	550.9	548.3	548.3	547.0	548.3	545.7	541.7
52.5°	514.2	510.2	516.8	515.5	514.2	512.9	511.5	512.9	510.2	507.6	507.6
55°	473.5	473.5	477.4	478.8	478.8	476.1	473.5	474.8	473.5	472.2	470.9
57.5°	440.7	435.5	438.1	439.4	439.4	435.5	438.1	435.5	435.5	436.8	432.8
60°	398.7	398.7	396.1	400.1	400.1	397.4	397.4	398.7	396.1	394.8	393.5
62.5°	354.1	355.5	359.4	360.7	362.0	359.4	356.8	358.1	358.1	354.1	355.5
65°	316.1	318.7	324.0	322.7	320.0	321.4	318.7	320.0	316.1	317.4	313.5
67.5°	279.4	278.1	279.4	279.4	282.0	280.7	278.1	278.1	276.8	280.7	276.8
70°	240.0	240.0	240.0	240.0	241.3	242.7	240.0	237.4	238.7	236.1	234.8
72.5°	199.4	200.7	199.4	202.0	198.1	200.7	200.7	199.4	198.1	198.1	198.1
75°	161.3	164.0	160.0	161.3	160.0	162.6	161.3	161.3	158.7	157.4	158.7
77.5°	123.3	124.6	122.0	123.3	122.0	123.3	123.3	122.0	122.0	122.0	122.0
80°	87.9	89.2	87.9	86.6	85.3	87.9	85.3	86.6	87.9	86.6	89.2
82.5°	56.4	56.4	55.1	56.4	53.8	53.8	55.1	55.1	53.8	56.4	53.8
85°	27.5	27.5	30.2	27.5	26.2	26.2	26.2	27.5	26.2	28.9	27.5
87.5°	6.6	5.2	6.6	6.6	5.2	5.2	6.6	5.2	6.6	7.9	5.2
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: P997678

CATALOG NUMBER: SA2XXDP-B865DB40-4F0-XX-W2A-A

CANDELA DISTRIBUTION (continued):

	295°	300°	305°	310°	315°	320°	325°	330°	335°	337.5°	340°
0°	1706.5	1706.5	1706.5	1706.5	1706.5	1706.5	1706.5	1706.5	1706.5	1706.5	1706.5
2.5°	1619.9	1630.4	1626.5	1612.0	1629.1	1629.1	1640.9	1640.9	1655.3	1660.6	1668.4
5°	1528.1	1536.0	1542.5	1536.0	1547.8	1566.1	1576.6	1585.8	1605.5	1613.3	1625.2
7.5°	1429.7	1444.1	1450.7	1450.7	1470.4	1491.4	1512.3	1525.5	1553.0	1563.5	1575.3
10°	1334.0	1351.0	1364.1	1362.8	1395.6	1408.7	1435.0	1465.1	1492.7	1508.4	1525.5
12.5°	1233.0	1242.1	1260.5	1286.7	1294.6	1318.2	1348.4	1386.4	1436.3	1450.7	1475.6
15°	1149.0	1173.9	1188.4	1200.2	1218.5	1240.8	1273.6	1310.4	1360.2	1391.7	1417.9
17.5°	1078.2	1111.0	1120.2	1117.5	1141.1	1175.2	1213.3	1240.8	1285.4	1323.5	1348.4
20°	1020.5	1033.6	1049.3	1055.9	1074.3	1111.0	1147.7	1179.2	1215.9	1246.1	1274.9
22.5°	962.8	973.3	986.4	998.2	1012.6	1033.6	1069.0	1108.4	1143.8	1172.6	1205.4
25°	915.5	922.1	933.9	943.1	958.8	973.3	998.2	1041.5	1083.4	1100.5	1129.3
27.5°	869.6	874.9	882.7	893.2	901.1	915.5	937.8	973.3	1016.5	1033.6	1072.9
30°	829.0	832.9	840.8	846.0	850.0	867.0	884.1	911.6	944.4	968.0	996.9
32.5°	790.9	794.9	802.7	804.0	809.3	818.5	834.2	859.1	888.0	907.7	932.6
35°	749.0	751.6	759.5	762.1	766.0	773.9	785.7	804.0	830.3	844.7	867.0
37.5°	716.2	714.9	720.1	724.0	729.3	733.2	737.2	755.5	775.2	788.3	805.4
40°	680.8	678.1	679.4	684.7	687.3	692.6	692.6	710.9	724.0	734.5	747.6
42.5°	645.3	644.0	641.4	644.0	646.6	648.0	649.3	662.4	675.5	684.7	699.1
45°	609.9	608.6	606.0	607.3	607.3	609.9	613.9	619.1	628.3	636.2	644.0
47.5°	577.1	574.5	570.6	569.3	571.9	571.9	571.9	577.1	586.3	588.9	596.8
50°	543.0	539.1	533.8	531.2	531.2	529.9	532.5	533.8	541.7	544.3	550.9
52.5°	506.3	503.7	498.4	493.2	494.5	491.9	493.2	494.5	497.1	501.1	505.0
55°	469.6	464.3	460.4	459.1	455.1	455.1	451.2	456.5	455.1	456.5	461.7
57.5°	434.2	428.9	422.4	419.7	415.8	414.5	411.9	410.6	411.9	415.8	419.7
60°	392.2	389.6	385.6	381.7	379.1	375.1	372.5	372.5	371.2	371.2	372.5
62.5°	351.5	350.2	345.0	343.7	341.0	338.4	334.5	331.9	331.9	334.5	335.8
65°	312.2	310.9	306.9	305.6	299.1	296.4	295.1	293.8	291.2	291.2	291.2
67.5°	275.4	271.5	271.5	265.0	259.7	257.1	254.5	253.2	253.2	253.2	254.5
70°	234.8	234.8	230.9	226.9	221.7	223.0	219.0	215.1	215.1	212.5	213.8
72.5°	195.4	194.1	190.2	188.9	184.9	181.0	178.4	181.0	177.1	175.8	177.1
75°	157.4	156.1	153.5	150.8	152.2	148.2	144.3	143.0	143.0	140.3	140.3
77.5°	120.7	123.3	118.0	116.7	114.1	111.5	110.2	108.9	108.9	108.9	111.5
80°	83.9	85.3	85.3	82.6	83.9	80.0	80.0	80.0	76.1	77.4	78.7
82.5°	53.8	53.8	52.5	53.8	52.5	52.5	51.2	51.2	49.8	49.8	51.2
85°	30.2	28.9	27.5	30.2	28.9	28.9	27.5	27.5	27.5	27.5	27.5
87.5°	6.6	7.9	7.9	7.9	7.9	9.2	9.2	9.2	10.5	10.5	10.5
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: P997678

CATALOG NUMBER: SA2XXDP-B865DB40-4F0-XX-W2A-A

CANDELA DISTRIBUTION (continued):

	345°	350°	355°	360°
0°	1706.5	1706.5	1706.5	1706.5
2.5°	1675.0	1675.0	1694.7	1715.7
5°	1638.3	1647.4	1678.9	1707.8
7.5°	1602.9	1618.6	1657.9	1694.7
10°	1559.6	1580.6	1629.1	1672.4
12.5°	1517.6	1537.3	1593.7	1642.2
15°	1458.6	1483.5	1543.8	1604.2
17.5°	1399.5	1424.5	1497.9	1568.7
20°	1330.0	1362.8	1445.5	1539.9
22.5°	1265.8	1306.4	1398.2	1474.3
25°	1194.9	1257.9	1343.1	1441.5
27.5°	1132.0	1194.9	1281.5	1381.2
30°	1061.1	1125.4	1214.6	1306.4
32.5°	992.9	1052.0	1138.5	1251.3
35°	922.1	978.5	1062.4	1176.6
37.5°	857.8	912.9	1004.7	1109.7
40°	794.9	852.6	931.3	1036.2
42.5°	735.8	787.0	857.8	962.8
45°	682.1	718.8	784.4	882.7
47.5°	625.7	658.5	718.8	817.2
50°	573.2	600.7	653.2	745.0
52.5°	522.0	545.7	594.2	667.6
55°	476.1	498.4	533.8	606.0
57.5°	428.9	446.0	480.1	537.8
60°	383.0	398.7	426.3	473.5
62.5°	337.1	350.2	376.4	414.5
65°	296.4	306.9	326.6	359.4
67.5°	257.1	263.6	279.4	305.6
70°	219.0	224.3	237.4	258.4
72.5°	178.4	183.6	198.1	212.5
75°	144.3	145.6	156.1	167.9
77.5°	112.8	111.5	119.4	128.5
80°	77.4	81.3	87.9	91.8
82.5°	52.5	53.8	56.4	59.0
85°	28.9	30.2	30.2	34.1
87.5°	11.8	13.1	13.1	14.4
90°	0.0	0.0	0.0	0.0

TEST NUMBER: P997678

CATALOG NUMBER: SA2XXDP-B865DB40-4F0-XX-W2A-A

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	23.42	24.94	23.79	25.25	25.57	19.69	21.21	20.06	21.52	21.84
	3H	24.54	25.90	24.92	26.23	26.59	21.10	22.47	21.48	22.79	23.16
	4H	24.86	26.14	25.26	26.49	26.87	21.61	22.89	22.01	23.24	23.62
	6H	25.05	26.23	25.47	26.60	26.99	21.97	23.15	22.38	23.51	23.91
	8H	25.09	26.22	25.52	26.61	27.01	22.08	23.20	22.51	23.59	23.99
	12H	25.11	26.18	25.54	26.56	26.99	22.16	23.23	22.59	23.61	24.04
4H	2H	23.54	24.82	23.94	25.17	25.55	20.49	21.76	20.89	22.11	22.49
	3H	24.87	25.93	25.28	26.33	26.74	22.07	23.13	22.48	23.53	23.93
	4H	25.35	26.30	25.78	26.72	27.16	22.66	23.62	23.10	24.03	24.47
	6H	25.68	26.51	26.14	26.95	27.41	23.12	23.95	23.57	24.39	24.85
	8H	25.75	26.53	26.22	26.97	27.44	23.26	24.04	23.72	24.48	24.95
	12H	25.80	26.49	26.28	26.97	27.44	23.37	24.06	23.85	24.54	25.01
8H	4H	25.43	26.21	25.90	26.65	27.12	23.07	23.85	23.54	24.29	24.76
	6H	25.84	26.48	26.34	26.97	27.45	23.62	24.25	24.11	24.75	25.22
	8H	25.97	26.54	26.48	27.05	27.54	23.81	24.39	24.33	24.90	25.38
	12H	26.06	26.56	26.57	27.06	27.62	23.98	24.48	24.49	24.98	25.54
12H	4H	25.42	26.12	25.91	26.59	27.06	23.13	23.82	23.61	24.30	24.77
	6H	25.83	26.41	26.35	26.92	27.41	23.69	24.26	24.20	24.77	25.26
	8H	26.00	26.51	26.51	27.00	27.56	23.94	24.45	24.45	24.94	25.50