

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: NEO-RAY

Report Number: P331551

Luminaire Tested: **S122DIW-S675D1440U835-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331551
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-2,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122DIW-S675D1440U835-4F0-1E-UDD-D
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1440 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8452.2 lumens
Efficiency: N/A
Efficacy: 124.1 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

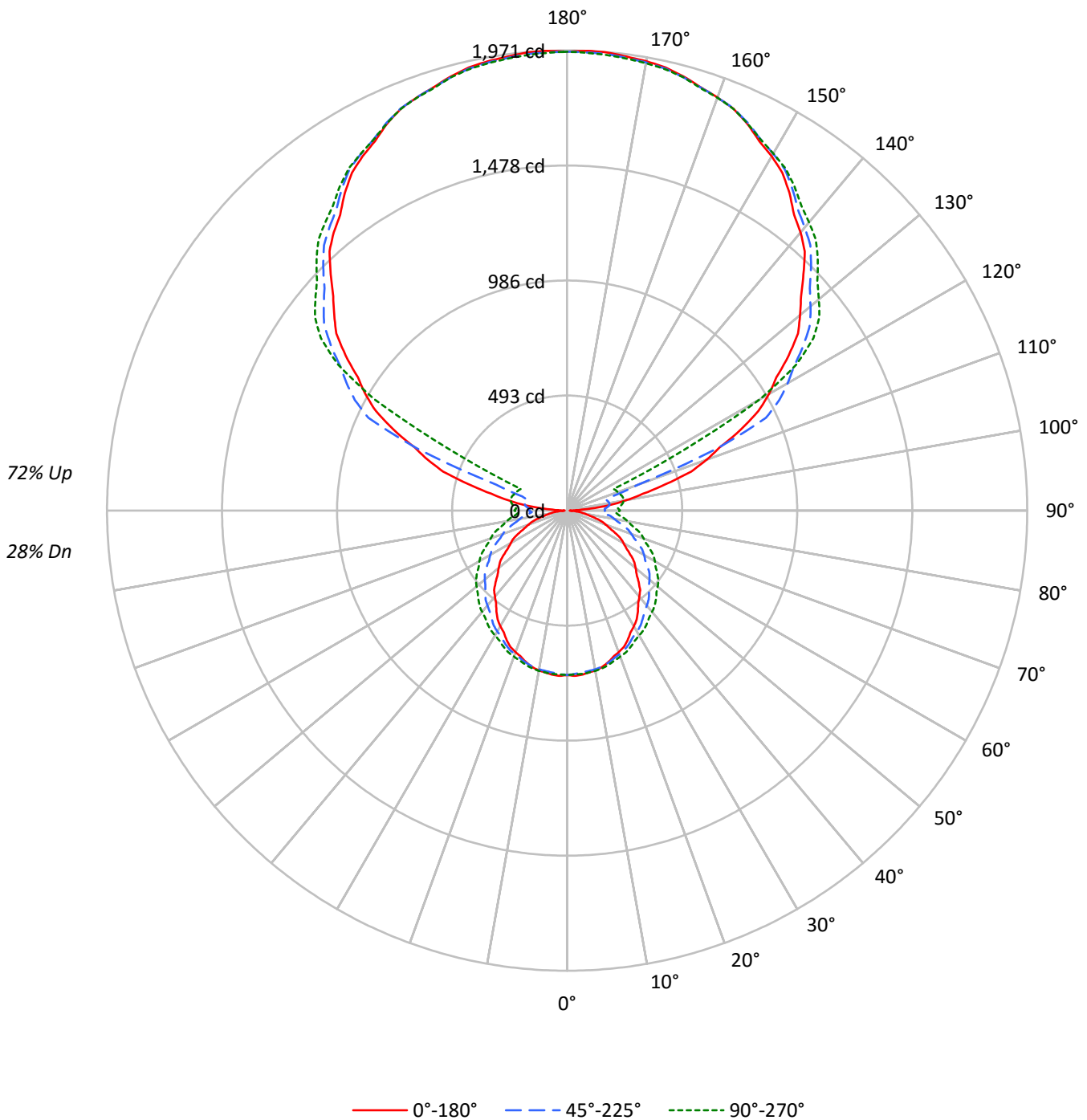
Input Watts (W): 68.1
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	0	
RCR																						
0	102	102	102	102	91	91	91	91	71	71	71	53	53	53	36	36	36	28				
1	92	88	83	80	82	78	75	72	61	59	57	45	44	42	31	30	29	22				
2	83	76	70	64	74	68	63	58	53	49	46	39	37	35	26	25	24	18				
3	76	66	59	53	67	59	53	48	46	42	38	34	31	29	23	21	20	15				
4	69	58	51	45	61	52	46	40	41	36	32	30	27	24	20	18	17	12				
5	63	52	44	38	56	46	40	34	36	31	28	27	24	21	18	16	14	11				
6	58	46	38	32	52	42	35	30	33	28	24	24	21	18	17	14	13	9				
7	54	42	34	28	48	37	31	26	29	24	21	22	18	16	15	13	11	8				
8	50	37	30	25	44	34	27	22	27	22	18	20	17	14	14	11	10	7				
9	46	34	27	22	41	31	24	20	24	20	16	18	15	12	13	10	9	6				
10	43	31	24	19	38	28	22	18	22	18	14	17	13	11	12	9	8	6				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11373	11373	11373
5°	11428	10947	10905
10°	11356	10624	10504
15°	11200	10282	10083
20°	11002	9915	9676
25°	10807	9560	9307
30°	10532	9197	8935
35°	10254	8846	8673
40°	9960	8547	8413
45°	9681	8279	8190
50°	9382	8037	7969
55°	9070	7777	7745
60°	8686	7508	7509
65°	8287	7191	7227
70°	7841	6852	6923
75°	7270	6518	6643
80°	6370	6177	6361
85°	5506	5882	6138



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.7	0.8
10°-20°	191.4	2.3
20°-30°	290.0	3.4
30°-40°	353.3	4.2
40°-50°	380.0	4.5
50°-60°	369.1	4.4
60°-70°	322.3	3.8
70°-80°	248.1	2.9
80°-90°	171.3	2.0
90°-100°	180.3	2.1
100°-110°	324.2	3.8
110°-120°	698.0	8.3
120°-130°	1091.8	12.9
130°-140°	1141.2	13.5
140°-150°	1050.9	12.4
150°-160°	843.1	10.0
160°-170°	543.3	6.4
170°-180°	187.0	2.2
0°-30°	548.2	6.5
0°-40°	901.4	10.7
0°-60°	1650.6	19.5
0°-90°	2392.3	28.3
90°-120°	1202.5	14.2
90°-150°	4486.5	53.1
90°-180°	6060.0	71.7
0°-180°	8452.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	704	704	704	704	704	
5°	706	703	697	703	702	67
15°	674	676	676	684	684	190
25°	612	620	629	641	644	281
35°	528	545	564	586	594	330
45°	433	461	496	527	538	334
55°	332	369	422	457	472	297
65°	227	277	337	377	392	225
75°	126	183	248	290	305	133
85°	37	100	165	207	222	40
90°	12	87	163	209	226	11
95°	101	106	173	217	230	120
105°	438	487	174	224	243	468
115°	822	860	939	341	220	809
125°	1158	1179	1236	1273	1288	1033
135°	1432	1455	1478	1512	1518	1106
145°	1660	1660	1682	1698	1697	1038
155°	1828	1816	1832	1839	1829	842
165°	1926	1918	1921	1930	1921	544
175°	1970	1961	1963	1971	1958	187
180°	1966	1966	1966	1966	1966	



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CATALOG NUMBER: S122DIW-S675D1440U835-4F0-1E-UDD-D

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	704.4	704.4	704.4	704.4	704.4	704.4	704.4	704.4	704.4	704.4	704.4
2.5°	708.5	707.9	707.4	706.8	706.3	705.4	704.1	702.8	701.6	700.3	701.2
5°	706.4	705.7	705.1	704.4	703.7	702.7	701.3	700.0	698.6	697.2	698.6
7.5°	700.1	699.6	699.2	698.7	698.3	697.5	696.5	695.4	694.4	693.4	695.0
10°	695.2	694.7	694.3	693.8	693.4	692.8	692.1	691.5	690.8	690.1	691.9
12.5°	687.0	687.1	687.2	687.3	687.4	687.2	686.7	686.2	685.7	685.2	687.0
15°	673.8	674.2	674.7	675.1	675.6	675.8	675.8	675.8	675.8	675.8	677.8
17.5°	656.6	657.6	658.5	659.5	660.4	661.3	662.0	662.7	663.4	664.2	666.3
20°	645.2	646.3	647.4	648.6	649.7	650.7	651.6	652.6	653.5	654.4	656.9
22.5°	632.9	634.2	635.6	636.9	638.2	639.5	640.8	642.0	643.3	644.6	647.1
25°	612.5	614.1	615.7	617.3	618.9	620.7	622.7	624.8	626.8	628.8	631.6
27.5°	588.0	590.6	593.2	595.8	598.4	600.9	603.3	605.7	608.1	610.5	613.9
30°	571.7	574.6	577.6	580.5	583.5	586.4	589.4	592.3	595.3	598.2	601.8
32.5°	553.7	557.0	560.3	563.6	567.0	570.4	573.9	577.3	580.8	584.3	588.5
35°	527.8	531.6	535.5	539.3	543.2	547.3	551.6	555.9	560.2	564.5	569.5
37.5°	499.6	504.1	508.5	512.9	517.4	522.4	528.0	533.6	539.1	544.7	550.3
40°	480.8	485.8	490.8	495.8	500.8	506.3	512.5	518.6	524.7	530.8	536.7
42.5°	462.9	467.8	472.8	477.8	482.8	488.8	495.9	502.9	509.9	517.0	523.4
45°	432.8	439.0	445.1	451.2	457.3	464.4	472.3	480.3	488.2	496.1	503.2
47.5°	403.2	409.9	416.6	423.2	429.9	437.9	447.2	456.5	465.8	475.1	482.5
50°	382.8	389.9	396.9	403.9	410.9	419.6	429.8	440.0	450.2	460.4	468.1
52.5°	363.2	370.6	378.0	385.4	392.8	401.9	412.6	423.4	434.1	444.9	452.8
55°	331.8	339.9	348.1	356.3	364.4	374.4	386.2	398.0	409.8	421.6	429.8
57.5°	300.7	310.0	319.2	328.4	337.6	348.2	360.2	372.2	384.3	396.3	405.1
60°	278.7	288.4	298.2	308.0	317.7	329.1	342.0	354.9	367.8	380.8	389.4
62.5°	259.1	269.2	279.3	289.4	299.6	311.1	324.0	336.9	349.9	362.8	372.0
65°	226.6	237.7	248.9	260.0	271.1	283.3	296.7	310.1	323.5	336.9	346.2
67.5°	196.8	208.4	220.1	231.7	243.3	255.9	269.6	283.3	297.0	310.7	320.1
70°	175.6	187.4	199.2	211.0	222.8	235.7	249.8	263.8	277.9	292.0	301.7
72.5°	156.0	168.1	180.3	192.5	204.6	217.8	232.1	246.3	260.6	274.8	284.4
75°	125.6	138.3	151.0	163.7	176.4	190.0	204.5	219.0	233.5	248.1	257.8
77.5°	96.2	109.5	122.8	136.0	149.3	163.4	178.1	192.9	207.6	222.3	232.1
80°	76.6	90.4	104.2	118.1	131.9	146.2	161.0	175.7	190.4	205.2	214.7
82.5°	60.2	73.9	87.5	101.2	114.9	129.1	144.1	159.0	173.9	188.9	198.4
85°	36.8	50.8	64.9	78.9	93.0	107.3	121.8	136.3	150.9	165.4	174.9
87.5°	20.3	34.5	48.7	62.9	77.2	91.8	106.8	121.8	136.9	151.9	161.4
90°	11.6	28.3	44.9	61.5	78.2	95.0	112.1	129.1	146.1	163.2	173.9
92.5°	38.1	50.1	62.0	73.9	85.9	99.4	114.7	129.9	145.2	160.4	170.1
95°	100.6	100.8	101.1	101.3	101.5	109.6	125.4	141.2	157.0	172.9	183.1
97.5°	190.6	170.7	150.8	130.9	111.0	110.1	128.3	146.5	164.7	182.9	192.5
100°	258.9	224.0	189.1	154.2	119.3	110.8	128.9	147.0	165.1	183.2	194.1
102.5°	333.2	331.7	330.2	328.7	327.2	310.1	277.5	244.9	212.3	179.7	191.2
105°	437.5	453.5	469.6	485.6	501.7	472.5	398.0	323.5	249.0	174.5	186.0
107.5°	557.6	570.5	583.4	596.3	609.2	569.6	477.4	385.2	293.1	200.9	205.0
110°	634.1	645.3	656.5	667.7	678.8	644.3	564.1	483.9	403.6	323.4	299.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	707.0	716.6	726.3	736.0	745.7	744.6	732.6	720.6	708.6	696.6	588.5
115°	821.9	829.7	837.6	845.5	853.3	866.3	884.4	902.6	920.7	938.8	799.2
117.5°	923.5	931.2	938.8	946.5	954.1	965.3	980.2	995.1	1010.0	1024.8	996.2
120°	998.6	1004.3	1009.9	1015.6	1021.2	1031.4	1046.2	1061.0	1075.7	1090.5	1100.6
122.5°	1062.3	1067.7	1073.1	1078.4	1083.8	1093.8	1108.5	1123.3	1138.0	1152.7	1161.2
125°	1158.3	1162.4	1166.5	1170.6	1174.8	1183.4	1196.7	1210.0	1223.2	1236.5	1244.8
127.5°	1246.2	1250.5	1254.9	1259.2	1263.5	1270.8	1281.2	1291.5	1301.9	1312.2	1321.1
130°	1302.0	1306.8	1311.6	1316.5	1321.3	1327.8	1336.1	1344.3	1352.5	1360.8	1369.7
132.5°	1358.9	1362.9	1367.0	1371.1	1375.1	1380.8	1387.9	1395.1	1402.2	1409.4	1417.6
135°	1431.8	1436.8	1441.9	1447.0	1452.0	1457.1	1462.2	1467.3	1472.4	1477.6	1485.5
137.5°	1506.6	1510.1	1513.6	1517.1	1520.6	1524.4	1528.7	1532.9	1537.1	1541.3	1548.6
140°	1555.5	1557.8	1560.1	1562.4	1564.7	1567.8	1571.8	1575.7	1579.6	1583.6	1590.0
142.5°	1596.5	1598.5	1600.6	1602.6	1604.7	1607.7	1611.8	1615.9	1620.0	1624.0	1629.5
145°	1659.8	1659.4	1659.1	1658.8	1658.5	1661.0	1666.4	1671.8	1677.1	1682.5	1686.1
147.5°	1715.8	1714.6	1713.4	1712.2	1711.0	1713.0	1718.3	1723.7	1729.0	1734.3	1736.1
150°	1752.2	1750.0	1747.8	1745.6	1743.3	1744.8	1749.8	1754.9	1759.9	1765.0	1766.9
152.5°	1782.9	1780.5	1778.0	1775.5	1773.1	1774.2	1779.0	1783.8	1788.6	1793.4	1795.3
155°	1827.6	1824.7	1821.9	1819.0	1816.2	1816.7	1820.5	1824.3	1828.1	1831.8	1833.7
157.5°	1862.6	1860.2	1857.8	1855.4	1853.0	1853.1	1855.7	1858.4	1861.0	1863.7	1865.9
160°	1883.0	1881.1	1879.3	1877.4	1875.5	1875.5	1877.4	1879.3	1881.1	1883.0	1884.9
162.5°	1901.2	1899.4	1897.5	1895.6	1893.7	1893.5	1895.2	1896.8	1898.5	1900.1	1902.3
165°	1925.7	1923.8	1921.9	1920.0	1918.1	1917.7	1918.6	1919.5	1920.5	1921.4	1923.7
167.5°	1943.9	1942.0	1940.1	1938.2	1936.3	1935.8	1936.7	1937.6	1938.5	1939.4	1941.6
170°	1954.2	1952.3	1950.4	1948.5	1946.6	1945.9	1946.6	1947.2	1947.8	1948.5	1950.7
172.5°	1961.0	1959.1	1957.2	1955.3	1953.4	1952.8	1953.4	1954.0	1954.7	1955.3	1957.5
175°	1969.8	1967.6	1965.4	1963.2	1961.0	1960.2	1960.8	1961.4	1962.1	1962.7	1964.9
177.5°	1971.2	1969.5	1967.7	1965.9	1964.1	1963.4	1963.6	1963.9	1964.1	1964.4	1966.2
180°	1965.5	1965.5	1965.5	1965.5	1965.5	1965.5	1965.5	1965.5	1965.5	1965.5	1965.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	704.4	704.4	704.4	704.4	704.4	704.4	704.4	704.4
2.5°	702.1	703.0	703.9	704.2	703.8	703.5	703.1	702.8
5°	700.0	701.3	702.7	703.3	703.0	702.8	702.6	702.3
7.5°	696.6	698.3	699.9	700.6	700.4	700.1	699.9	699.7
10°	693.7	695.5	697.4	698.1	697.9	697.7	697.5	697.2
12.5°	688.8	690.6	692.5	693.2	693.0	692.8	692.6	692.3
15°	679.9	681.9	684.0	684.9	684.7	684.4	684.2	684.0
17.5°	668.4	670.6	672.7	673.8	673.8	673.8	673.8	673.8
20°	659.4	661.9	664.3	665.6	665.6	665.6	665.6	665.6
22.5°	649.6	652.1	654.5	656.0	656.3	656.7	657.1	657.4
25°	634.3	637.0	639.7	641.4	642.1	642.8	643.5	644.2
27.5°	617.4	620.8	624.3	626.2	626.7	627.2	627.7	628.2
30°	605.5	609.1	612.7	614.9	615.6	616.3	616.9	617.6
32.5°	592.7	596.9	601.0	603.7	605.0	606.2	607.4	608.6
35°	574.5	579.5	584.5	587.8	589.4	591.0	592.5	594.1
37.5°	555.8	561.3	566.9	570.5	572.2	573.8	575.5	577.2
40°	542.6	548.5	554.4	558.4	560.4	562.5	564.5	566.6
42.5°	529.8	536.3	542.7	547.0	549.0	551.1	553.1	555.1
45°	510.2	517.2	524.3	528.9	531.2	533.5	535.7	538.0
47.5°	489.8	497.2	504.5	509.4	511.9	514.4	516.9	519.4
50°	475.8	483.5	491.3	496.4	498.9	501.4	503.8	506.3
52.5°	460.7	468.6	476.5	481.8	484.4	487.1	489.8	492.5
55°	437.9	446.1	454.3	459.8	462.8	465.7	468.7	471.6
57.5°	413.9	422.7	431.5	437.4	440.4	443.4	446.4	449.4
60°	398.0	406.6	415.3	421.2	424.3	427.5	430.7	433.9
62.5°	381.1	390.3	399.5	405.6	408.5	411.5	414.5	417.5
65°	355.5	364.8	374.1	380.2	383.2	386.1	389.1	392.0
67.5°	329.5	338.9	348.3	354.6	357.6	360.7	363.8	366.9
70°	311.5	321.2	331.0	337.2	339.9	342.7	345.4	348.1
72.5°	294.0	303.5	313.1	319.5	322.8	326.1	329.3	332.6
75°	267.6	277.3	287.1	293.4	296.4	299.3	302.3	305.2
77.5°	241.8	251.5	261.2	267.6	270.8	274.0	277.1	280.3
80°	224.2	233.8	243.3	249.7	252.8	256.0	259.2	262.4
82.5°	207.9	217.4	227.0	233.2	236.2	239.2	242.2	245.2
85°	184.4	194.0	203.5	209.8	213.0	216.2	219.4	222.5
87.5°	171.0	180.6	190.2	196.5	199.5	202.5	205.6	208.6
90°	184.5	195.2	205.8	212.8	216.2	219.5	222.9	226.2
92.5°	179.8	189.5	199.3	205.7	208.8	211.9	215.0	218.1
95°	193.3	203.5	213.7	220.0	222.4	224.8	227.2	229.6
97.5°	202.2	211.8	221.5	227.8	230.9	234.0	237.0	240.1
100°	205.0	215.9	226.8	233.9	237.0	240.1	243.2	246.4
102.5°	202.7	214.2	225.7	233.1	236.5	239.9	243.3	246.7
105°	197.4	208.8	220.2	227.8	231.6	235.3	239.1	242.8
107.5°	209.0	213.1	217.2	221.1	224.9	228.7	232.4	236.2
110°	274.7	250.4	226.0	215.7	219.5	223.3	227.0	230.8



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CATALOG NUMBER: S122DIW-S675D1440U835-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	480.5	372.5	264.4	212.2	215.7	219.2	222.7	226.2
115°	659.7	520.2	380.7	300.8	280.5	260.3	240.0	219.7
117.5°	967.5	938.8	910.1	859.5	787.1	714.6	642.1	569.7
120°	1110.8	1120.9	1131.1	1116.0	1075.9	1035.7	995.5	955.4
122.5°	1169.6	1178.0	1186.5	1187.6	1181.5	1175.3	1169.2	1163.1
125°	1253.2	1261.5	1269.9	1275.5	1278.5	1281.5	1284.5	1287.5
127.5°	1329.9	1338.8	1347.6	1353.1	1355.3	1357.5	1359.7	1361.9
130°	1378.6	1387.5	1396.5	1401.7	1403.2	1404.7	1406.2	1407.7
132.5°	1425.8	1434.1	1442.3	1447.2	1448.7	1450.2	1451.7	1453.2
135°	1493.4	1501.3	1509.3	1513.8	1515.0	1516.2	1517.4	1518.5
137.5°	1555.9	1563.1	1570.4	1574.3	1574.7	1575.2	1575.7	1576.2
140°	1596.5	1603.0	1609.5	1612.6	1612.4	1612.2	1611.9	1611.7
142.5°	1635.0	1640.5	1646.0	1648.6	1648.2	1647.8	1647.4	1647.0
145°	1689.7	1693.2	1696.8	1698.4	1697.9	1697.5	1697.0	1696.6
147.5°	1737.9	1739.8	1741.6	1742.1	1741.3	1740.5	1739.7	1739.0
150°	1768.8	1770.7	1772.6	1772.7	1771.2	1769.6	1768.0	1766.4
152.5°	1797.2	1799.1	1801.0	1800.9	1798.8	1796.8	1794.7	1792.6
155°	1835.6	1837.5	1839.4	1839.1	1836.6	1834.1	1831.5	1829.0
157.5°	1868.0	1870.1	1872.3	1872.1	1869.7	1867.2	1864.7	1862.3
160°	1886.8	1888.7	1890.6	1890.5	1888.3	1886.0	1883.8	1881.6
162.5°	1904.4	1906.6	1908.7	1908.4	1905.7	1903.0	1900.3	1897.6
165°	1925.9	1928.1	1930.3	1930.3	1928.1	1925.9	1923.7	1921.4
167.5°	1943.8	1946.0	1948.2	1947.9	1945.1	1942.2	1939.4	1936.5
170°	1952.9	1955.1	1957.3	1957.0	1954.2	1951.3	1948.5	1945.6
172.5°	1959.7	1961.9	1964.1	1963.8	1961.0	1958.1	1955.3	1952.4
175°	1967.1	1969.3	1971.5	1971.1	1967.9	1964.7	1961.6	1958.4
177.5°	1967.9	1969.7	1971.5	1971.2	1968.9	1966.7	1964.4	1962.1
180°	1965.5	1965.5	1965.5	1965.5	1965.5	1965.5	1965.5	1965.5

(END OF REPORT)