

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: P332772

Luminaire Tested: **S124DIW-S575D1560U835-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332772  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S124DIW-S575D1560U835-4F0-1E-UDD-D1  
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 575 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 1560 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7783.7 lumens  
Efficiency: N/A  
Efficacy: 128.4 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39  
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')  
CIE Type: Semi-Indirect

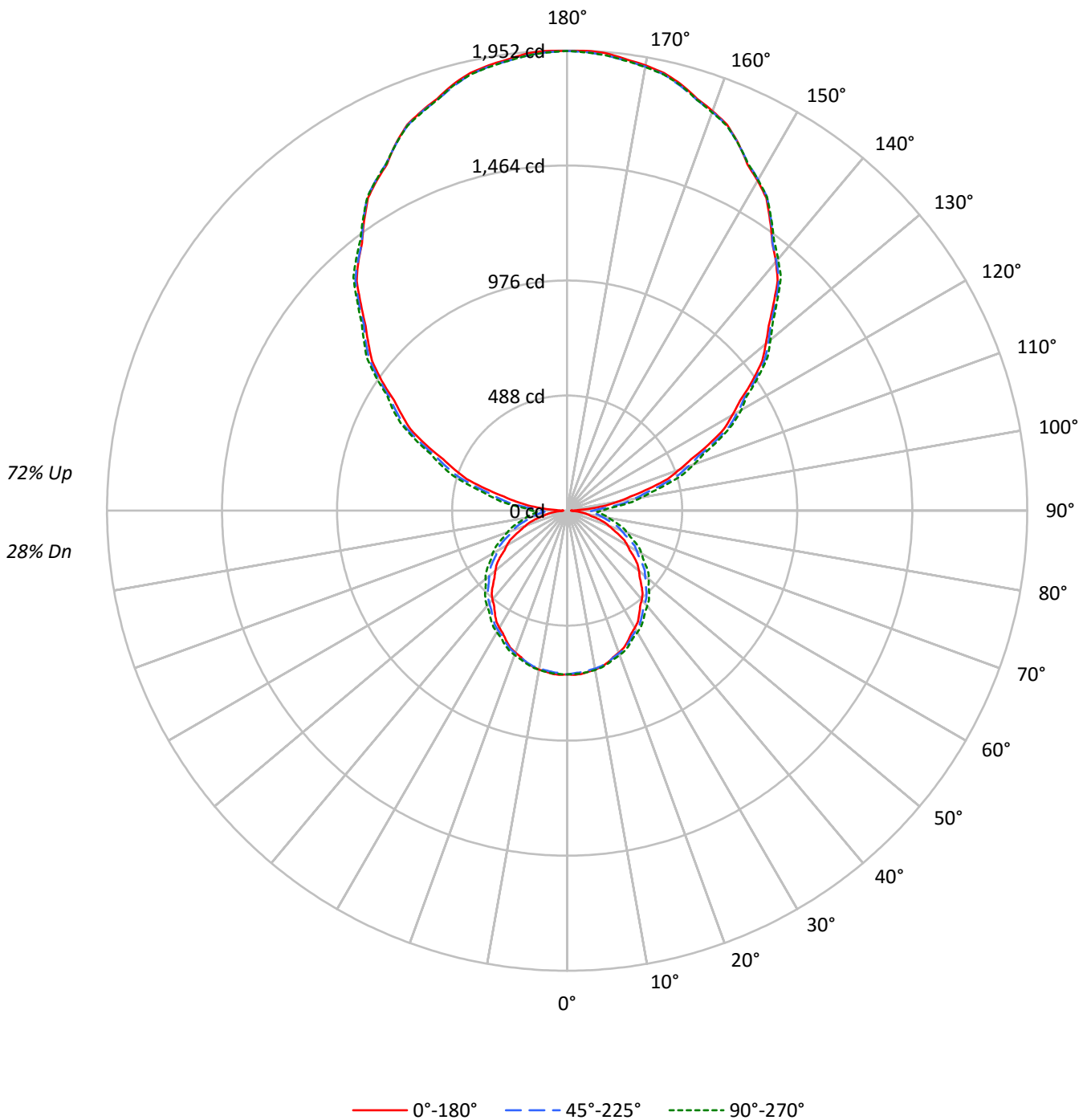
Input Watts (W): 60.6  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P332772

CATALOG NUMBER: S124DIW-S575D1560U835-4F0-1E-UDD-D1

### Luminous Intensity Polar Plot





TEST NUMBER: P332772

CATALOG NUMBER: S124DIW-S575D1560U835-4F0-1E-UDD-D1

**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	84	80	82	79	75	72	61	59	57	46	44	43	31	30	29	23				
2	84	76	70	65	75	68	63	59	53	50	47	40	37	35	27	25	24	18				
3	76	67	60	54	68	60	54	49	47	42	39	35	32	29	24	22	20	15				
4	70	59	51	45	62	53	46	41	41	37	33	31	28	25	21	19	17	13				
5	64	52	44	38	57	47	40	35	37	32	28	27	24	21	19	17	15	11				
6	58	47	39	33	52	42	35	30	33	28	24	25	21	19	17	15	13	10				
7	54	42	34	29	48	38	31	26	30	25	21	22	19	16	15	13	11	9				
8	50	38	30	25	44	34	28	23	27	22	19	20	17	14	14	12	10	8				
9	46	34	27	22	41	31	25	20	25	20	17	19	15	13	13	11	9	7				
10	43	31	24	20	39	28	22	18	23	18	15	17	14	11	12	10	8	6				

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	5610	5610	5610
5°	5628	5483	5498
10°	5593	5393	5388
15°	5543	5289	5260
20°	5467	5175	5135
25°	5382	5046	4997
30°	5290	4919	4856
35°	5185	4787	4732
40°	5102	4663	4603
45°	4978	4549	4492
50°	4873	4416	4375
55°	4765	4291	4237
60°	4596	4132	4112
65°	4410	3962	3958
70°	4186	3768	3778
75°	3872	3553	3616
80°	3526	3347	3457
85°	3082	3163	3364



TEST NUMBER: P332772

CATALOG NUMBER: S124DIW-S575D1560U835-4F0-1E-UDD-D1

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	65.8	0.8
10°-20°	188.5	2.4
20°-30°	285.1	3.7
30°-40°	344.9	4.4
40°-50°	364.7	4.7
50°-60°	343.2	4.4
60°-70°	284.7	3.7
70°-80°	200.0	2.6
80°-90°	118.9	1.5
90°-100°	195.7	2.5
100°-110°	430.6	5.5
110°-120°	679.9	8.7
120°-130°	871.4	11.2
130°-140°	965.6	12.4
140°-150°	942.5	12.1
150°-160°	791.3	10.2
160°-170°	526.5	6.8
170°-180°	184.4	2.4
0°-30°	539.4	6.9
0°-40°	884.4	11.4
0°-60°	1592.2	20.5
0°-90°	2195.8	28.2
90°-120°	1306.3	16.8
90°-150°	4085.7	52.5
90°-180°	5588.0	71.8
0°-180°	7783.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	695	695	695	695	695	
5°	696	693	688	694	693	66
15°	667	668	665	672	672	188
25°	610	615	617	625	626	281
35°	534	543	551	561	564	334
45°	445	460	475	487	492	344
55°	349	365	388	403	408	311
65°	241	266	293	311	318	239
75°	134	163	195	216	224	142
85°	41	74	109	131	140	44
90°	17	65	110	141	151	14
95°	101	140	182	207	215	109
105°	358	376	410	433	445	381
115°	662	670	691	706	710	653
125°	961	961	978	989	991	856
135°	1236	1245	1251	1260	1261	956
145°	1501	1506	1508	1511	1510	939
155°	1719	1719	1717	1723	1717	791
165°	1871	1867	1864	1872	1867	527
175°	1947	1939	1938	1947	1938	185
180°	1950	1950	1950	1950	1950	



TEST NUMBER: P332772

CATALOG NUMBER: S124DIW-S575D1560U835-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	694.9	694.9	694.9	694.9	694.9	694.9	694.9	694.9	694.9	694.9	694.9
2.5°	697.4	697.0	696.6	696.1	695.7	695.0	693.9	692.8	691.6	690.5	691.5
5°	695.7	695.2	694.6	694.1	693.6	692.7	691.5	690.3	689.1	687.9	689.3
7.5°	689.8	689.4	689.1	688.8	688.5	687.9	686.9	685.9	684.8	683.8	685.4
10°	684.8	684.6	684.4	684.3	684.1	683.6	682.7	681.8	681.0	680.1	681.7
12.5°	677.9	677.9	677.9	677.8	677.8	677.5	676.9	676.3	675.7	675.1	676.5
15°	666.9	667.1	667.2	667.4	667.6	667.4	666.9	666.4	665.8	665.3	666.9
17.5°	651.8	652.3	652.8	653.3	653.9	654.1	654.0	653.9	653.8	653.7	655.2
20°	641.2	641.7	642.2	642.8	643.3	643.6	643.8	644.0	644.1	644.3	646.0
22.5°	629.4	630.0	630.7	631.3	632.0	632.5	632.8	633.1	633.4	633.7	635.5
25°	610.1	611.1	612.2	613.2	614.2	615.0	615.5	616.0	616.6	617.1	619.0
27.5°	588.6	590.1	591.6	593.2	594.7	595.8	596.6	597.4	598.2	599.0	600.8
30°	574.3	575.7	577.0	578.4	579.8	581.1	582.3	583.5	584.7	586.0	587.9
32.5°	558.7	560.4	562.0	563.7	565.4	566.9	568.2	569.6	570.9	572.3	574.4
35°	533.8	535.9	538.0	540.0	542.1	544.0	545.7	547.5	549.2	550.9	553.4
37.5°	508.8	511.1	513.5	515.9	518.3	520.6	522.7	524.9	527.0	529.1	531.6
40°	492.6	494.8	497.1	499.3	501.6	503.9	506.3	508.7	511.2	513.6	516.2
42.5°	473.9	476.4	478.9	481.5	484.0	486.7	489.5	492.3	495.2	498.0	500.9
45°	445.1	448.4	451.7	455.0	458.2	461.5	464.8	468.1	471.4	474.7	477.6
47.5°	417.6	420.9	424.3	427.7	431.1	434.7	438.5	442.3	446.1	449.9	453.0
50°	397.6	401.4	405.2	409.1	412.9	416.7	420.5	424.3	428.1	431.9	435.3
52.5°	377.7	381.5	385.3	389.1	392.9	397.0	401.4	405.7	410.1	414.4	417.9
55°	348.6	352.2	355.9	359.5	363.1	367.5	372.7	377.9	383.1	388.3	391.8
57.5°	316.1	320.6	325.1	329.6	334.1	338.9	344.0	349.2	354.4	359.5	363.6
60°	294.9	299.4	303.9	308.4	312.9	318.0	323.7	329.4	335.1	340.8	344.8
62.5°	274.4	279.3	284.2	289.1	294.0	299.3	305.0	310.7	316.5	322.2	326.1
65°	241.2	246.8	252.3	257.8	263.4	269.1	274.9	280.8	286.7	292.6	296.9
67.5°	209.3	215.2	221.1	227.0	232.8	238.9	245.2	251.5	257.8	264.1	268.5
70°	187.5	193.4	199.3	205.2	211.1	217.3	223.8	230.4	237.0	243.6	248.2
72.5°	166.4	172.4	178.4	184.4	190.4	196.9	203.9	210.9	217.9	224.9	229.4
75°	133.8	140.2	146.6	153.0	159.4	166.3	173.5	180.8	188.1	195.3	200.2
77.5°	103.5	110.3	117.1	123.8	130.6	137.8	145.4	153.0	160.6	168.2	173.1
80°	84.8	91.7	98.7	105.6	112.5	119.7	127.4	135.0	142.6	150.2	155.4
82.5°	66.1	73.3	80.5	87.7	94.9	102.3	109.9	117.5	125.1	132.8	138.1
85°	41.2	48.5	55.8	63.0	70.3	77.8	85.6	93.4	101.2	108.9	114.1
87.5°	23.9	31.7	39.5	47.3	55.1	63.1	71.2	79.3	87.4	95.5	100.9
90°	17.0	27.6	38.2	48.8	59.4	69.7	79.9	90.0	100.1	110.2	117.2
92.5°	44.1	54.5	65.0	75.4	85.9	95.8	105.1	114.4	123.7	133.0	139.1
95°	100.6	109.3	118.0	126.8	135.5	144.6	154.0	163.4	172.9	182.3	188.0
97.5°	167.2	174.5	181.9	189.2	196.5	205.0	214.8	224.6	234.3	244.1	249.9
100°	219.7	225.5	231.3	237.2	243.0	250.8	260.6	270.3	280.1	289.8	295.2
102.5°	275.1	279.6	284.1	288.6	293.1	300.0	309.3	318.7	328.0	337.4	342.9
105°	358.3	362.1	365.9	369.7	373.5	379.3	387.0	394.7	402.5	410.2	415.6
107.5°	447.1	450.4	453.6	456.9	460.1	464.8	471.1	477.3	483.6	489.8	495.0
110°	506.8	509.9	513.0	516.1	519.2	523.6	529.3	535.0	540.7	546.5	549.8



TEST NUMBER: P332772

CATALOG NUMBER: S124DIW-S575D1560U835-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	568.9	571.2	573.5	575.8	578.0	581.8	586.9	592.1	597.3	602.5	606.2
115°	662.1	663.6	665.2	666.8	668.3	671.5	676.4	681.2	686.1	691.0	694.4
117.5°	750.6	751.8	753.0	754.2	755.4	758.3	763.0	767.7	772.4	777.1	779.5
120°	809.1	810.9	812.8	814.7	816.5	819.4	823.5	827.5	831.5	835.5	837.3
122.5°	870.6	871.2	871.9	872.5	873.2	875.6	879.9	884.1	888.4	892.7	895.0
125°	960.6	960.4	960.2	960.1	959.9	961.8	965.8	969.8	973.8	977.8	980.4
127.5°	1042.8	1043.6	1044.4	1045.3	1046.1	1047.9	1050.7	1053.5	1056.3	1059.0	1061.5
130°	1100.0	1100.9	1101.7	1102.5	1103.4	1105.2	1107.9	1110.7	1113.5	1116.2	1118.7
132.5°	1159.1	1159.7	1160.3	1160.8	1161.4	1162.7	1164.6	1166.6	1168.5	1170.4	1172.7
135°	1236.5	1238.5	1240.5	1242.5	1244.5	1246.1	1247.3	1248.5	1249.8	1251.0	1253.1
137.5°	1321.5	1322.3	1323.0	1323.8	1324.6	1325.5	1326.6	1327.8	1328.9	1330.0	1331.7
140°	1378.2	1378.7	1379.2	1379.7	1380.2	1380.5	1380.7	1380.9	1381.1	1381.2	1383.1
142.5°	1429.5	1430.1	1430.7	1431.4	1432.0	1432.1	1431.8	1431.4	1431.0	1430.6	1432.6
145°	1501.1	1502.2	1503.4	1504.6	1505.7	1506.5	1506.8	1507.2	1507.5	1507.8	1508.5
147.5°	1572.2	1573.7	1575.1	1576.6	1578.0	1578.6	1578.3	1578.0	1577.8	1577.5	1577.4
150°	1615.7	1616.8	1618.0	1619.2	1620.3	1620.9	1620.9	1620.9	1620.9	1620.9	1620.9
152.5°	1656.1	1656.8	1657.6	1658.4	1659.1	1659.7	1659.9	1660.2	1660.5	1660.7	1661.5
155°	1718.9	1718.9	1718.9	1718.9	1718.9	1718.8	1718.4	1718.1	1717.8	1717.4	1718.8
157.5°	1772.0	1771.4	1770.8	1770.2	1769.6	1769.3	1769.2	1769.1	1769.1	1769.0	1770.0
160°	1803.4	1803.0	1802.7	1802.4	1802.0	1801.7	1801.4	1801.0	1800.7	1800.4	1801.4
162.5°	1832.3	1831.5	1830.6	1829.7	1828.8	1828.2	1827.9	1827.6	1827.2	1826.9	1828.7
165°	1871.2	1870.2	1869.2	1868.2	1867.2	1866.4	1865.7	1865.0	1864.4	1863.7	1865.7
167.5°	1901.1	1899.7	1898.3	1896.9	1895.5	1894.8	1894.9	1894.9	1895.0	1895.1	1897.1
170°	1918.0	1916.3	1914.6	1912.9	1911.3	1910.6	1910.9	1911.3	1911.6	1911.9	1913.9
172.5°	1930.0	1928.6	1927.2	1925.8	1924.4	1923.7	1923.8	1923.9	1923.9	1924.0	1926.3
175°	1946.6	1944.9	1943.3	1941.6	1939.9	1938.9	1938.6	1938.2	1937.9	1937.6	1939.9
177.5°	1952.0	1950.7	1949.4	1948.0	1946.7	1946.0	1946.0	1946.0	1946.0	1946.0	1947.9
180°	1949.6	1949.6	1949.6	1949.6	1949.6	1949.6	1949.6	1949.6	1949.6	1949.6	1949.6



TEST NUMBER: P332772

CATALOG NUMBER: S124DIW-S575D1560U835-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	694.9	694.9	694.9	694.9	694.9	694.9	694.9	694.9
2.5°	692.5	693.4	694.4	694.8	694.7	694.5	694.4	694.3
5°	690.7	692.0	693.4	694.0	693.9	693.7	693.5	693.3
7.5°	687.0	688.5	690.1	690.8	690.6	690.4	690.2	690.1
10°	683.2	684.8	686.3	687.0	686.9	686.7	686.5	686.3
12.5°	678.0	679.4	680.8	681.5	681.5	681.4	681.4	681.4
15°	668.4	670.0	671.5	672.2	672.1	671.9	671.7	671.5
17.5°	656.8	658.4	660.0	660.7	660.6	660.5	660.3	660.2
20°	647.8	649.5	651.2	652.1	652.1	652.1	652.1	652.1
22.5°	637.2	638.9	640.6	641.7	641.9	642.2	642.5	642.8
25°	620.9	622.8	624.7	625.7	625.9	626.1	626.2	626.4
27.5°	602.6	604.3	606.1	607.1	607.3	607.5	607.7	607.9
30°	589.8	591.7	593.6	594.7	595.0	595.4	595.7	596.1
32.5°	576.6	578.8	581.0	582.2	582.6	582.9	583.3	583.6
35°	555.8	558.2	560.6	562.1	562.6	563.1	563.6	564.2
37.5°	534.1	536.5	539.0	540.5	541.0	541.6	542.1	542.7
40°	518.8	521.4	524.0	525.6	526.3	527.0	527.7	528.4
42.5°	503.8	506.6	509.5	511.2	511.8	512.3	512.9	513.4
45°	480.6	483.5	486.4	488.3	489.2	490.1	490.9	491.8
47.5°	456.0	459.1	462.1	464.1	465.2	466.2	467.3	468.3
50°	438.8	442.3	445.7	448.0	449.0	450.0	451.1	452.1
52.5°	421.4	424.8	428.3	430.5	431.6	432.6	433.6	434.7
55°	395.2	398.7	402.1	404.4	405.4	406.5	407.5	408.5
57.5°	367.7	371.9	376.0	378.5	379.5	380.4	381.4	382.4
60°	348.8	352.8	356.7	359.4	360.8	362.2	363.6	365.0
62.5°	330.1	334.1	338.1	340.7	342.1	343.5	344.9	346.3
65°	301.2	305.6	309.9	312.7	314.1	315.5	316.9	318.3
67.5°	272.9	277.3	281.7	284.5	285.9	287.2	288.6	289.9
70°	252.9	257.6	262.2	265.2	266.4	267.6	268.8	270.0
72.5°	233.9	238.5	243.0	245.9	247.3	248.6	250.0	251.3
75°	205.0	209.8	214.7	217.9	219.4	221.0	222.6	224.1
77.5°	178.1	183.0	187.9	191.2	192.8	194.5	196.1	197.8
80°	160.6	165.7	170.9	174.2	175.6	177.0	178.4	179.8
82.5°	143.4	148.7	154.1	157.5	159.0	160.5	162.0	163.6
85°	119.3	124.5	129.7	133.2	134.9	136.6	138.3	140.1
87.5°	106.3	111.8	117.2	120.7	122.4	124.0	125.7	127.3
90°	124.3	131.3	138.3	142.9	144.9	147.0	149.0	151.1
92.5°	145.2	151.3	157.3	161.3	163.1	164.8	166.6	168.4
95°	193.6	199.3	205.0	208.6	210.2	211.7	213.3	214.8
97.5°	255.6	261.3	267.1	270.7	272.2	273.7	275.1	276.6
100°	300.5	305.9	311.2	314.5	315.7	316.9	318.1	319.3
102.5°	348.3	353.8	359.3	362.8	364.4	366.0	367.7	369.3
105°	420.9	426.2	431.5	435.4	437.8	440.2	442.6	445.0
107.5°	500.2	505.4	510.6	513.8	515.0	516.2	517.3	518.5
110°	553.1	556.4	559.7	562.5	564.9	567.3	569.7	572.1





TEST NUMBER: P332772

CATALOG NUMBER: S124DIW-S575D1560U835-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	609.9	613.6	617.3	619.9	621.5	623.1	624.7	626.3
115°	697.9	701.4	704.9	707.0	707.9	708.8	709.7	710.5
117.5°	782.0	784.5	786.9	788.5	789.2	789.9	790.6	791.3
120°	839.1	840.8	842.6	844.5	846.6	848.6	850.7	852.8
122.5°	897.3	899.6	902.0	903.1	903.2	903.2	903.3	903.3
125°	983.0	985.6	988.2	989.7	990.1	990.4	990.8	991.2
127.5°	1063.9	1066.4	1068.8	1070.3	1071.0	1071.6	1072.3	1072.9
130°	1121.1	1123.6	1126.0	1127.1	1126.8	1126.5	1126.2	1125.9
132.5°	1175.0	1177.4	1179.7	1181.1	1181.6	1182.1	1182.6	1183.1
135°	1255.2	1257.3	1259.4	1260.4	1260.5	1260.5	1260.5	1260.6
137.5°	1333.3	1335.0	1336.6	1338.0	1339.1	1340.1	1341.2	1342.3
140°	1385.1	1387.0	1388.9	1390.1	1390.6	1391.2	1391.7	1392.2
142.5°	1434.5	1436.4	1438.3	1439.5	1440.2	1440.9	1441.5	1442.2
145°	1509.2	1509.9	1510.6	1510.8	1510.5	1510.2	1509.9	1509.6
147.5°	1577.2	1577.1	1577.0	1577.0	1577.2	1577.5	1577.7	1577.9
150°	1620.9	1620.9	1620.9	1620.8	1620.4	1620.1	1619.8	1619.4
152.5°	1662.3	1663.1	1663.9	1663.9	1663.0	1662.2	1661.3	1660.4
155°	1720.1	1721.4	1722.8	1722.8	1721.4	1720.1	1718.8	1717.4
157.5°	1771.0	1772.0	1773.0	1772.9	1771.8	1770.7	1769.5	1768.4
160°	1802.4	1803.4	1804.4	1804.0	1802.4	1800.7	1799.0	1797.3
162.5°	1830.5	1832.3	1834.1	1834.2	1832.5	1830.9	1829.2	1827.5
165°	1867.7	1869.7	1871.7	1872.1	1870.7	1869.4	1868.0	1866.7
167.5°	1899.1	1901.1	1903.1	1903.1	1901.0	1898.9	1896.8	1894.7
170°	1916.0	1918.0	1920.0	1919.8	1917.5	1915.1	1912.8	1910.4
172.5°	1928.6	1930.8	1933.1	1933.1	1930.7	1928.4	1926.0	1923.7
175°	1942.3	1944.6	1947.0	1947.0	1944.6	1942.3	1939.9	1937.6
177.5°	1949.8	1951.6	1953.5	1953.4	1951.2	1949.1	1947.0	1944.8
180°	1949.6	1949.6	1949.6	1949.6	1949.6	1949.6	1949.6	1949.6

(END OF REPORT)