

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: P332771

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

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332771  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-6,  
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-D  
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 575 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 1560 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8611.5 lumens  
Efficiency: N/A  
Efficacy: 142.1 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

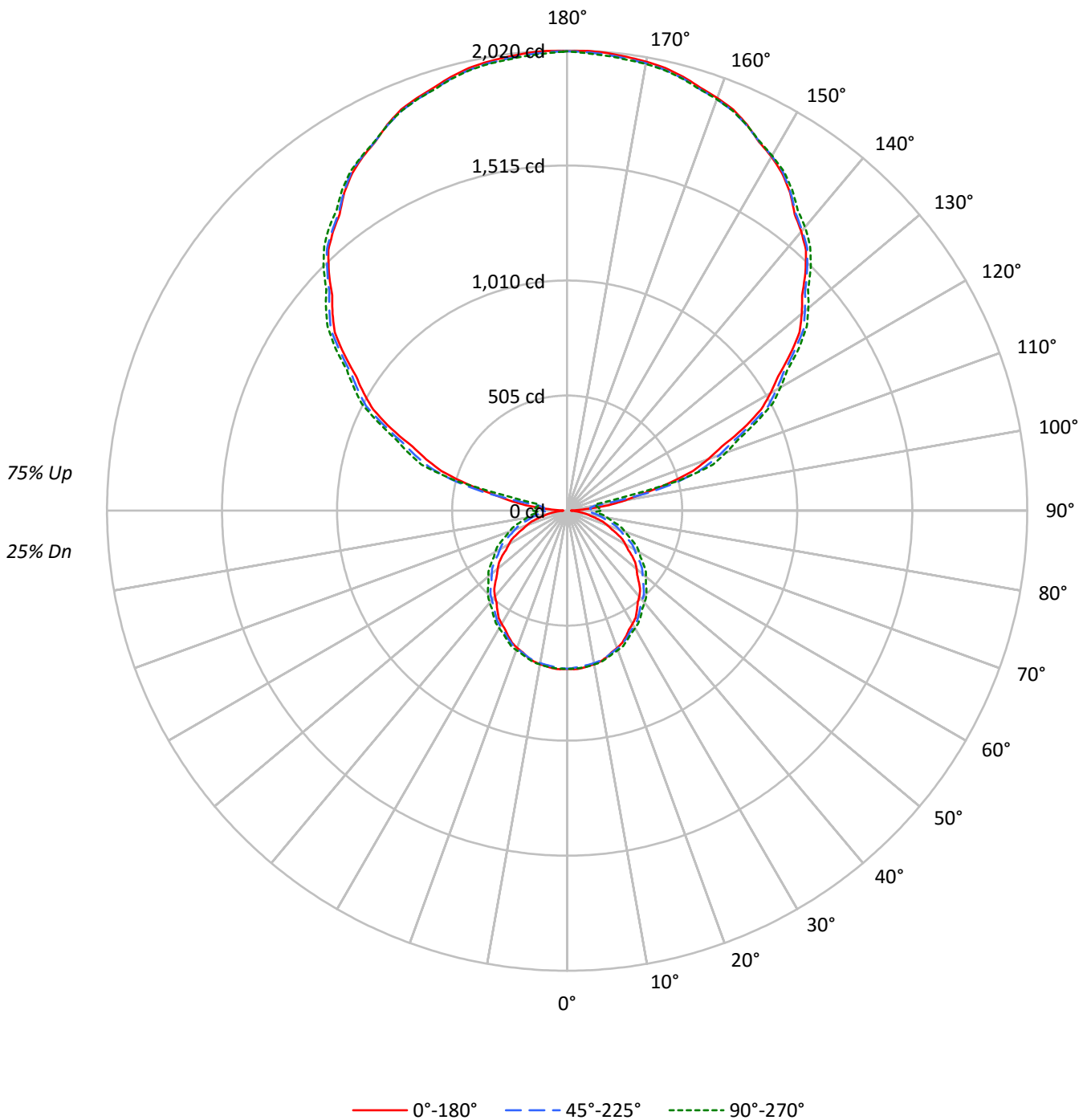
Input Watts (W): 60.6  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P332771

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

### Luminous Intensity Polar Plot





TEST NUMBER: P332771

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

**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	101	101	101	101	90	90	90	90	70	70	70	51	51	51	34	34	34	25				
1	92	87	83	80	82	78	75	72	60	58	56	44	42	41	29	28	27	20				
2	83	76	70	65	74	68	63	58	52	49	46	38	36	34	25	24	23	17				
3	76	66	59	54	67	59	53	48	46	42	38	34	31	28	22	20	19	14				
4	69	59	51	45	61	52	46	41	41	36	32	30	27	24	20	18	16	12				
5	63	52	44	38	56	46	40	35	36	31	28	26	23	21	17	15	14	10				
6	58	46	38	33	51	42	35	30	32	27	24	24	20	18	16	14	12	9				
7	54	42	34	28	47	37	31	26	29	24	21	22	18	16	14	12	11	8				
8	50	38	30	25	44	34	27	23	26	22	18	20	16	14	13	11	9	7				
9	46	34	27	22	41	31	24	20	24	19	16	18	15	12	12	10	8	6				
10	43	31	24	20	38	28	22	18	22	18	14	16	13	11	11	9	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: P332771

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

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	65.8	0.8
10°-20°	188.5	2.2
20°-30°	285.1	3.3
30°-40°	344.9	4.0
40°-50°	364.7	4.2
50°-60°	343.2	4.0
60°-70°	284.7	3.3
70°-80°	200.0	2.3
80°-90°	118.9	1.4
90°-100°	136.1	1.6
100°-110°	489.4	5.7
110°-120°	874.5	10.2
120°-130°	1086.6	12.6
130°-140°	1150.5	13.4
140°-150°	1069.9	12.4
150°-160°	861.5	10.0
160°-170°	555.6	6.5
170°-180°	191.5	2.2
0°-30°	539.4	6.3
0°-40°	884.4	10.3
0°-60°	1592.2	18.5
0°-90°	2195.8	25.5
90°-120°	1500.0	17.4
90°-150°	4807.0	55.8
90°-180°	6416.0	74.5
0°-180°	8611.5	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	12
95°	93	71	101	130	139	115
105°	461	486	522	550	507	483
115°	852	864	887	906	913	839
125°	1194	1200	1216	1235	1242	1066
135°	1479	1479	1489	1504	1513	1140
145°	1705	1708	1709	1715	1721	1065
155°	1868	1870	1865	1871	1867	861
165°	1971	1964	1964	1974	1962	557
175°	2016	2008	2009	2021	2004	192
180°	2016	2016	2016	2016	2016	



TEST NUMBER: P332771

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

**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°	30.8	37.3	43.7	50.1	56.5	64.8	74.9	85.0	95.2	105.3	112.2
95°	93.1	87.4	81.7	76.0	70.3	71.2	78.6	86.0	93.5	100.9	107.6
97.5°	185.3	197.3	209.4	221.4	233.4	224.2	193.8	163.4	133.1	102.7	107.4
100°	255.9	266.4	276.9	287.5	298.0	283.5	244.0	204.5	165.0	125.5	124.5
102.5°	335.5	343.9	352.2	360.6	369.0	373.4	374.0	374.6	375.2	375.7	318.8
105°	460.9	466.4	471.9	477.3	482.8	489.6	497.6	505.7	513.8	521.9	529.2
107.5°	578.7	582.5	586.4	590.2	594.1	600.1	608.5	616.8	625.1	633.5	639.2
110°	657.7	661.1	664.6	668.0	671.4	677.1	685.2	693.3	701.3	709.4	714.0



TEST NUMBER: P332771

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

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	734.3	738.2	742.2	746.1	750.1	755.4	762.2	768.9	775.6	782.3	786.0
115°	852.2	854.7	857.3	859.9	862.4	866.3	871.5	876.7	881.9	887.1	891.6
117.5°	959.1	961.4	963.7	965.9	968.2	972.3	978.2	984.1	990.0	995.8	999.3
120°	1030.9	1032.7	1034.6	1036.4	1038.3	1041.6	1046.3	1050.9	1055.6	1060.3	1064.4
122.5°	1098.4	1099.3	1100.2	1101.2	1102.1	1105.1	1110.3	1115.5	1120.7	1125.9	1129.8
125°	1194.5	1195.6	1196.8	1198.0	1199.1	1201.5	1205.2	1208.9	1212.5	1216.2	1220.4
127.5°	1286.0	1286.2	1286.3	1286.5	1286.6	1289.2	1294.0	1298.9	1303.7	1308.6	1311.5
130°	1344.5	1344.7	1344.8	1345.0	1345.1	1347.1	1350.9	1354.6	1358.4	1362.2	1365.6
132.5°	1398.8	1399.2	1399.6	1400.1	1400.5	1402.5	1405.9	1409.4	1412.9	1416.4	1419.7
135°	1479.4	1479.1	1478.8	1478.4	1478.1	1479.2	1481.8	1484.3	1486.9	1489.4	1492.8
137.5°	1551.5	1551.5	1551.4	1551.4	1551.4	1552.4	1554.4	1556.5	1558.6	1560.6	1563.9
140°	1598.6	1599.1	1599.6	1600.1	1600.6	1601.2	1602.1	1602.9	1603.8	1604.6	1607.9
142.5°	1640.2	1641.3	1642.5	1643.7	1644.9	1645.6	1645.9	1646.2	1646.5	1646.8	1649.5
145°	1704.9	1705.7	1706.5	1707.4	1708.2	1708.6	1708.6	1708.6	1708.6	1708.6	1710.0
147.5°	1756.4	1758.1	1759.8	1761.5	1763.3	1763.9	1763.6	1763.3	1762.9	1762.6	1763.0
150°	1793.8	1795.0	1796.2	1797.3	1798.5	1798.9	1798.6	1798.3	1797.9	1797.6	1797.6
152.5°	1824.6	1825.6	1826.7	1827.7	1828.7	1829.0	1828.3	1827.7	1827.1	1826.5	1827.1
155°	1868.5	1868.8	1869.1	1869.5	1869.8	1869.5	1868.5	1867.5	1866.5	1865.4	1866.8
157.5°	1905.6	1905.4	1905.2	1905.0	1904.8	1904.1	1902.9	1901.8	1900.7	1899.5	1901.3
160°	1927.3	1926.3	1925.3	1924.3	1923.3	1922.6	1922.2	1921.9	1921.6	1921.2	1923.3
162.5°	1946.6	1945.3	1944.0	1942.8	1941.5	1940.7	1940.3	1940.0	1939.7	1939.3	1941.3
165°	1971.0	1969.3	1967.7	1966.0	1964.3	1963.5	1963.5	1963.5	1963.5	1963.5	1966.1
167.5°	1990.3	1988.6	1986.8	1985.1	1983.3	1982.4	1982.2	1982.0	1981.8	1981.6	1984.5
170°	2001.2	1999.2	1997.1	1995.1	1993.1	1992.3	1992.6	1993.0	1993.3	1993.6	1996.3
172.5°	2008.4	2006.4	2004.4	2002.4	2000.4	1999.5	1999.9	2000.2	2000.5	2000.9	2003.5
175°	2016.2	2014.2	2012.2	2010.2	2008.2	2007.4	2007.7	2008.0	2008.4	2008.7	2011.7
177.5°	2019.9	2018.0	2016.1	2014.2	2012.4	2011.7	2012.2	2012.8	2013.3	2013.8	2016.0
180°	2016.2	2016.2	2016.2	2016.2	2016.2	2016.2	2016.2	2016.2	2016.2	2016.2	2016.2



TEST NUMBER: P332771

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

**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°	119.0	125.9	132.8	137.0	138.5	140.1	141.6	143.1
95°	114.2	120.9	127.6	131.9	133.8	135.7	137.6	139.4
97.5°	112.2	116.9	121.6	124.9	126.7	128.5	130.4	132.2
100°	123.4	122.4	121.4	121.6	123.2	124.7	126.3	127.8
102.5°	261.9	204.9	148.0	120.3	121.7	123.1	124.5	125.9
105°	536.5	543.9	551.2	549.6	538.9	528.2	517.5	506.8
107.5°	644.9	650.7	656.4	660.5	663.0	665.5	668.1	670.6
110°	718.7	723.3	728.0	731.5	733.9	736.3	738.7	741.1





TEST NUMBER: P332771

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

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	789.7	793.4	797.1	800.3	803.0	805.6	808.3	810.9
115°	896.1	900.5	905.0	907.8	909.1	910.3	911.5	912.7
117.5°	1002.8	1006.2	1009.7	1012.1	1013.3	1014.5	1015.8	1017.0
120°	1068.5	1072.7	1076.8	1079.2	1079.9	1080.7	1081.4	1082.1
122.5°	1133.7	1137.5	1141.4	1143.6	1144.2	1144.8	1145.3	1145.9
125°	1224.7	1229.0	1233.3	1236.2	1237.5	1238.9	1240.3	1241.6
127.5°	1314.4	1317.3	1320.3	1322.2	1323.1	1324.0	1324.9	1325.8
130°	1369.1	1372.5	1376.0	1378.2	1379.3	1380.3	1381.3	1382.4
132.5°	1423.0	1426.3	1429.6	1431.7	1432.5	1433.2	1434.0	1434.8
135°	1496.3	1499.7	1503.2	1505.7	1507.4	1509.1	1510.9	1512.6
137.5°	1567.1	1570.4	1573.7	1575.6	1576.3	1577.0	1577.6	1578.3
140°	1611.1	1614.4	1617.6	1619.8	1621.0	1622.2	1623.4	1624.6
142.5°	1652.2	1654.9	1657.6	1659.4	1660.2	1661.0	1661.8	1662.5
145°	1711.4	1712.7	1714.1	1715.5	1716.8	1718.2	1719.6	1720.9
147.5°	1763.4	1763.8	1764.2	1764.9	1765.8	1766.6	1767.5	1768.4
150°	1797.6	1797.6	1797.6	1797.8	1798.1	1798.4	1798.8	1799.1
152.5°	1827.6	1828.1	1828.7	1828.8	1828.6	1828.4	1828.2	1828.0
155°	1868.1	1869.5	1870.8	1871.0	1870.0	1869.0	1868.0	1867.0
157.5°	1903.0	1904.8	1906.5	1906.5	1904.8	1903.0	1901.3	1899.5
160°	1925.3	1927.3	1929.3	1929.3	1927.3	1925.3	1923.3	1921.2
162.5°	1943.4	1945.4	1947.4	1947.2	1945.0	1942.7	1940.4	1938.1
165°	1968.8	1971.5	1974.2	1974.0	1971.0	1968.0	1965.0	1962.0
167.5°	1987.5	1990.4	1993.4	1993.2	1989.8	1986.5	1983.1	1979.8
170°	1999.0	2001.7	2004.4	2004.0	2000.7	1997.3	1994.0	1990.6
172.5°	2006.2	2008.9	2011.6	2011.1	2007.5	2003.9	2000.3	1996.6
175°	2014.7	2017.8	2020.8	2020.3	2016.2	2012.2	2008.2	2004.2
177.5°	2018.1	2020.3	2022.4	2021.9	2018.7	2015.4	2012.2	2009.0
180°	2016.2	2016.2	2016.2	2016.2	2016.2	2016.2	2016.2	2016.2

(END OF REPORT)