

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: P332765

Luminaire Tested: **S124DIW-S575D1340U835-4F0-1E-UDD-D**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332765  
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-S575D1340U835-4F0-1E-UDD-D  
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 575 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 1340 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7738.1 lumens  
Efficiency: N/A  
Efficacy: 143.8 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

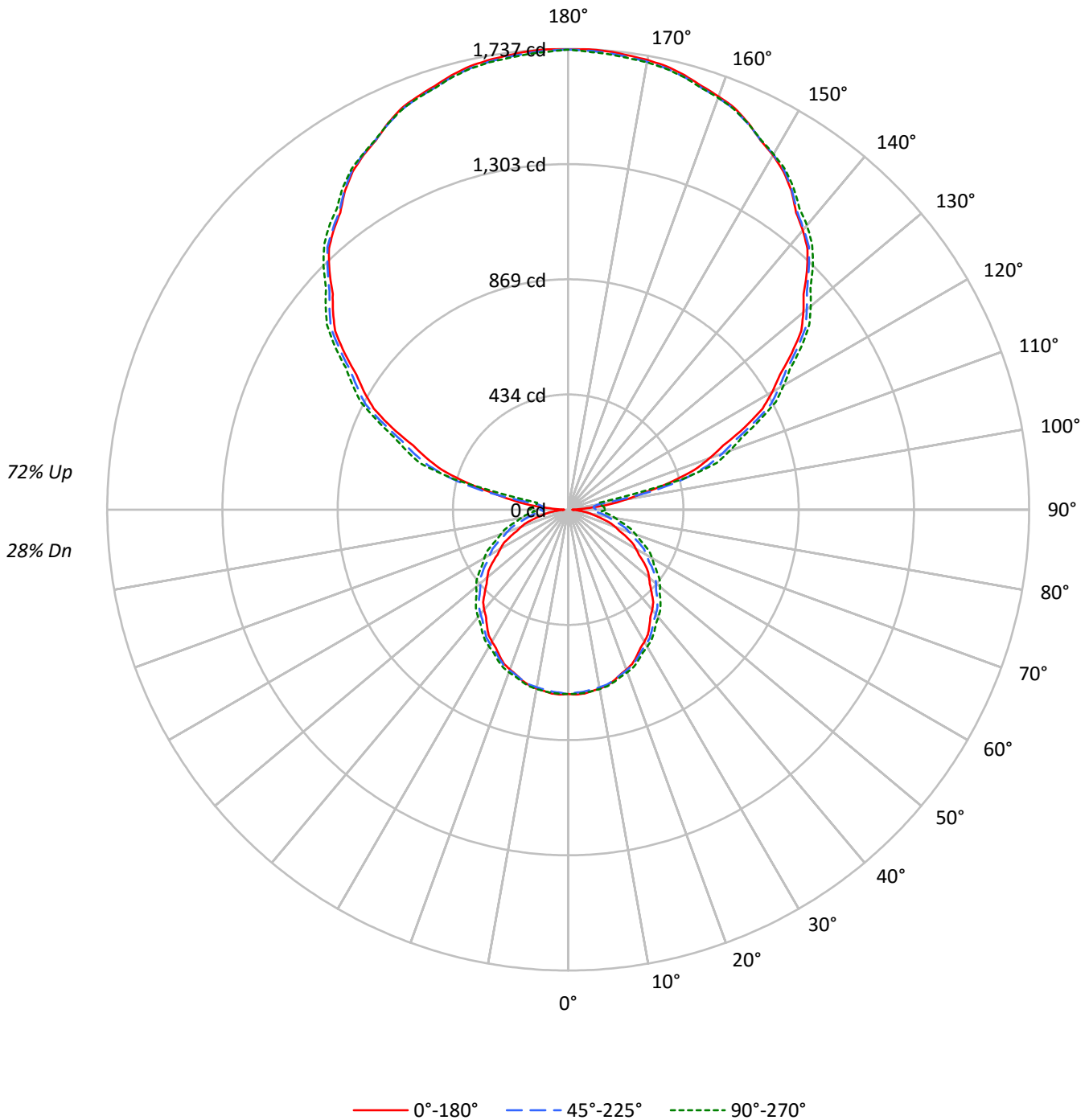
Input Watts (W): 53.8  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P332765

CATALOG NUMBER: S124DIW-S575D1340U835-4F0-1E-UDD-D

### Luminous Intensity Polar Plot





TEST NUMBER: P332765

CATALOG NUMBER: S124DIW-S575D1340U835-4F0-1E-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	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	26	24	19				
3	76	67	60	54	68	60	54	49	47	43	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	28	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	12	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: P332765

CATALOG NUMBER: S124DIW-S575D1340U835-4F0-1E-UDD-D

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	65.8	0.9
10°-20°	188.5	2.4
20°-30°	285.1	3.7
30°-40°	344.9	4.5
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°	118.1	1.5
90°-100°	126.5	1.6
100°-110°	427.9	5.5
110°-120°	756.8	9.8
120°-130°	937.2	12.1
130°-140°	990.7	12.8
140°-150°	920.5	11.9
150°-160°	741.0	9.6
160°-170°	477.9	6.2
170°-180°	164.7	2.1
0°-30°	539.4	7.0
0°-40°	884.4	11.4
0°-60°	1592.2	20.6
0°-90°	2195.0	28.4
90°-120°	1311.1	16.9
90°-150°	4159.5	53.8
90°-180°	5543.0	71.6
0°-180°	7738.1	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°	16	62	106	135	145	12
95°	82	66	96	124	133	100
105°	397	421	456	483	447	416
115°	734	745	768	787	793	722
125°	1028	1033	1049	1067	1074	917
135°	1273	1272	1282	1297	1304	980
145°	1466	1469	1470	1476	1481	916
155°	1607	1608	1604	1609	1606	741
165°	1695	1689	1689	1698	1688	479
175°	1734	1727	1728	1738	1724	165
180°	1734	1734	1734	1734	1734	



TEST NUMBER: P332765

CATALOG NUMBER: S124DIW-S575D1340U835-4F0-1E-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°	23.8	31.5	39.2	46.9	54.6	62.4	70.5	78.5	86.5	94.6	99.9
90°	16.3	26.4	36.5	46.6	56.7	66.6	76.3	86.1	95.8	105.6	112.3
92.5°	28.2	34.6	41.0	47.4	53.8	61.8	71.6	81.3	91.1	100.8	107.4
95°	81.5	77.4	73.3	69.2	65.1	66.7	74.1	81.5	88.9	96.2	102.6
97.5°	160.7	171.7	182.7	193.7	204.8	197.7	172.6	147.4	122.3	97.1	101.8
100°	221.3	231.0	240.6	250.3	260.0	248.3	215.3	182.3	149.2	116.2	116.0
102.5°	289.8	297.5	305.3	313.0	320.8	325.3	326.8	328.2	329.6	331.0	282.7
105°	397.4	402.6	407.8	413.0	418.2	424.7	432.5	440.4	448.2	456.0	463.0
107.5°	498.7	502.4	506.1	509.8	513.5	519.4	527.4	535.4	543.4	551.4	556.9
110°	566.6	569.8	573.1	576.4	579.7	585.2	593.0	600.8	608.6	616.4	620.9



TEST NUMBER: P332765

CATALOG NUMBER: S124DIW-S575D1340U835-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	632.3	636.0	639.7	643.4	647.1	652.3	658.9	665.5	672.0	678.6	682.3
115°	733.6	736.0	738.5	740.9	743.3	747.1	752.4	757.6	762.9	768.1	772.5
117.5°	825.6	827.6	829.7	831.8	833.9	837.8	843.6	849.4	855.2	861.0	864.5
120°	887.2	888.9	890.5	892.2	893.9	897.1	901.8	906.5	911.3	916.0	920.0
122.5°	945.3	946.1	946.9	947.7	948.5	951.4	956.6	961.7	966.9	972.0	975.8
125°	1027.8	1028.8	1029.7	1030.7	1031.7	1034.1	1037.8	1041.6	1045.3	1049.1	1053.2
127.5°	1106.5	1106.6	1106.7	1106.8	1107.0	1109.3	1114.0	1118.6	1123.3	1127.9	1130.9
130°	1156.7	1156.8	1156.9	1157.1	1157.2	1159.0	1162.7	1166.3	1169.9	1173.6	1177.0
132.5°	1203.4	1203.8	1204.1	1204.4	1204.8	1206.6	1209.9	1213.2	1216.5	1219.9	1223.1
135°	1272.7	1272.4	1272.1	1271.8	1271.5	1272.6	1274.9	1277.3	1279.6	1282.0	1285.4
137.5°	1334.7	1334.6	1334.6	1334.5	1334.4	1335.3	1337.2	1339.1	1340.9	1342.8	1345.9
140°	1375.1	1375.5	1375.9	1376.4	1376.8	1377.3	1378.1	1378.8	1379.6	1380.3	1383.4
142.5°	1410.8	1411.8	1412.8	1413.8	1414.8	1415.5	1415.7	1416.0	1416.2	1416.4	1419.0
145°	1466.5	1467.1	1467.8	1468.5	1469.2	1469.6	1469.6	1469.6	1469.6	1469.6	1470.9
147.5°	1510.8	1512.3	1513.7	1515.1	1516.6	1517.2	1516.9	1516.6	1516.3	1516.0	1516.4
150°	1543.0	1544.0	1544.9	1545.9	1546.9	1547.2	1547.0	1546.7	1546.4	1546.1	1546.1
152.5°	1569.3	1570.2	1571.1	1572.0	1572.9	1573.1	1572.6	1572.0	1571.5	1571.0	1571.5
155°	1607.1	1607.3	1607.6	1607.9	1608.2	1607.9	1607.1	1606.2	1605.3	1604.5	1605.6
157.5°	1639.0	1638.8	1638.6	1638.4	1638.3	1637.7	1636.7	1635.7	1634.8	1633.8	1635.3
160°	1657.6	1656.8	1655.9	1655.0	1654.2	1653.6	1653.3	1653.0	1652.7	1652.5	1654.2
162.5°	1674.2	1673.1	1672.1	1671.0	1669.9	1669.2	1668.9	1668.6	1668.3	1668.0	1669.7
165°	1695.3	1693.8	1692.4	1690.9	1689.5	1688.8	1688.8	1688.8	1688.8	1688.8	1691.1
167.5°	1711.9	1710.4	1708.9	1707.4	1705.9	1705.0	1704.9	1704.7	1704.5	1704.3	1706.9
170°	1721.2	1719.5	1717.7	1716.0	1714.3	1713.6	1713.8	1714.1	1714.4	1714.7	1717.0
172.5°	1727.4	1725.7	1724.0	1722.2	1720.5	1719.8	1720.1	1720.4	1720.6	1720.9	1723.2
175°	1734.2	1732.4	1730.7	1729.0	1727.2	1726.5	1726.8	1727.1	1727.4	1727.7	1730.3
177.5°	1737.3	1735.7	1734.0	1732.4	1730.8	1730.2	1730.7	1731.2	1731.6	1732.1	1733.9
180°	1734.2	1734.2	1734.2	1734.2	1734.2	1734.2	1734.2	1734.2	1734.2	1734.2	1734.2



TEST NUMBER: P332765

CATALOG NUMBER: S124DIW-S575D1340U835-4F0-1E-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°	105.3	110.7	116.0	119.5	121.2	122.8	124.4	126.1
90°	119.1	125.8	132.5	136.9	138.9	140.8	142.8	144.7
92.5°	114.0	120.6	127.2	131.3	132.8	134.3	135.8	137.3
95°	109.0	115.4	121.8	125.9	127.8	129.6	131.5	133.3
97.5°	106.5	111.2	115.9	119.2	120.9	122.7	124.5	126.3
100°	115.7	115.5	115.3	115.9	117.4	118.9	120.4	121.9
102.5°	234.3	186.0	137.7	114.2	115.6	117.0	118.4	119.8
105°	469.9	476.8	483.7	482.7	473.7	464.7	455.7	446.7
107.5°	562.4	568.0	573.5	577.4	579.8	582.1	584.4	586.8
110°	625.5	630.0	634.6	638.0	640.2	642.5	644.7	647.0





TEST NUMBER: P332765

CATALOG NUMBER: S124DIW-S575D1340U835-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	686.1	689.8	693.5	696.6	699.1	701.6	704.0	706.5
115°	776.9	781.3	785.6	788.4	789.6	790.9	792.1	793.3
117.5°	867.9	871.4	874.9	877.3	878.6	879.8	881.1	882.4
120°	924.0	928.1	932.1	934.5	935.3	936.2	937.0	937.8
122.5°	979.6	983.4	987.2	989.5	990.1	990.8	991.5	992.1
125°	1057.4	1061.5	1065.7	1068.4	1069.7	1071.0	1072.4	1073.7
127.5°	1133.8	1136.7	1139.7	1141.6	1142.6	1143.5	1144.5	1145.4
130°	1180.4	1183.8	1187.2	1189.4	1190.4	1191.5	1192.5	1193.5
132.5°	1226.4	1229.6	1232.9	1234.9	1235.7	1236.6	1237.4	1238.2
135°	1288.7	1292.0	1295.4	1297.9	1299.5	1301.1	1302.7	1304.3
137.5°	1349.1	1352.2	1355.4	1357.3	1358.0	1358.7	1359.4	1360.1
140°	1386.6	1389.7	1392.8	1394.9	1396.1	1397.2	1398.4	1399.5
142.5°	1421.6	1424.3	1426.9	1428.6	1429.3	1430.1	1430.9	1431.7
145°	1472.2	1473.5	1474.9	1476.2	1477.4	1478.7	1480.0	1481.2
147.5°	1516.7	1517.1	1517.5	1518.1	1518.9	1519.8	1520.6	1521.4
150°	1546.1	1546.1	1546.1	1546.2	1546.5	1546.8	1547.1	1547.4
152.5°	1571.9	1572.4	1572.8	1573.0	1572.8	1572.6	1572.5	1572.3
155°	1606.8	1607.9	1609.1	1609.2	1608.4	1607.5	1606.6	1605.8
157.5°	1636.8	1638.3	1639.8	1639.8	1638.3	1636.8	1635.3	1633.8
160°	1655.9	1657.6	1659.4	1659.4	1657.6	1655.9	1654.2	1652.5
162.5°	1671.5	1673.2	1674.9	1674.8	1672.9	1670.9	1668.9	1667.0
165°	1693.4	1695.7	1698.0	1697.8	1695.3	1692.7	1690.1	1687.5
167.5°	1709.4	1711.9	1714.5	1714.3	1711.4	1708.5	1705.7	1702.8
170°	1719.3	1721.6	1723.9	1723.6	1720.8	1717.9	1715.0	1712.1
172.5°	1725.5	1727.9	1730.2	1729.8	1726.6	1723.5	1720.4	1717.3
175°	1732.9	1735.5	1738.1	1737.6	1734.2	1730.7	1727.2	1723.8
177.5°	1735.8	1737.6	1739.5	1739.0	1736.2	1733.5	1730.7	1727.9
180°	1734.2	1734.2	1734.2	1734.2	1734.2	1734.2	1734.2	1734.2

(END OF REPORT)