

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: P332765-830

Luminaire Tested: **S124DIW-S575D1340U830-4F0-1E-UDD-D**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332765-830  
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-S575D1340U830-4F0-1E-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: 7293.5 lumens  
Efficiency: N/A  
Efficacy: 135.6 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

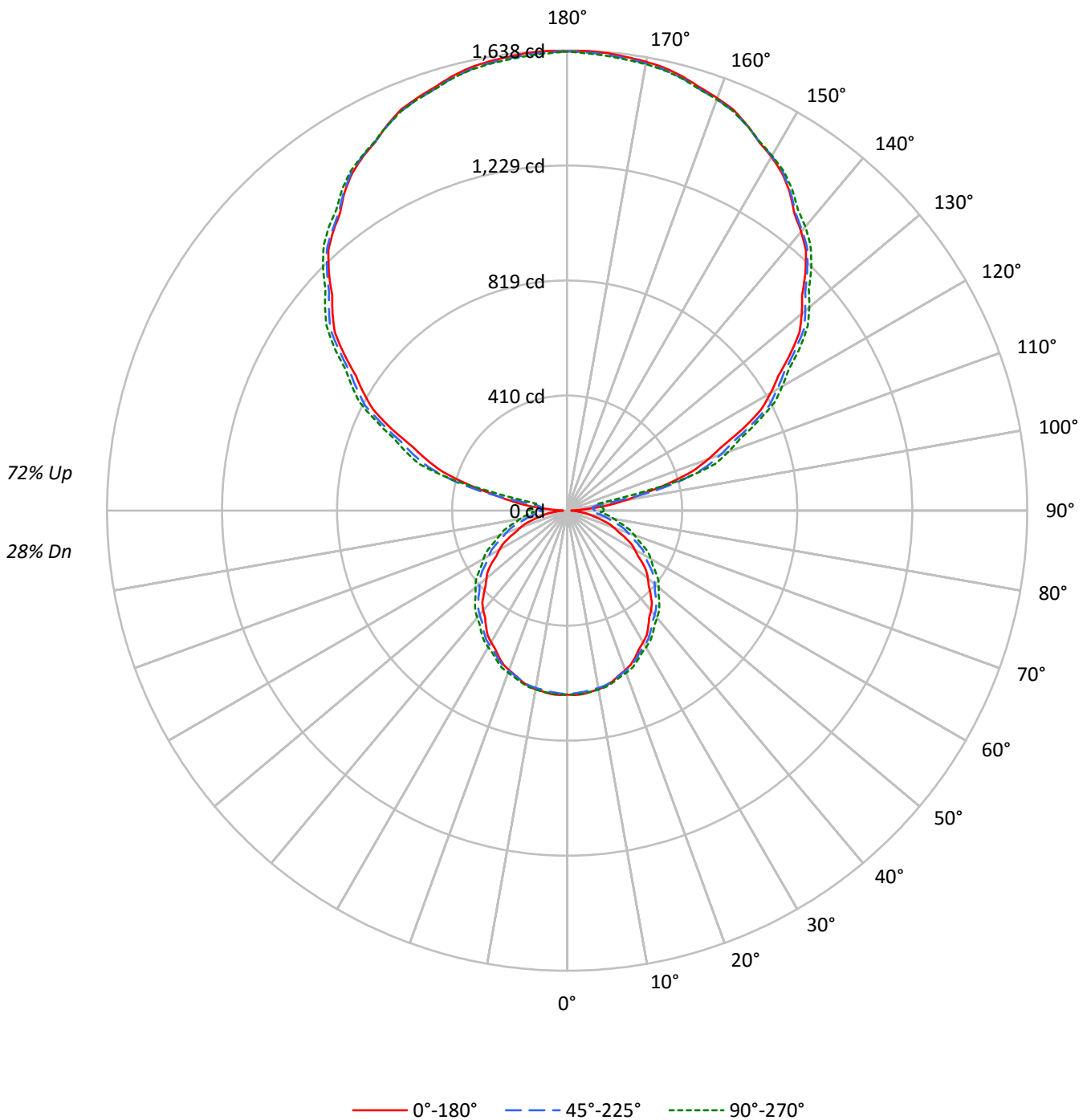
Input Watts (W): 53.8  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P332765-830

CATALOG NUMBER: S124DIW-S575D1340U830-4F0-1E-UDD-D

### Luminous Intensity Polar Plot





TEST NUMBER: P332765-830

CATALOG NUMBER: S124DIW-S575D1340U830-4F0-1E-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	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°	5288	5288	5288
5°	5304	5168	5182
10°	5272	5083	5079
15°	5225	4985	4958
20°	5153	4877	4840
25°	5073	4756	4710
30°	4986	4636	4576
35°	4887	4512	4460
40°	4809	4395	4338
45°	4692	4287	4233
50°	4593	4163	4123
55°	4491	4045	3993
60°	4332	3894	3876
65°	4156	3735	3731
70°	3945	3551	3561
75°	3649	3349	3408
80°	3322	3156	3259
85°	2903	2980	3172



TEST NUMBER: P332765-830

CATALOG NUMBER: S124DIW-S575D1340U830-4F0-1E-UDD-D

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	62.0	0.9
10°-20°	177.7	2.4
20°-30°	268.7	3.7
30°-40°	325.1	4.5
40°-50°	343.7	4.7
50°-60°	323.5	4.4
60°-70°	268.4	3.7
70°-80°	188.5	2.6
80°-90°	111.3	1.5
90°-100°	119.2	1.6
100°-110°	403.3	5.5
110°-120°	713.3	9.8
120°-130°	883.3	12.1
130°-140°	933.8	12.8
140°-150°	867.6	11.9
150°-160°	698.4	9.6
160°-170°	450.5	6.2
170°-180°	155.3	2.1
0°-30°	508.4	7.0
0°-40°	833.5	11.4
0°-60°	1500.7	20.6
0°-90°	2068.9	28.4
90°-120°	1235.8	16.9
90°-150°	3920.5	53.8
90°-180°	5225.0	71.6
0°-180°	7293.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	655	655	655	655	655	
5°	656	653	648	654	654	62
15°	629	629	627	633	633	177
25°	575	579	582	589	590	265
35°	503	512	519	529	532	315
45°	420	433	447	459	464	324
55°	329	344	366	380	385	293
65°	227	251	276	293	300	225
75°	126	153	184	204	211	134
85°	39	70	103	124	132	41
90°	15	58	100	127	136	11
95°	77	62	91	117	126	94
105°	375	397	430	455	421	392
115°	691	702	724	742	748	681
125°	969	974	989	1006	1012	865
135°	1200	1199	1208	1222	1229	924
145°	1382	1385	1385	1391	1396	863
155°	1515	1516	1512	1517	1514	698
165°	1598	1592	1592	1600	1590	451
175°	1635	1628	1628	1638	1625	156
180°	1635	1635	1635	1635	1635	



TEST NUMBER: P332765-830

CATALOG NUMBER: S124DIW-S575D1340U830-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	655.0	655.0	655.0	655.0	655.0	655.0	655.0	655.0	655.0	655.0	655.0
2.5°	657.3	657.0	656.6	656.1	655.7	655.1	654.0	653.0	651.9	650.8	651.8
5°	655.7	655.3	654.7	654.2	653.7	652.9	651.8	650.6	649.5	648.4	649.7
7.5°	650.2	649.8	649.5	649.2	648.9	648.4	647.4	646.5	645.5	644.5	646.0
10°	645.5	645.3	645.1	645.0	644.8	644.3	643.5	642.6	641.9	641.0	642.5
12.5°	638.9	638.9	638.9	638.9	638.9	638.6	638.0	637.4	636.9	636.3	637.6
15°	628.6	628.8	628.9	629.1	629.2	629.1	628.6	628.1	627.5	627.1	628.6
17.5°	614.3	614.8	615.3	615.8	616.3	616.5	616.4	616.3	616.2	616.1	617.6
20°	604.4	604.8	605.3	605.9	606.3	606.6	606.8	607.0	607.1	607.3	608.9
22.5°	593.2	593.8	594.5	595.0	595.7	596.2	596.4	596.7	597.0	597.3	599.0
25°	575.0	576.0	577.0	578.0	578.9	579.7	580.1	580.6	581.2	581.6	583.4
27.5°	554.8	556.2	557.6	559.1	560.5	561.6	562.3	563.1	563.8	564.6	566.3
30°	541.3	542.6	543.8	545.2	546.5	547.7	548.8	550.0	551.1	552.3	554.1
32.5°	526.6	528.2	529.7	531.3	532.9	534.3	535.6	536.9	538.1	539.4	541.4
35°	503.1	505.1	507.1	509.0	511.0	512.7	514.3	516.0	517.6	519.2	521.6
37.5°	479.6	481.7	484.0	486.3	488.5	490.7	492.7	494.7	496.7	498.7	501.1
40°	464.3	466.4	468.5	470.6	472.8	474.9	477.2	479.5	481.8	484.1	486.5
42.5°	446.7	449.0	451.4	453.8	456.2	458.7	461.4	464.0	466.7	469.4	472.1
45°	419.5	422.6	425.7	428.9	431.9	435.0	438.1	441.2	444.3	447.4	450.2
47.5°	393.6	396.7	399.9	403.1	406.3	409.7	413.3	416.9	420.5	424.0	427.0
50°	374.8	378.3	381.9	385.6	389.2	392.8	396.3	399.9	403.5	407.1	410.3
52.5°	356.0	359.6	363.2	366.7	370.3	374.2	378.3	382.4	386.5	390.6	393.9
55°	328.6	332.0	335.5	338.8	342.2	346.4	351.3	356.2	361.1	366.0	369.3
57.5°	297.9	302.2	306.4	310.7	314.9	319.4	324.2	329.1	334.0	338.8	342.7
60°	278.0	282.2	286.4	290.7	294.9	299.7	305.1	310.5	315.8	321.2	325.0
62.5°	258.6	263.3	267.9	272.5	277.1	282.1	287.5	292.8	298.3	303.7	307.4
65°	227.3	232.6	237.8	243.0	248.3	253.6	259.1	264.7	270.2	275.8	279.8
67.5°	197.3	202.8	208.4	214.0	219.4	225.2	231.1	237.0	243.0	248.9	253.1
70°	176.7	182.3	187.8	193.4	199.0	204.8	210.9	217.2	223.4	229.6	233.9
72.5°	156.8	162.5	168.1	173.8	179.5	185.6	192.2	198.8	205.4	212.0	216.2
75°	126.1	132.1	138.2	144.2	150.2	156.7	163.5	170.4	177.3	184.1	188.7
77.5°	97.6	104.0	110.4	116.7	123.1	129.9	137.0	144.2	151.4	158.5	163.2
80°	79.9	86.4	93.0	99.5	106.0	112.8	120.1	127.2	134.4	141.6	146.5
82.5°	62.3	69.1	75.9	82.7	89.4	96.4	103.6	110.7	117.9	125.2	130.2
85°	38.8	45.7	52.6	59.4	66.3	73.3	80.7	88.0	95.4	102.6	107.5
87.5°	22.4	29.7	36.9	44.2	51.5	58.8	66.4	74.0	81.5	89.2	94.2
90°	15.4	24.9	34.4	43.9	53.4	62.8	71.9	81.2	90.3	99.5	105.8
92.5°	26.6	32.6	38.6	44.7	50.7	58.2	67.5	76.6	85.9	95.0	101.2
95°	76.8	73.0	69.1	65.2	61.4	62.9	69.8	76.8	83.8	90.7	96.7
97.5°	151.5	161.8	172.2	182.6	193.0	186.3	162.7	138.9	115.3	91.5	96.0
100°	208.6	217.7	226.8	235.9	245.1	234.0	202.9	171.8	140.6	109.5	109.3
102.5°	273.1	280.4	287.8	295.0	302.4	306.6	308.0	309.3	310.7	312.0	266.5
105°	374.6	379.5	384.4	389.3	394.2	400.3	407.6	415.1	422.4	429.8	436.4
107.5°	470.0	473.5	477.0	480.5	484.0	489.6	497.1	504.6	512.2	519.7	524.9
110°	534.0	537.1	540.2	543.3	546.4	551.6	558.9	566.3	573.6	581.0	585.2



TEST NUMBER: P332765-830

CATALOG NUMBER: S124DIW-S575D1340U830-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	596.0	599.5	602.9	606.4	609.9	614.8	621.0	627.3	633.4	639.6	643.1
115°	691.4	693.7	696.1	698.3	700.6	704.2	709.2	714.1	719.1	724.0	728.1
117.5°	778.2	780.0	782.0	784.0	786.0	789.7	795.1	800.6	806.1	811.5	814.8
120°	836.2	837.8	839.3	840.9	842.5	845.6	850.0	854.4	858.9	863.4	867.1
122.5°	891.0	891.7	892.5	893.2	894.0	896.7	901.6	906.4	911.3	916.2	919.7
125°	968.7	969.7	970.5	971.5	972.4	974.7	978.2	981.8	985.2	988.8	992.7
127.5°	1042.9	1043.0	1043.1	1043.2	1043.4	1045.6	1050.0	1054.3	1058.8	1063.1	1065.9
130°	1090.2	1090.3	1090.4	1090.6	1090.7	1092.4	1095.9	1099.3	1102.7	1106.2	1109.4
132.5°	1134.3	1134.6	1134.9	1135.2	1135.6	1137.3	1140.4	1143.5	1146.6	1149.8	1152.8
135°	1199.6	1199.3	1199.0	1198.7	1198.4	1199.5	1201.6	1203.9	1206.1	1208.3	1211.5
137.5°	1258.0	1257.9	1257.9	1257.8	1257.7	1258.6	1260.4	1262.2	1263.9	1265.6	1268.6
140°	1296.1	1296.5	1296.8	1297.3	1297.7	1298.2	1298.9	1299.6	1300.3	1301.0	1303.9
142.5°	1329.7	1330.7	1331.6	1332.6	1333.5	1334.2	1334.4	1334.6	1334.8	1335.0	1337.5
145°	1382.2	1382.8	1383.5	1384.1	1384.8	1385.2	1385.2	1385.2	1385.2	1385.2	1386.4
147.5°	1424.0	1425.4	1426.7	1428.0	1429.5	1430.0	1429.7	1429.5	1429.2	1428.9	1429.3
150°	1454.3	1455.3	1456.1	1457.1	1458.0	1458.3	1458.1	1457.8	1457.5	1457.3	1457.3
152.5°	1479.1	1480.0	1480.8	1481.7	1482.5	1482.7	1482.2	1481.7	1481.2	1480.7	1481.2
155°	1514.8	1514.9	1515.2	1515.5	1515.8	1515.5	1514.8	1513.9	1513.1	1512.3	1513.3
157.5°	1544.8	1544.6	1544.5	1544.3	1544.2	1543.6	1542.7	1541.7	1540.9	1539.9	1541.3
160°	1562.4	1561.6	1560.8	1559.9	1559.2	1558.6	1558.3	1558.0	1557.7	1557.6	1559.2
162.5°	1578.0	1577.0	1576.0	1575.0	1574.0	1573.3	1573.0	1572.7	1572.4	1572.2	1573.8
165°	1597.9	1596.5	1595.2	1593.7	1592.4	1591.8	1591.8	1591.8	1591.8	1591.8	1593.9
167.5°	1613.5	1612.1	1610.7	1609.3	1607.9	1607.0	1606.9	1606.8	1606.6	1606.4	1608.8
170°	1622.3	1620.7	1619.0	1617.4	1615.8	1615.1	1615.3	1615.6	1615.9	1616.2	1618.3
172.5°	1628.1	1626.5	1624.9	1623.2	1621.6	1621.0	1621.3	1621.6	1621.7	1622.0	1624.2
175°	1634.6	1632.9	1631.3	1629.7	1628.0	1627.3	1627.6	1627.9	1628.1	1628.4	1630.9
177.5°	1637.5	1636.0	1634.4	1632.9	1631.4	1630.8	1631.3	1631.7	1632.1	1632.6	1634.3
180°	1634.6	1634.6	1634.6	1634.6	1634.6	1634.6	1634.6	1634.6	1634.6	1634.6	1634.6



TEST NUMBER: P332765-830

CATALOG NUMBER: S124DIW-S575D1340U830-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	655.0	655.0	655.0	655.0	655.0	655.0	655.0	655.0
2.5°	652.7	653.6	654.5	654.9	654.8	654.6	654.5	654.4
5°	651.0	652.2	653.6	654.1	654.0	653.8	653.7	653.5
7.5°	647.5	648.9	650.4	651.1	650.9	650.7	650.5	650.4
10°	643.9	645.5	646.9	647.5	647.4	647.2	647.1	646.9
12.5°	639.0	640.4	641.7	642.3	642.3	642.2	642.2	642.2
15°	630.0	631.5	632.9	633.6	633.5	633.3	633.1	632.9
17.5°	619.1	620.6	622.1	622.7	622.6	622.5	622.4	622.3
20°	610.6	612.2	613.8	614.6	614.6	614.6	614.6	614.6
22.5°	600.6	602.2	603.8	604.8	605.0	605.3	605.6	605.9
25°	585.2	587.0	588.8	589.7	589.9	590.1	590.2	590.4
27.5°	568.0	569.6	571.3	572.2	572.4	572.6	572.8	573.0
30°	555.9	557.7	559.5	560.5	560.8	561.2	561.5	561.8
32.5°	543.5	545.5	547.6	548.7	549.1	549.4	549.8	550.1
35°	523.9	526.1	528.4	529.8	530.3	530.7	531.2	531.8
37.5°	503.4	505.7	508.0	509.4	509.9	510.5	511.0	511.5
40°	489.0	491.4	493.9	495.4	496.1	496.7	497.4	498.0
42.5°	474.9	477.5	480.2	481.8	482.4	482.9	483.4	483.9
45°	453.0	455.7	458.5	460.2	461.1	461.9	462.7	463.5
47.5°	429.8	432.7	435.5	437.4	438.5	439.4	440.5	441.4
50°	413.6	416.9	420.1	422.3	423.2	424.1	425.2	426.1
52.5°	397.2	400.4	403.7	405.8	406.8	407.7	408.7	409.7
55°	372.5	375.8	379.0	381.2	382.1	383.1	384.1	385.0
57.5°	346.6	350.5	354.4	356.8	357.7	358.5	359.5	360.4
60°	328.8	332.5	336.2	338.7	340.1	341.4	342.7	344.0
62.5°	311.1	314.9	318.7	321.1	322.4	323.8	325.1	326.4
65°	283.9	288.0	292.1	294.7	296.1	297.4	298.7	300.0
67.5°	257.2	261.4	265.5	268.2	269.5	270.7	272.0	273.2
70°	238.4	242.8	247.1	250.0	251.1	252.2	253.4	254.5
72.5°	220.5	224.8	229.0	231.8	233.1	234.3	235.6	236.9
75°	193.2	197.7	202.4	205.4	206.8	208.3	209.8	211.2
77.5°	167.9	172.5	177.1	180.2	181.7	183.3	184.8	186.4
80°	151.4	156.2	161.1	164.2	165.5	166.8	168.1	169.5
82.5°	135.2	140.2	145.2	148.5	149.9	151.3	152.7	154.2
85°	112.4	117.3	122.2	125.5	127.1	128.8	130.4	132.1
87.5°	99.2	104.3	109.3	112.6	114.2	115.7	117.3	118.9
90°	112.3	118.6	124.9	129.0	130.9	132.7	134.6	136.4
92.5°	107.4	113.7	119.9	123.8	125.2	126.6	128.0	129.4
95°	102.7	108.8	114.8	118.7	120.5	122.2	123.9	125.6
97.5°	100.4	104.8	109.2	112.4	114.0	115.6	117.3	119.0
100°	109.1	108.9	108.7	109.2	110.7	112.1	113.5	114.9
102.5°	220.8	175.3	129.8	107.6	109.0	110.3	111.6	112.9
105°	442.9	449.4	455.9	455.0	446.5	438.0	429.5	421.0
107.5°	530.1	535.4	540.5	544.2	546.5	548.7	550.8	553.1
110°	589.6	593.8	598.1	601.3	603.4	605.6	607.7	609.8





TEST NUMBER: P332765-830

CATALOG NUMBER: S124DIW-S575D1340U830-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	646.7	650.2	653.7	656.6	658.9	661.3	663.5	665.9
115°	732.3	736.4	740.5	743.1	744.2	745.5	746.6	747.7
117.5°	818.0	821.3	824.6	826.9	828.1	829.2	830.5	831.7
120°	870.9	874.8	878.5	880.8	881.6	882.4	883.2	883.9
122.5°	923.3	926.9	930.5	932.6	933.2	933.9	934.5	935.1
125°	996.6	1000.5	1004.5	1007.0	1008.2	1009.5	1010.8	1012.0
127.5°	1068.7	1071.4	1074.2	1076.0	1076.9	1077.8	1078.7	1079.6
130°	1112.6	1115.8	1119.0	1121.1	1122.0	1123.0	1124.0	1124.9
132.5°	1155.9	1159.0	1162.1	1163.9	1164.7	1165.5	1166.3	1167.1
135°	1214.7	1217.8	1221.0	1223.3	1224.8	1226.3	1227.9	1229.4
137.5°	1271.6	1274.5	1277.5	1279.3	1280.0	1280.6	1281.3	1282.0
140°	1306.9	1309.9	1312.8	1314.8	1315.9	1316.9	1318.1	1319.1
142.5°	1339.9	1342.5	1344.9	1346.5	1347.2	1347.9	1348.7	1349.4
145°	1387.6	1388.8	1390.2	1391.4	1392.5	1393.7	1395.0	1396.1
147.5°	1429.6	1429.9	1430.3	1430.9	1431.6	1432.5	1433.2	1434.0
150°	1457.3	1457.3	1457.3	1457.4	1457.6	1457.9	1458.2	1458.5
152.5°	1481.6	1482.1	1482.4	1482.6	1482.4	1482.2	1482.1	1482.0
155°	1514.5	1515.5	1516.6	1516.7	1516.0	1515.1	1514.3	1513.5
157.5°	1542.8	1544.2	1545.6	1545.6	1544.2	1542.8	1541.3	1539.9
160°	1560.8	1562.4	1564.1	1564.1	1562.4	1560.8	1559.2	1557.6
162.5°	1575.5	1577.1	1578.7	1578.6	1576.8	1574.9	1573.0	1571.2
165°	1596.1	1598.3	1600.4	1600.2	1597.9	1595.4	1593.0	1590.5
167.5°	1611.2	1613.5	1616.0	1615.8	1613.1	1610.3	1607.7	1605.0
170°	1620.5	1622.7	1624.8	1624.6	1621.9	1619.2	1616.5	1613.7
172.5°	1626.4	1628.6	1630.8	1630.4	1627.4	1624.5	1621.6	1618.6
175°	1633.3	1635.8	1638.2	1637.8	1634.6	1631.3	1628.0	1624.8
177.5°	1636.1	1637.8	1639.6	1639.1	1636.4	1633.9	1631.3	1628.6
180°	1634.6	1634.6	1634.6	1634.6	1634.6	1634.6	1634.6	1634.6

(END OF REPORT)