

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: P332765-940

Luminaire Tested: **S124DIW-S575D1340U940-4F0-1E-UDD-D**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332765-940  
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-S575D1340U940-4F0-1E-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: 6900.2 lumens  
Efficiency: N/A  
Efficacy: 128.3 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

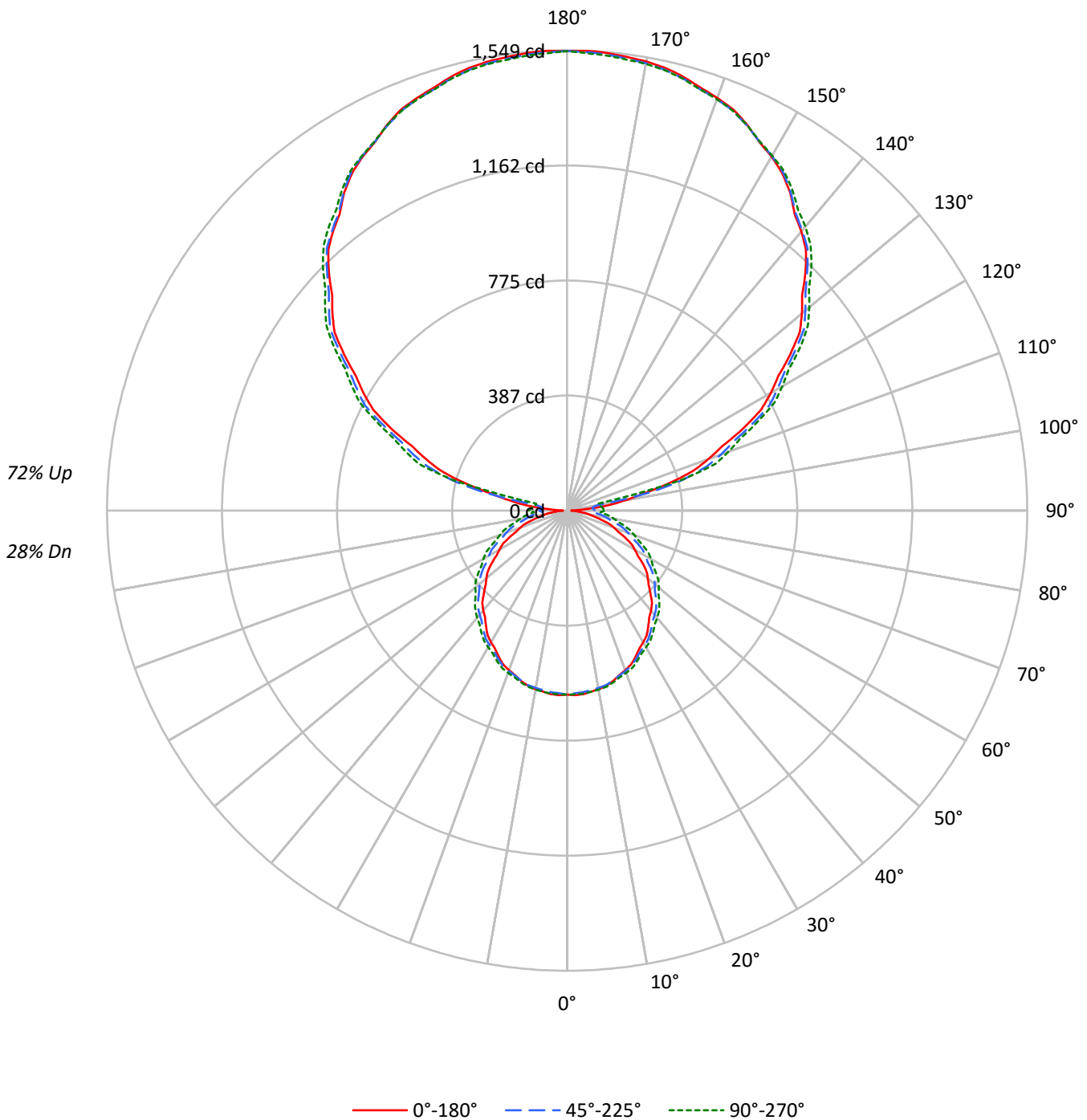
Input Watts (W): 53.8  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	5002	5002	5002
5°	5018	4889	4903
10°	4987	4809	4805
15°	4943	4717	4690
20°	4875	4614	4579
25°	4799	4500	4456
30°	4717	4386	4330
35°	4624	4269	4220
40°	4550	4158	4105
45°	4439	4056	4005
50°	4344	3938	3901
55°	4249	3827	3778
60°	4098	3685	3667
65°	3933	3533	3529
70°	3733	3359	3369
75°	3453	3169	3224
80°	3143	2984	3082
85°	2746	2820	2999



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	58.7	0.9
10°-20°	168.1	2.4
20°-30°	254.2	3.7
30°-40°	307.6	4.5
40°-50°	325.2	4.7
50°-60°	306.0	4.4
60°-70°	253.9	3.7
70°-80°	178.3	2.6
80°-90°	105.3	1.5
90°-100°	112.8	1.6
100°-110°	381.5	5.5
110°-120°	674.8	9.8
120°-130°	835.7	12.1
130°-140°	883.4	12.8
140°-150°	820.8	11.9
150°-160°	660.7	9.6
160°-170°	426.2	6.2
170°-180°	146.9	2.1
0°-30°	481.0	7.0
0°-40°	788.6	11.4
0°-60°	1419.8	20.6
0°-90°	1957.3	28.4
90°-120°	1169.1	16.9
90°-150°	3709.1	53.8
90°-180°	4943.0	71.6
0°-180°	6900.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	620	620	620	620	620	
5°	620	618	613	619	618	59
15°	595	595	593	599	599	167
25°	544	548	550	558	559	250
35°	476	484	491	501	503	298
45°	397	410	423	435	438	307
55°	311	326	346	360	364	277
65°	215	237	261	278	284	213
75°	119	145	174	193	200	127
85°	37	66	97	117	125	39
90°	14	55	94	120	129	10
95°	73	59	86	110	119	89
105°	354	376	407	431	398	371
115°	654	664	685	702	707	644
125°	916	921	936	952	957	818
135°	1135	1134	1143	1156	1163	874
145°	1308	1310	1310	1316	1321	817
155°	1433	1434	1431	1435	1432	661
165°	1512	1506	1506	1514	1505	427
175°	1546	1540	1541	1550	1537	147
180°	1546	1546	1546	1546	1546	



TEST NUMBER: P332765-940

CATALOG NUMBER: S124DIW-S575D1340U940-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	619.6	619.6	619.6	619.6	619.6	619.6	619.6	619.6	619.6	619.6	619.6
2.5°	621.9	621.5	621.2	620.7	620.4	619.7	618.8	617.8	616.7	615.7	616.6
5°	620.4	619.9	619.4	618.9	618.5	617.7	616.6	615.5	614.5	613.4	614.7
7.5°	615.1	614.7	614.5	614.2	613.9	613.4	612.5	611.6	610.6	609.8	611.2
10°	610.6	610.5	610.3	610.2	610.0	609.6	608.8	608.0	607.3	606.5	607.9
12.5°	604.5	604.5	604.5	604.4	604.4	604.1	603.6	603.1	602.5	602.0	603.2
15°	594.7	594.9	594.9	595.1	595.3	595.1	594.7	594.2	593.7	593.3	594.7
17.5°	581.2	581.7	582.1	582.6	583.1	583.3	583.2	583.1	583.0	582.9	584.2
20°	571.8	572.2	572.7	573.2	573.6	573.9	574.1	574.3	574.4	574.5	576.0
22.5°	561.2	561.8	562.4	562.9	563.6	564.0	564.3	564.5	564.8	565.1	566.7
25°	544.0	544.9	545.9	546.8	547.7	548.4	548.8	549.3	549.8	550.3	552.0
27.5°	524.9	526.2	527.5	529.0	530.3	531.3	532.0	532.7	533.4	534.1	535.7
30°	512.1	513.4	514.5	515.8	517.0	518.2	519.2	520.3	521.4	522.5	524.2
32.5°	498.2	499.7	501.1	502.7	504.2	505.5	506.7	507.9	509.1	510.3	512.2
35°	476.0	477.9	479.7	481.5	483.4	485.1	486.6	488.2	489.7	491.2	493.5
37.5°	453.7	455.8	457.9	460.0	462.2	464.2	466.1	468.1	469.9	471.8	474.0
40°	439.3	441.2	443.3	445.2	447.3	449.3	451.5	453.6	455.8	458.0	460.3
42.5°	422.6	424.8	427.0	429.4	431.6	434.0	436.5	439.0	441.6	444.1	446.7
45°	396.9	399.8	402.8	405.7	408.6	411.5	414.5	417.4	420.4	423.3	425.9
47.5°	372.4	375.3	378.4	381.4	384.4	387.6	391.0	394.4	397.8	401.2	403.9
50°	354.5	357.9	361.3	364.8	368.2	371.6	375.0	378.4	381.7	385.1	388.2
52.5°	336.8	340.2	343.6	347.0	350.4	354.0	357.9	361.8	365.7	369.5	372.6
55°	310.9	314.1	317.4	320.6	323.8	327.7	332.3	337.0	341.6	346.3	349.4
57.5°	281.9	285.9	289.9	293.9	297.9	302.2	306.7	311.4	316.0	320.6	324.2
60°	263.0	267.0	271.0	275.0	279.0	283.6	288.6	293.7	298.8	303.9	307.5
62.5°	244.7	249.1	253.4	257.8	262.2	266.9	272.0	277.1	282.2	287.3	290.8
65°	215.1	220.1	225.0	229.9	234.9	240.0	245.1	250.4	255.7	260.9	264.7
67.5°	186.6	191.9	197.2	202.4	207.6	213.0	218.6	224.3	229.9	235.5	239.4
70°	167.2	172.5	177.7	183.0	188.2	193.8	199.6	205.5	211.3	217.2	221.3
72.5°	148.4	153.7	159.1	164.4	169.8	175.6	181.8	188.1	194.3	200.5	204.6
75°	119.3	125.0	130.7	136.4	142.1	148.3	154.7	161.2	167.7	174.2	178.5
77.5°	92.3	98.4	104.4	110.4	116.5	122.9	129.7	136.4	143.2	150.0	154.4
80°	75.6	81.8	88.0	94.2	100.3	106.7	113.6	120.4	127.2	133.9	138.6
82.5°	58.9	65.4	71.8	78.2	84.6	91.2	98.0	104.8	111.6	118.4	123.1
85°	36.7	43.2	49.8	56.2	62.7	69.4	76.3	83.3	90.2	97.1	101.7
87.5°	21.2	28.1	35.0	41.8	48.7	55.6	62.9	70.0	77.1	84.4	89.1
90°	14.5	23.5	32.5	41.6	50.6	59.4	68.0	76.8	85.4	94.2	100.1
92.5°	25.1	30.9	36.6	42.3	48.0	55.1	63.8	72.5	81.2	89.9	95.8
95°	72.7	69.0	65.4	61.7	58.1	59.5	66.1	72.7	79.3	85.8	91.5
97.5°	143.3	153.1	162.9	172.7	182.6	176.3	153.9	131.4	109.1	86.6	90.8
100°	197.3	206.0	214.5	223.2	231.8	221.4	192.0	162.6	133.0	103.6	103.4
102.5°	258.4	265.3	272.2	279.1	286.1	290.1	291.4	292.7	293.9	295.2	252.1
105°	354.4	359.0	363.6	368.3	372.9	378.7	385.7	392.7	399.7	406.6	412.9
107.5°	444.7	448.0	451.3	454.6	457.9	463.2	470.3	477.4	484.6	491.7	496.6
110°	505.2	508.1	511.0	514.0	516.9	521.8	528.8	535.7	542.7	549.7	553.7



TEST NUMBER: P332765-940

CATALOG NUMBER: S124DIW-S575D1340U940-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	563.8	567.1	570.4	573.7	577.0	581.7	587.5	593.4	599.2	605.1	608.4
115°	654.2	656.3	658.5	660.7	662.8	666.2	670.9	675.6	680.3	684.9	688.8
117.5°	736.2	738.0	739.9	741.7	743.6	747.1	752.2	757.4	762.6	767.8	770.9
120°	791.1	792.6	794.1	795.6	797.1	800.0	804.1	808.3	812.6	816.8	820.4
122.5°	842.9	843.6	844.4	845.1	845.8	848.4	853.0	857.6	862.2	866.7	870.1
125°	916.5	917.4	918.2	919.1	920.0	922.1	925.4	928.8	932.1	935.5	939.1
127.5°	986.7	986.8	986.9	986.9	987.1	989.2	993.4	997.5	1001.7	1005.8	1008.4
130°	1031.4	1031.5	1031.6	1031.8	1031.9	1033.5	1036.8	1040.0	1043.2	1046.5	1049.5
132.5°	1073.1	1073.4	1073.7	1074.0	1074.3	1075.9	1078.9	1081.8	1084.8	1087.8	1090.7
135°	1134.9	1134.6	1134.3	1134.1	1133.8	1134.8	1136.8	1139.0	1141.0	1143.2	1146.2
137.5°	1190.2	1190.1	1190.1	1190.0	1189.9	1190.7	1192.4	1194.1	1195.7	1197.4	1200.2
140°	1226.2	1226.5	1226.9	1227.4	1227.7	1228.2	1228.9	1229.5	1230.2	1230.8	1233.6
142.5°	1258.0	1258.9	1259.8	1260.7	1261.6	1262.2	1262.4	1262.7	1262.8	1263.0	1265.3
145°	1307.7	1308.2	1308.9	1309.5	1310.1	1310.5	1310.5	1310.5	1310.5	1310.5	1311.6
147.5°	1347.2	1348.5	1349.8	1351.0	1352.4	1352.9	1352.6	1352.4	1352.1	1351.8	1352.2
150°	1375.9	1376.8	1377.6	1378.5	1379.4	1379.7	1379.5	1379.2	1378.9	1378.7	1378.7
152.5°	1399.4	1400.2	1401.0	1401.8	1402.6	1402.8	1402.3	1401.8	1401.3	1400.9	1401.3
155°	1433.1	1433.2	1433.5	1433.8	1434.0	1433.8	1433.1	1432.3	1431.5	1430.7	1431.7
157.5°	1461.5	1461.3	1461.2	1461.0	1460.9	1460.4	1459.5	1458.6	1457.8	1456.9	1458.2
160°	1478.1	1477.4	1476.6	1475.8	1475.1	1474.5	1474.3	1474.0	1473.7	1473.6	1475.1
162.5°	1492.9	1491.9	1491.0	1490.0	1489.1	1488.4	1488.2	1487.9	1487.6	1487.4	1488.9
165°	1511.7	1510.4	1509.1	1507.8	1506.5	1505.9	1505.9	1505.9	1505.9	1505.9	1508.0
167.5°	1526.5	1525.2	1523.8	1522.5	1521.2	1520.4	1520.3	1520.1	1519.9	1519.7	1522.1
170°	1534.8	1533.3	1531.7	1530.2	1528.7	1528.0	1528.2	1528.5	1528.7	1529.0	1531.1
172.5°	1540.3	1538.8	1537.3	1535.7	1534.2	1533.6	1533.8	1534.1	1534.3	1534.5	1536.6
175°	1546.4	1544.8	1543.3	1541.8	1540.2	1539.5	1539.8	1540.1	1540.3	1540.6	1542.9
177.5°	1549.2	1547.7	1546.2	1544.8	1543.4	1542.8	1543.3	1543.7	1544.1	1544.5	1546.1
180°	1546.4	1546.4	1546.4	1546.4	1546.4	1546.4	1546.4	1546.4	1546.4	1546.4	1546.4



TEST NUMBER: P332765-940

CATALOG NUMBER: S124DIW-S575D1340U940-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	619.6	619.6	619.6	619.6	619.6	619.6	619.6	619.6
2.5°	617.5	618.3	619.2	619.6	619.5	619.3	619.2	619.1
5°	615.9	617.1	618.3	618.8	618.8	618.6	618.4	618.2
7.5°	612.6	613.9	615.4	616.0	615.8	615.6	615.5	615.4
10°	609.2	610.6	612.0	612.6	612.5	612.3	612.2	612.0
12.5°	604.6	605.8	607.1	607.7	607.7	607.6	607.6	607.6
15°	596.0	597.4	598.8	599.4	599.3	599.1	599.0	598.8
17.5°	585.7	587.1	588.5	589.2	589.1	589.0	588.8	588.7
20°	577.7	579.2	580.7	581.5	581.5	581.5	581.5	581.5
22.5°	568.2	569.7	571.2	572.2	572.4	572.7	572.9	573.2
25°	553.7	555.4	557.1	557.9	558.1	558.3	558.4	558.6
27.5°	537.3	538.9	540.5	541.4	541.5	541.7	541.9	542.1
30°	525.9	527.6	529.3	530.3	530.6	530.9	531.2	531.5
32.5°	514.2	516.1	518.1	519.2	519.5	519.8	520.1	520.4
35°	495.6	497.8	499.9	501.2	501.7	502.1	502.6	503.1
37.5°	476.3	478.4	480.6	482.0	482.4	483.0	483.4	483.9
40°	462.6	464.9	467.3	468.7	469.3	469.9	470.6	471.2
42.5°	449.2	451.7	454.3	455.8	456.4	456.8	457.4	457.8
45°	428.6	431.1	433.7	435.4	436.2	437.0	437.7	438.5
47.5°	406.6	409.4	412.1	413.8	414.8	415.7	416.7	417.6
50°	391.3	394.4	397.4	399.5	400.4	401.3	402.3	403.1
52.5°	375.8	378.8	381.9	383.9	384.9	385.8	386.6	387.6
55°	352.4	355.5	358.6	360.6	361.5	362.5	363.4	364.3
57.5°	327.9	331.6	335.3	337.5	338.4	339.2	340.1	341.0
60°	311.0	314.6	318.1	320.5	321.7	323.0	324.2	325.5
62.5°	294.4	297.9	301.5	303.8	305.1	306.3	307.6	308.8
65°	268.6	272.5	276.3	278.8	280.1	281.3	282.6	283.8
67.5°	243.3	247.3	251.2	253.7	254.9	256.1	257.3	258.5
70°	225.5	229.7	233.8	236.5	237.6	238.6	239.7	240.8
72.5°	208.6	212.7	216.7	219.3	220.5	221.7	222.9	224.1
75°	182.8	187.1	191.5	194.3	195.6	197.1	198.5	199.8
77.5°	158.8	163.2	167.6	170.5	171.9	173.4	174.9	176.4
80°	143.2	147.8	152.4	155.3	156.6	157.8	159.1	160.3
82.5°	127.9	132.6	137.4	140.4	141.8	143.1	144.5	145.9
85°	106.4	111.0	115.7	118.8	120.3	121.8	123.3	124.9
87.5°	93.9	98.7	103.4	106.6	108.1	109.5	110.9	112.4
90°	106.2	112.2	118.2	122.1	123.9	125.6	127.3	129.0
92.5°	101.7	107.5	113.4	117.1	118.4	119.8	121.1	122.4
95°	97.2	102.9	108.6	112.3	114.0	115.6	117.3	118.9
97.5°	95.0	99.2	103.3	106.3	107.8	109.4	111.0	112.6
100°	103.2	103.0	102.8	103.3	104.7	106.0	107.4	108.7
102.5°	208.9	165.9	122.8	101.8	103.1	104.3	105.6	106.8
105°	419.0	425.2	431.3	430.4	422.4	414.4	406.4	398.3
107.5°	501.5	506.5	511.4	514.9	517.0	519.1	521.1	523.3
110°	557.8	561.8	565.9	568.9	570.9	572.9	574.9	576.9





TEST NUMBER: P332765-940

CATALOG NUMBER: S124DIW-S575D1340U940-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	611.8	615.1	618.4	621.2	623.4	625.6	627.8	630.0
115°	692.8	696.7	700.5	703.0	704.1	705.3	706.3	707.4
117.5°	773.9	777.0	780.2	782.3	783.5	784.5	785.7	786.8
120°	823.9	827.6	831.2	833.3	834.0	834.8	835.5	836.2
122.5°	873.5	876.9	880.3	882.3	882.9	883.5	884.1	884.7
125°	942.9	946.6	950.3	952.7	953.9	955.0	956.3	957.4
127.5°	1011.0	1013.6	1016.3	1018.0	1018.9	1019.7	1020.6	1021.4
130°	1052.6	1055.6	1058.6	1060.6	1061.5	1062.5	1063.4	1064.3
132.5°	1093.6	1096.4	1099.4	1101.2	1101.9	1102.7	1103.4	1104.1
135°	1149.1	1152.1	1155.1	1157.4	1158.8	1160.2	1161.6	1163.1
137.5°	1203.0	1205.8	1208.6	1210.3	1210.9	1211.6	1212.2	1212.8
140°	1236.4	1239.2	1242.0	1243.8	1244.9	1245.9	1247.0	1247.9
142.5°	1267.7	1270.1	1272.4	1273.9	1274.5	1275.2	1275.9	1276.7
145°	1312.8	1313.9	1315.2	1316.3	1317.4	1318.6	1319.7	1320.8
147.5°	1352.5	1352.8	1353.2	1353.7	1354.4	1355.2	1355.9	1356.6
150°	1378.7	1378.7	1378.7	1378.8	1379.0	1379.3	1379.6	1379.8
152.5°	1401.7	1402.1	1402.5	1402.7	1402.5	1402.3	1402.2	1402.0
155°	1432.8	1433.8	1434.9	1434.9	1434.2	1433.4	1432.6	1431.9
157.5°	1459.6	1460.9	1462.2	1462.2	1460.9	1459.6	1458.2	1456.9
160°	1476.6	1478.1	1479.7	1479.7	1478.1	1476.6	1475.1	1473.6
162.5°	1490.5	1492.0	1493.5	1493.4	1491.7	1490.0	1488.2	1486.5
165°	1510.0	1512.1	1514.1	1513.9	1511.7	1509.4	1507.1	1504.8
167.5°	1524.3	1526.5	1528.8	1528.7	1526.1	1523.5	1521.0	1518.4
170°	1533.1	1535.2	1537.2	1537.0	1534.5	1531.9	1529.3	1526.7
172.5°	1538.6	1540.8	1542.8	1542.5	1539.6	1536.9	1534.1	1531.3
175°	1545.2	1547.6	1549.9	1549.4	1546.4	1543.3	1540.2	1537.1
177.5°	1547.8	1549.4	1551.1	1550.7	1548.2	1545.8	1543.3	1540.8
180°	1546.4	1546.4	1546.4	1546.4	1546.4	1546.4	1546.4	1546.4

(END OF REPORT)