

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: P332565-935

Luminaire Tested: **S124DIP-S575D1035U935-4F0-1E-UDD-D**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332565-935  
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: S124DIP-S575D1035U935-4F0-1E-UDD-D  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 575 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 1035 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5597.5 lumens  
Efficiency: N/A  
Efficacy: 125.8 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

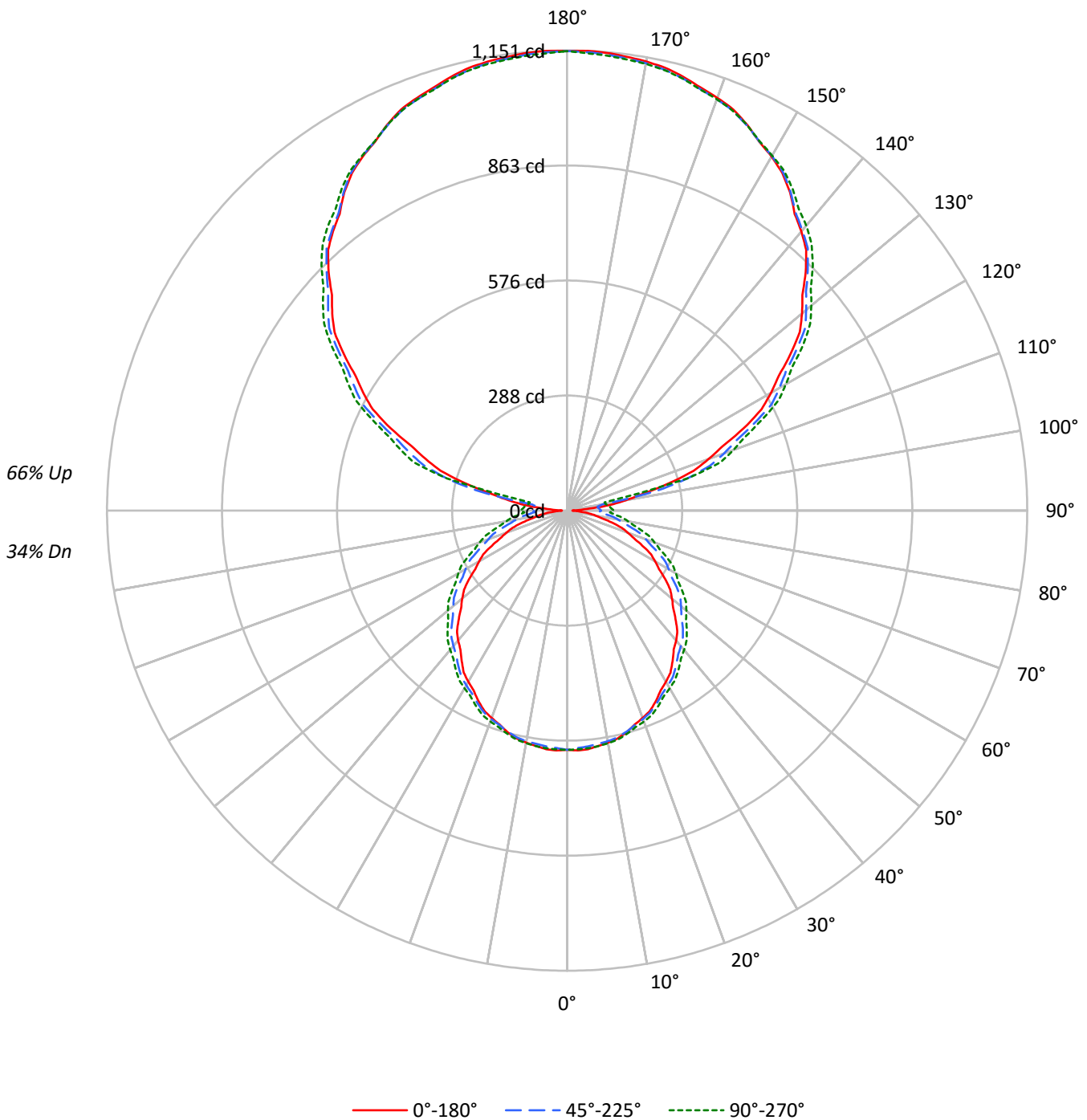
Input Watts (W): 44.5  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	103	103	103	103	93	93	93	93	74	74	74	57	57	57	41	41	41	34
1	93	89	85	81	84	80	77	74	64	62	59	49	47	46	35	34	33	27
2	85	77	71	66	76	70	64	60	56	52	49	43	40	38	31	29	28	22
3	77	68	60	54	69	61	55	50	49	44	40	37	34	32	27	25	23	18
4	70	60	52	46	63	54	47	42	43	38	34	33	30	27	24	22	20	16
5	64	53	45	39	58	48	41	36	38	33	29	30	26	23	21	19	17	13
6	59	47	39	33	53	43	36	31	34	29	25	27	23	20	19	17	15	12
7	55	42	35	29	49	39	32	27	31	26	22	24	20	18	18	15	13	10
8	51	38	31	25	45	35	28	23	28	23	19	22	18	16	16	14	12	9
9	47	35	28	23	42	32	25	21	26	21	17	20	16	14	15	12	10	8
10	44	32	25	20	39	29	23	18	24	19	15	19	15	12	14	11	9	7

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

	0°	45°	90°
0°	4830	4830	4830
5°	4845	4721	4734
10°	4816	4644	4639
15°	4772	4554	4529
20°	4707	4455	4422
25°	4634	4345	4302
30°	4555	4235	4181
35°	4464	4122	4074
40°	4393	4015	3964
45°	4286	3916	3867
50°	4195	3803	3767
55°	4102	3695	3648
60°	3957	3557	3541
65°	3798	3411	3409
70°	3603	3243	3253
75°	3334	3060	3114
80°	3035	2882	2977
85°	2656	2725	2896



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	56.7	1.0
10°-20°	162.3	2.9
20°-30°	245.5	4.4
30°-40°	297.0	5.3
40°-50°	314.0	5.6
50°-60°	295.5	5.3
60°-70°	245.2	4.4
70°-80°	172.2	3.1
80°-90°	100.7	1.8
90°-100°	97.1	1.7
100°-110°	293.4	5.2
110°-120°	508.1	9.1
120°-130°	624.8	11.2
130°-140°	658.1	11.8
140°-150°	610.3	10.9
150°-160°	491.0	8.8
160°-170°	316.7	5.7
170°-180°	109.2	1.9
0°-30°	464.5	8.3
0°-40°	761.4	13.6
0°-60°	1370.9	24.5
0°-90°	1888.9	33.7
90°-120°	898.6	16.1
90°-150°	2791.8	49.9
90°-180°	3709.0	66.3
0°-180°	5597.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	598	598	598	598	598	
5°	599	597	592	597	597	57
15°	574	575	573	578	578	162
25°	525	529	531	538	539	242
35°	460	468	474	483	486	288
45°	383	396	409	420	423	296
55°	300	314	334	347	352	267
65°	208	229	252	268	274	206
75°	115	140	168	186	193	123
85°	36	64	94	113	121	38
90°	13	50	85	109	117	9
95°	56	51	77	100	107	68
105°	265	284	312	334	311	277
115°	487	496	516	532	537	479
125°	682	685	700	714	720	609
135°	844	843	851	863	869	650
145°	972	974	974	979	983	607
155°	1065	1066	1063	1066	1064	491
165°	1123	1119	1119	1125	1118	317
175°	1149	1144	1145	1152	1142	109
180°	1149	1149	1149	1149	1149	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	598.3	598.3	598.3	598.3	598.3	598.3	598.3	598.3	598.3	598.3	598.3
2.5°	600.5	600.1	599.8	599.3	599.0	598.4	597.4	596.5	595.5	594.5	595.4
5°	599.0	598.6	598.1	597.6	597.2	596.4	595.4	594.3	593.3	592.3	593.5
7.5°	593.9	593.6	593.3	593.1	592.8	592.3	591.4	590.6	589.6	588.8	590.1
10°	589.6	589.4	589.3	589.2	589.0	588.6	587.8	587.0	586.3	585.6	586.9
12.5°	583.7	583.7	583.7	583.6	583.6	583.3	582.8	582.3	581.8	581.3	582.5
15°	574.2	574.4	574.5	574.6	574.8	574.6	574.2	573.8	573.3	572.8	574.2
17.5°	561.2	561.6	562.1	562.5	563.0	563.2	563.1	563.0	562.9	562.8	564.1
20°	552.1	552.5	552.9	553.5	553.9	554.1	554.3	554.5	554.6	554.7	556.2
22.5°	541.9	542.4	543.0	543.5	544.2	544.6	544.8	545.1	545.4	545.6	547.2
25°	525.3	526.2	527.1	528.0	528.8	529.5	529.9	530.4	530.9	531.3	533.0
27.5°	506.8	508.1	509.4	510.7	512.0	513.0	513.7	514.4	515.1	515.7	517.3
30°	494.5	495.7	496.8	498.0	499.2	500.3	501.4	502.4	503.4	504.5	506.2
32.5°	481.0	482.5	483.9	485.3	486.8	488.1	489.2	490.4	491.5	492.8	494.6
35°	459.6	461.4	463.2	464.9	466.7	468.4	469.8	471.4	472.9	474.3	476.5
37.5°	438.1	440.1	442.1	444.2	446.3	448.2	450.0	451.9	453.7	455.6	457.7
40°	424.1	426.0	428.0	429.9	431.9	433.9	435.9	438.0	440.1	442.2	444.4
42.5°	408.0	410.2	412.3	414.6	416.7	419.0	421.5	423.9	426.4	428.8	431.3
45°	383.2	386.1	388.9	391.8	394.5	397.4	400.2	403.0	405.9	408.7	411.2
47.5°	359.6	362.4	365.3	368.2	371.2	374.3	377.5	380.8	384.1	387.4	390.0
50°	342.3	345.6	348.9	352.2	355.5	358.8	362.1	365.3	368.6	371.9	374.8
52.5°	325.2	328.5	331.7	335.0	338.3	341.8	345.6	349.3	353.1	356.8	359.8
55°	300.1	303.2	306.4	309.5	312.6	316.4	320.9	325.4	329.8	334.3	337.3
57.5°	272.2	276.0	279.9	283.8	287.7	291.8	296.2	300.7	305.1	309.5	313.1
60°	253.9	257.8	261.7	265.5	269.4	273.8	278.7	283.6	288.5	293.4	296.9
62.5°	236.3	240.5	244.7	248.9	253.1	257.7	262.6	267.5	272.5	277.4	280.8
65°	207.7	212.5	217.2	222.0	226.8	231.7	236.7	241.8	246.8	251.9	255.6
67.5°	180.2	185.3	190.4	195.4	200.4	205.7	211.1	216.5	222.0	227.4	231.2
70°	161.4	166.5	171.6	176.7	181.8	187.1	192.7	198.4	204.1	209.7	213.7
72.5°	143.3	148.4	153.6	158.8	163.9	169.5	175.6	181.6	187.6	193.6	197.5
75°	115.2	120.7	126.2	131.7	137.2	143.2	149.4	155.7	162.0	168.2	172.4
77.5°	89.1	95.0	100.8	106.6	112.4	118.6	125.2	131.7	138.3	144.8	149.0
80°	73.0	79.0	85.0	90.9	96.9	103.1	109.7	116.2	122.8	129.3	133.8
82.5°	56.9	63.1	69.3	75.5	81.7	88.1	94.6	101.2	107.7	114.3	118.9
85°	35.5	41.8	48.0	54.2	60.5	67.0	73.7	80.4	87.1	93.8	98.2
87.5°	20.3	26.9	33.3	39.9	46.3	53.0	59.8	66.6	73.4	80.3	84.8
90°	13.3	21.4	29.4	37.5	45.5	53.6	61.5	69.4	77.3	85.2	90.7
92.5°	21.0	26.5	31.9	37.5	42.9	49.6	57.5	65.4	73.4	81.4	86.7
95°	56.0	54.4	52.8	51.2	49.7	52.0	58.3	64.6	70.9	77.2	82.4
97.5°	108.3	116.6	124.8	133.1	141.4	137.9	122.6	107.4	92.1	76.8	80.8
100°	148.4	155.7	163.0	170.2	177.5	170.9	150.4	129.8	109.3	88.8	89.5
102.5°	193.7	199.7	205.5	211.5	217.4	221.4	223.7	225.9	228.2	230.5	199.3
105°	264.8	268.9	273.0	277.2	281.2	286.5	293.0	299.5	305.9	312.4	317.8
107.5°	331.8	334.8	337.9	340.9	343.9	348.6	355.2	361.7	368.2	374.7	379.2
110°	376.7	379.4	382.0	384.6	387.3	391.8	398.1	404.5	410.9	417.2	421.0



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	420.2	423.0	425.9	428.8	431.6	435.8	441.3	446.9	452.4	457.9	461.1
115°	487.1	489.0	490.9	492.8	494.7	498.0	502.6	507.1	511.7	516.3	519.9
117.5°	547.9	549.5	551.1	552.7	554.2	557.4	562.3	567.1	572.0	576.9	579.9
120°	588.7	589.9	591.1	592.3	593.5	596.2	600.3	604.4	608.6	612.7	616.0
122.5°	627.2	627.8	628.3	628.8	629.4	631.8	636.2	640.5	644.9	649.2	652.4
125°	681.7	682.3	682.9	683.5	684.2	686.1	689.5	692.8	696.1	699.5	702.9
127.5°	733.8	733.8	733.9	733.9	734.0	735.9	739.6	743.4	747.1	750.8	753.4
130°	767.0	767.0	767.1	767.1	767.2	768.6	771.6	774.6	777.5	780.5	783.3
132.5°	797.9	798.1	798.3	798.5	798.7	800.1	802.7	805.4	808.0	810.6	813.4
135°	843.7	843.4	843.3	843.1	842.9	843.7	845.5	847.3	849.1	850.9	853.7
137.5°	884.8	884.7	884.6	884.5	884.4	885.1	886.4	887.8	889.2	890.4	893.0
140°	911.5	911.8	912.1	912.2	912.5	912.9	913.4	914.0	914.5	915.0	917.5
142.5°	935.1	935.7	936.4	937.0	937.7	938.1	938.2	938.4	938.6	938.7	940.8
145°	971.9	972.3	972.8	973.2	973.6	973.8	973.8	973.8	973.8	973.8	974.9
147.5°	1001.3	1002.2	1003.2	1004.1	1005.0	1005.4	1005.1	1005.0	1004.8	1004.6	1004.9
150°	1022.6	1023.2	1023.8	1024.5	1025.1	1025.3	1025.1	1024.9	1024.8	1024.5	1024.5
152.5°	1040.0	1040.5	1041.1	1041.7	1042.3	1042.4	1042.1	1041.7	1041.4	1041.0	1041.4
155°	1065.0	1065.1	1065.3	1065.5	1065.7	1065.5	1065.0	1064.4	1063.8	1063.2	1063.9
157.5°	1086.1	1086.0	1085.8	1085.7	1085.6	1085.2	1084.6	1083.9	1083.3	1082.6	1083.7
160°	1098.5	1097.9	1097.3	1096.7	1096.1	1095.8	1095.6	1095.4	1095.2	1095.0	1096.1
162.5°	1109.5	1108.7	1108.0	1107.2	1106.6	1106.1	1105.9	1105.7	1105.5	1105.4	1106.5
165°	1123.3	1122.4	1121.5	1120.5	1119.6	1119.0	1119.0	1119.0	1119.0	1119.0	1120.6
167.5°	1134.4	1133.4	1132.4	1131.4	1130.4	1129.9	1129.7	1129.6	1129.5	1129.4	1131.1
170°	1140.6	1139.4	1138.2	1137.1	1136.0	1135.5	1135.7	1135.9	1136.1	1136.3	1137.8
172.5°	1144.7	1143.6	1142.4	1141.3	1140.1	1139.6	1139.8	1140.1	1140.2	1140.4	1141.9
175°	1149.2	1148.1	1146.9	1145.7	1144.6	1144.1	1144.3	1144.5	1144.7	1144.9	1146.6
177.5°	1151.2	1150.1	1149.1	1148.1	1146.9	1146.6	1146.9	1147.2	1147.5	1147.8	1149.0
180°	1149.2	1149.2	1149.2	1149.2	1149.2	1149.2	1149.2	1149.2	1149.2	1149.2	1149.2



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	598.3	598.3	598.3	598.3	598.3	598.3	598.3	598.3
2.5°	596.2	597.0	597.9	598.2	598.1	598.0	597.9	597.8
5°	594.7	595.8	597.0	597.5	597.4	597.3	597.1	596.9
7.5°	591.5	592.8	594.2	594.8	594.6	594.4	594.3	594.2
10°	588.2	589.6	590.9	591.5	591.4	591.2	591.1	590.9
12.5°	583.8	585.0	586.2	586.8	586.8	586.7	586.7	586.7
15°	575.5	576.9	578.2	578.8	578.7	578.5	578.3	578.2
17.5°	565.5	566.9	568.3	568.9	568.8	568.7	568.5	568.4
20°	557.8	559.2	560.7	561.5	561.5	561.5	561.5	561.5
22.5°	548.6	550.1	551.6	552.5	552.7	552.9	553.2	553.5
25°	534.6	536.2	537.9	538.7	538.9	539.1	539.2	539.3
27.5°	518.8	520.3	521.9	522.7	522.9	523.1	523.2	523.4
30°	507.8	509.5	511.1	512.0	512.3	512.6	512.9	513.2
32.5°	496.5	498.3	500.2	501.3	501.6	501.9	502.2	502.5
35°	478.5	480.6	482.7	484.0	484.4	484.8	485.3	485.8
37.5°	459.9	461.9	464.1	465.4	465.8	466.3	466.7	467.3
40°	446.7	448.9	451.2	452.5	453.1	453.7	454.3	455.0
42.5°	433.8	436.2	438.7	440.1	440.7	441.1	441.6	442.0
45°	413.8	416.3	418.8	420.4	421.2	422.0	422.7	423.4
47.5°	392.6	395.3	397.9	399.6	400.5	401.4	402.3	403.2
50°	377.8	380.8	383.7	385.7	386.6	387.4	388.4	389.3
52.5°	362.8	365.8	368.8	370.7	371.6	372.5	373.3	374.3
55°	340.3	343.3	346.2	348.2	349.0	350.0	350.9	351.7
57.5°	316.6	320.2	323.7	325.9	326.7	327.5	328.4	329.2
60°	300.3	303.8	307.1	309.4	310.6	311.9	313.1	314.3
62.5°	284.2	287.7	291.1	293.3	294.5	295.8	297.0	298.2
65°	259.3	263.1	266.8	269.2	270.4	271.6	272.9	274.1
67.5°	235.0	238.8	242.5	245.0	246.2	247.3	248.5	249.6
70°	217.7	221.8	225.8	228.3	229.4	230.4	231.4	232.5
72.5°	201.4	205.3	209.2	211.7	212.9	214.0	215.2	216.4
75°	176.5	180.6	184.9	187.6	188.9	190.3	191.7	193.0
77.5°	153.3	157.6	161.8	164.6	166.0	167.5	168.8	170.3
80°	138.3	142.7	147.1	150.0	151.2	152.4	153.6	154.8
82.5°	123.5	128.0	132.7	135.6	136.9	138.2	139.5	140.9
85°	102.7	107.2	111.7	114.7	116.1	117.6	119.1	120.6
87.5°	89.4	93.9	98.5	101.4	102.8	104.2	105.6	107.0
90°	96.2	101.6	107.1	110.6	112.2	113.7	115.4	116.9
92.5°	92.0	97.4	102.7	106.0	107.3	108.6	109.9	111.1
95°	87.6	92.7	97.9	101.3	102.7	104.3	105.8	107.4
97.5°	84.9	88.9	92.9	95.7	97.1	98.6	100.0	101.5
100°	90.3	91.1	91.9	92.8	94.1	95.3	96.5	97.7
102.5°	168.2	137.1	105.9	91.0	92.2	93.3	94.5	95.7
105°	323.3	328.7	334.2	334.1	328.4	322.7	316.9	311.3
107.5°	383.7	388.2	392.7	395.9	397.6	399.4	401.2	403.0
110°	424.8	428.7	432.5	435.2	437.0	438.8	440.6	442.3





TEST NUMBER: P332565-935

CATALOG NUMBER: S124DIP-S575D1035U935-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	464.3	467.5	470.8	473.4	475.3	477.2	479.1	481.0
115°	523.6	527.2	530.9	533.2	534.3	535.3	536.4	537.4
117.5°	582.9	585.9	588.9	591.0	592.1	593.2	594.3	595.5
120°	619.4	622.8	626.1	628.2	629.0	629.8	630.7	631.5
122.5°	655.7	658.8	662.0	664.0	664.7	665.4	666.1	666.8
125°	706.3	709.7	713.1	715.3	716.4	717.5	718.6	719.7
127.5°	756.0	758.5	761.1	762.8	763.6	764.5	765.3	766.2
130°	786.2	789.1	791.9	793.8	794.7	795.7	796.5	797.4
132.5°	816.1	818.9	821.7	823.4	824.1	824.8	825.6	826.4
135°	856.4	859.2	861.9	864.0	865.3	866.6	867.8	869.1
137.5°	895.7	898.3	900.9	902.5	903.1	903.7	904.4	905.0
140°	920.0	922.6	925.1	926.8	927.7	928.6	929.5	930.5
142.5°	942.9	945.0	947.2	948.6	949.2	949.9	950.5	951.2
145°	976.0	977.1	978.2	979.2	980.2	981.1	982.1	983.1
147.5°	1005.1	1005.4	1005.6	1006.2	1006.9	1007.5	1008.1	1008.8
150°	1024.5	1024.5	1024.5	1024.6	1024.8	1025.0	1025.2	1025.4
152.5°	1041.6	1042.0	1042.2	1042.3	1042.2	1042.2	1042.0	1041.9
155°	1064.7	1065.5	1066.3	1066.3	1065.8	1065.2	1064.6	1064.1
157.5°	1084.6	1085.6	1086.6	1086.6	1085.6	1084.6	1083.7	1082.6
160°	1097.3	1098.5	1099.6	1099.6	1098.5	1097.3	1096.1	1095.0
162.5°	1107.6	1108.8	1109.9	1109.8	1108.5	1107.2	1106.0	1104.7
165°	1122.1	1123.7	1125.2	1125.1	1123.3	1121.6	1119.9	1118.2
167.5°	1132.7	1134.5	1136.1	1136.0	1134.1	1132.2	1130.2	1128.3
170°	1139.4	1140.8	1142.4	1142.2	1140.3	1138.4	1136.4	1134.5
172.5°	1143.5	1145.0	1146.5	1146.2	1144.2	1142.1	1140.1	1138.0
175°	1148.3	1150.0	1151.8	1151.4	1149.2	1146.9	1144.6	1142.3
177.5°	1150.2	1151.4	1152.7	1152.4	1150.6	1148.7	1146.9	1145.0
180°	1149.2	1149.2	1149.2	1149.2	1149.2	1149.2	1149.2	1149.2

(END OF REPORT)