

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: P332524

Luminaire Tested: **S124DIP-S350D1035U835-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332524
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124DIP-S350D1035U835-4F0-1E-UDD-F1
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 350 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 1035 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5100.4 lumens
Efficiency: N/A
Efficacy: 136.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: Semi-Indirect

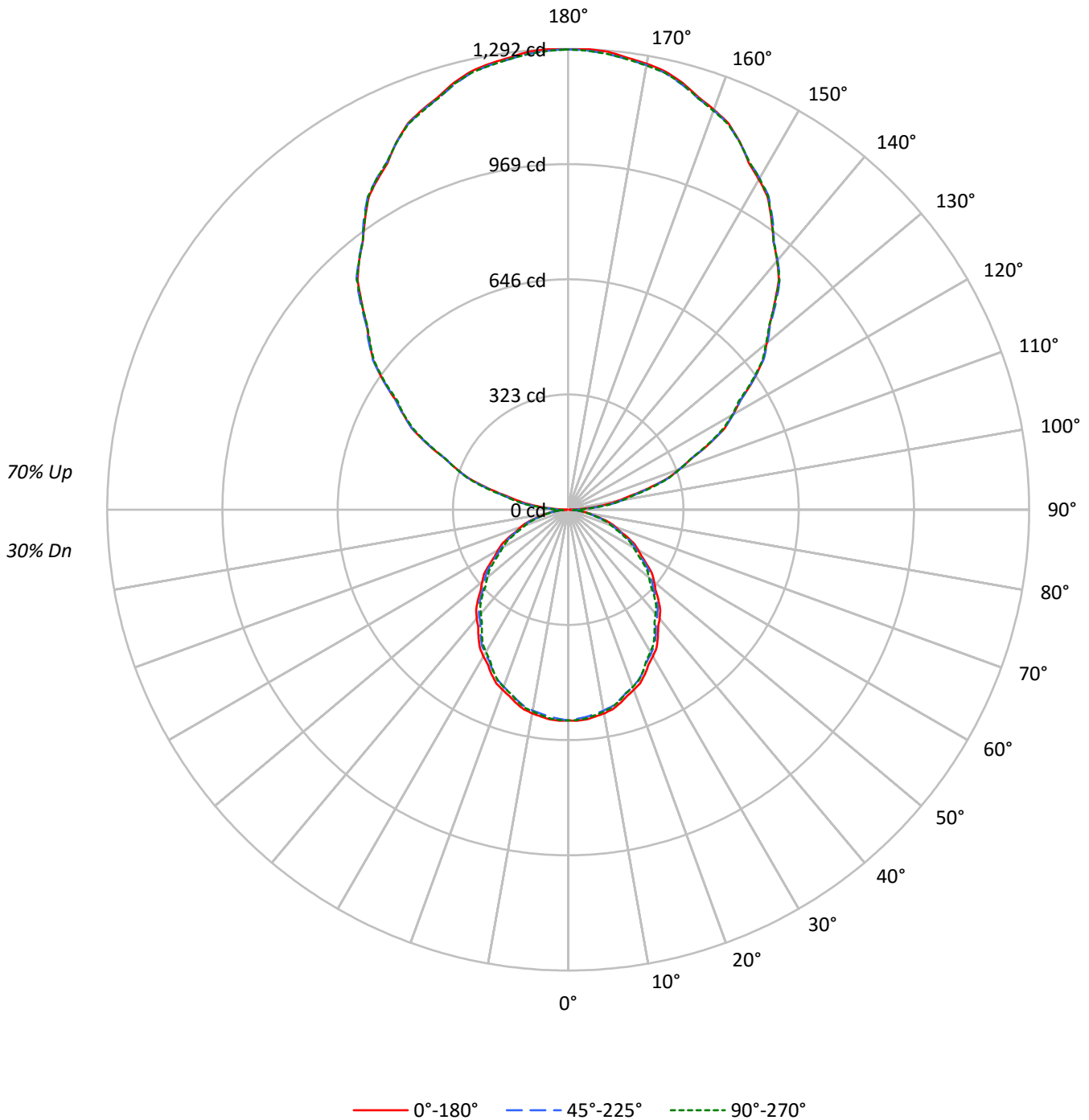
Input Watts (W): 37.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	50	30	10	0		
RCR																										
0	102	102	102	102	92	92	92	92	72	72	72	54	54	54	38	38	38	30					30			
1	93	89	85	82	83	80	77	74	63	61	59	47	46	45	33	32	32	25					25			
2	85	78	72	67	76	70	65	61	55	52	49	42	39	37	29	28	27	21					21			
3	77	68	61	55	69	61	55	51	49	44	41	37	34	32	26	24	23	18					18			
4	71	60	53	47	63	54	48	43	43	38	35	33	30	27	23	21	19	15					15			
5	65	54	46	40	58	48	42	37	38	34	30	29	26	23	21	19	17	13					13			
6	60	48	40	34	53	43	36	32	35	30	26	26	23	20	19	17	15	12					12			
7	55	43	35	30	49	39	32	28	31	26	23	24	20	18	17	15	13	10					10			
8	51	39	32	26	46	35	29	24	28	24	20	22	18	16	16	13	12	9					9			
9	47	35	28	23	42	32	26	21	26	21	18	20	17	14	14	12	11	8					8			
10	44	32	25	21	40	29	23	19	24	19	16	18	15	13	13	11	10	8					8			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4769	4769	4769
5°	4783	4725	4760
10°	4753	4687	4710
15°	4695	4621	4633
20°	4619	4538	4542
25°	4532	4444	4431
30°	4426	4333	4294
35°	4315	4217	4161
40°	4200	4086	4011
45°	4080	3956	3881
50°	3947	3841	3721
55°	3804	3690	3571
60°	3660	3523	3416
65°	3500	3364	3228
70°	3319	3151	3028
75°	3041	2895	2820
80°	2706	2599	2529
85°	2371	2279	2232



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	55.6	1.1
10°-20°	156.7	3.1
20°-30°	230.7	4.5
30°-40°	268.2	5.3
40°-50°	268.2	5.3
50°-60°	234.6	4.6
60°-70°	174.2	3.4
70°-80°	99.0	1.9
80°-90°	32.4	0.6
90°-100°	85.1	1.7
100°-110°	252.2	4.9
110°-120°	428.0	8.4
120°-130°	564.3	11.1
130°-140°	633.8	12.4
140°-150°	622.8	12.2
150°-160°	523.8	10.3
160°-170°	348.5	6.8
170°-180°	122.0	2.4
0°-30°	443.1	8.7
0°-40°	711.3	13.9
0°-60°	1214.1	23.8
0°-90°	1519.7	29.8
90°-120°	765.3	15.0
90°-150°	2586.3	50.7
90°-180°	3581.0	70.2
0°-180°	5100.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	591	591	591	591	591	
5°	590	588	583	588	587	56
15°	562	560	553	555	554	158
25°	509	505	499	499	498	234
35°	438	434	428	425	422	274
45°	357	354	346	342	340	275
55°	270	269	262	257	254	242
65°	183	181	176	172	169	181
75°	98	95	93	91	90	104
85°	26	26	25	25	24	28
90°	3	14	22	28	30	5
95°	60	69	76	79	79	67
105°	233	234	238	241	244	247
115°	435	435	433	432	431	429
125°	634	634	633	631	629	565
135°	818	823	824	821	818	632
145°	993	997	998	997	994	621
155°	1138	1138	1137	1140	1137	523
165°	1239	1236	1234	1239	1236	349
175°	1289	1284	1283	1289	1283	122
180°	1291	1291	1291	1291	1291	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	590.7	590.7	590.7	590.7	590.7	590.7	590.7	590.7	590.7	590.7	590.7
2.5°	592.2	592.0	591.7	591.5	591.2	590.6	589.7	588.8	587.9	586.9	587.8
5°	590.2	589.8	589.4	589.0	588.6	587.8	586.6	585.5	584.3	583.1	584.3
7.5°	584.8	584.3	583.9	583.5	583.1	582.2	580.9	579.7	578.4	577.1	578.0
10°	579.8	579.4	579.0	578.6	578.2	577.3	575.9	574.5	573.2	571.8	572.6
12.5°	573.4	573.0	572.6	572.1	571.7	570.8	569.3	567.9	566.4	565.0	565.9
15°	561.8	561.4	561.0	560.6	560.2	559.2	557.6	556.0	554.4	552.9	553.5
17.5°	547.9	547.4	546.9	546.4	545.8	544.8	543.3	541.8	540.3	538.8	539.2
20°	537.7	537.2	536.7	536.1	535.6	534.6	533.0	531.4	529.8	528.2	528.6
22.5°	526.7	526.0	525.3	524.6	523.9	522.8	521.2	519.7	518.1	516.5	517.1
25°	508.8	508.1	507.4	506.6	505.9	504.8	503.3	501.8	500.4	498.9	499.0
27.5°	488.4	487.6	486.9	486.1	485.4	484.3	482.9	481.6	480.2	478.8	478.6
30°	474.8	473.9	473.1	472.2	471.4	470.3	468.9	467.5	466.2	464.8	464.4
32.5°	460.4	459.6	458.8	458.1	457.3	456.2	454.8	453.3	451.9	450.4	449.9
35°	437.8	437.1	436.4	435.6	434.9	433.8	432.3	430.8	429.4	427.9	427.2
37.5°	414.1	413.4	412.7	412.1	411.4	410.3	408.7	407.1	405.5	403.9	403.1
40°	398.5	397.7	396.9	396.0	395.2	394.0	392.4	390.8	389.2	387.7	386.6
42.5°	381.9	381.4	380.9	380.4	379.9	378.7	377.0	375.2	373.5	371.8	370.5
45°	357.4	356.6	355.9	355.2	354.4	353.2	351.5	349.8	348.2	346.5	345.3
47.5°	331.7	331.2	330.7	330.2	329.7	328.7	327.1	325.5	324.0	322.4	321.1
50°	314.3	313.9	313.5	313.0	312.6	311.7	310.2	308.7	307.2	305.8	304.3
52.5°	297.3	296.7	296.2	295.7	295.2	294.2	292.6	291.1	289.5	288.0	286.7
55°	270.3	270.0	269.6	269.3	269.0	268.1	266.6	265.2	263.7	262.2	261.0
57.5°	244.5	244.2	243.8	243.5	243.1	242.2	240.7	239.3	237.8	236.4	235.2
60°	226.7	226.2	225.7	225.1	224.6	223.7	222.3	220.9	219.6	218.2	217.3
62.5°	209.3	208.9	208.4	208.0	207.5	206.6	205.1	203.7	202.2	200.8	199.9
65°	183.2	182.7	182.1	181.6	181.1	180.3	179.2	178.2	177.1	176.1	175.0
67.5°	156.9	156.4	155.9	155.4	154.9	154.2	153.2	152.2	151.2	150.1	149.1
70°	140.6	139.8	139.1	138.4	137.6	136.8	136.0	135.2	134.3	133.5	132.6
72.5°	123.2	122.4	121.7	121.0	120.2	119.5	118.8	118.2	117.5	116.8	116.1
75°	97.5	97.0	96.5	95.9	95.4	94.9	94.4	93.8	93.3	92.8	92.4
77.5°	73.0	72.8	72.5	72.3	72.1	71.7	71.3	70.8	70.3	69.9	69.7
80°	58.2	57.9	57.6	57.3	57.0	56.7	56.5	56.3	56.1	55.9	55.6
82.5°	43.8	43.7	43.5	43.4	43.2	43.1	43.1	43.1	43.0	43.0	42.9
85°	25.6	25.6	25.6	25.6	25.6	25.5	25.2	25.0	24.8	24.6	24.6
87.5°	10.4	10.8	11.3	11.7	12.1	12.4	12.7	12.9	13.2	13.5	13.7
90°	3.0	5.4	7.9	10.3	12.8	14.9	16.6	18.4	20.2	22.0	23.3
92.5°	21.4	24.2	26.9	29.7	32.5	34.6	35.8	37.0	38.3	39.5	40.3
95°	59.9	61.9	63.9	65.9	67.9	69.6	71.2	72.8	74.3	75.9	76.5
97.5°	104.6	106.2	107.8	109.4	111.0	112.7	114.5	116.3	118.2	120.0	120.8
100°	139.7	140.6	141.5	142.4	143.3	144.7	146.7	148.7	150.7	152.7	153.2
102.5°	176.5	176.8	177.2	177.5	177.9	179.0	180.8	182.6	184.4	186.3	186.9
105°	232.6	232.8	233.0	233.2	233.5	234.0	234.9	235.8	236.7	237.6	238.2
107.5°	291.5	291.7	292.0	292.3	292.5	292.7	292.9	293.0	293.1	293.3	293.9
110°	331.4	331.8	332.3	332.7	333.2	333.3	333.0	332.8	332.6	332.4	331.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	372.9	373.0	373.1	373.2	373.3	373.1	372.7	372.3	371.9	371.5	371.4
115°	435.2	435.2	435.2	435.2	435.2	435.0	434.5	434.1	433.6	433.2	433.0
117.5°	493.9	494.1	494.2	494.4	494.6	494.5	494.2	493.9	493.6	493.3	492.5
120°	533.0	533.9	534.8	535.7	536.6	536.7	536.0	535.3	534.7	534.0	532.9
122.5°	573.7	574.1	574.4	574.8	575.1	575.2	574.9	574.5	574.2	573.9	573.2
125°	633.8	633.8	633.8	633.8	633.8	633.7	633.5	633.3	633.0	632.8	632.4
127.5°	688.3	689.0	689.6	690.3	691.0	691.1	690.8	690.4	690.1	689.7	689.3
130°	726.6	727.3	728.0	728.6	729.3	729.6	729.6	729.6	729.6	729.6	729.2
132.5°	765.8	766.3	766.7	767.2	767.7	767.9	767.7	767.5	767.3	767.2	766.7
135°	817.5	818.8	820.1	821.5	822.8	823.5	823.5	823.5	823.5	823.5	823.0
137.5°	873.8	874.4	875.0	875.6	876.3	876.7	877.1	877.5	877.8	878.2	877.6
140°	911.3	911.7	912.2	912.6	913.1	913.3	913.3	913.3	913.3	913.3	913.1
142.5°	945.6	946.1	946.5	947.0	947.4	947.5	947.4	947.2	947.0	946.8	946.8
145°	993.1	994.0	994.9	995.8	996.7	997.2	997.5	997.7	997.9	998.1	997.9
147.5°	1040.3	1041.3	1042.4	1043.5	1044.5	1045.0	1044.8	1044.6	1044.4	1044.3	1044.1
150°	1069.0	1069.9	1070.8	1071.7	1072.6	1073.0	1073.0	1073.0	1073.0	1073.0	1073.0
152.5°	1096.2	1096.7	1097.2	1097.8	1098.3	1098.6	1098.8	1099.0	1099.2	1099.3	1099.9
155°	1137.9	1137.9	1137.9	1137.9	1137.9	1137.8	1137.5	1137.3	1137.1	1136.9	1137.8
157.5°	1173.0	1172.6	1172.2	1171.8	1171.4	1171.2	1171.1	1171.1	1171.1	1171.0	1171.7
160°	1193.8	1193.5	1193.3	1193.1	1192.9	1192.7	1192.4	1192.2	1192.0	1191.8	1192.4
162.5°	1212.9	1212.4	1211.8	1211.2	1210.6	1210.2	1210.0	1209.8	1209.6	1209.3	1210.5
165°	1238.7	1238.0	1237.4	1236.7	1236.0	1235.5	1235.0	1234.6	1234.1	1233.7	1235.0
167.5°	1258.5	1257.5	1256.6	1255.7	1254.7	1254.3	1254.3	1254.4	1254.4	1254.5	1255.8
170°	1269.6	1268.5	1267.4	1266.3	1265.2	1264.7	1265.0	1265.2	1265.4	1265.6	1267.0
172.5°	1277.6	1276.7	1275.8	1274.8	1273.9	1273.4	1273.5	1273.5	1273.6	1273.6	1275.1
175°	1288.6	1287.5	1286.4	1285.3	1284.2	1283.5	1283.3	1283.0	1282.8	1282.6	1284.2
177.5°	1292.2	1291.3	1290.4	1289.5	1288.6	1288.2	1288.2	1288.2	1288.2	1288.2	1289.4
180°	1290.6	1290.6	1290.6	1290.6	1290.6	1290.6	1290.6	1290.6	1290.6	1290.6	1290.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	590.7	590.7	590.7	590.7	590.7	590.7	590.7	590.7
2.5°	588.6	589.5	590.3	590.7	590.6	590.5	590.4	590.3
5°	585.5	586.6	587.8	588.2	588.0	587.8	587.6	587.4
7.5°	578.9	579.9	580.8	581.2	581.1	580.9	580.8	580.7
10°	573.5	574.3	575.2	575.5	575.3	575.0	574.8	574.6
12.5°	566.8	567.7	568.7	569.0	568.7	568.4	568.1	567.8
15°	554.1	554.7	555.4	555.5	555.2	554.9	554.6	554.3
17.5°	539.6	540.0	540.4	540.5	540.3	540.1	539.9	539.7
20°	528.9	529.2	529.5	529.6	529.3	529.1	528.9	528.7
22.5°	517.6	518.2	518.8	518.9	518.5	518.1	517.7	517.4
25°	499.1	499.2	499.3	499.2	498.7	498.3	497.9	497.5
27.5°	478.3	478.1	477.8	477.4	476.9	476.4	475.8	475.3
30°	464.0	463.6	463.1	462.7	462.1	461.6	461.1	460.6
32.5°	449.4	448.9	448.4	447.9	447.4	446.8	446.3	445.8
35°	426.4	425.7	424.9	424.3	423.8	423.3	422.7	422.2
37.5°	402.3	401.5	400.7	400.0	399.3	398.6	397.9	397.2
40°	385.6	384.5	383.5	382.7	382.1	381.6	381.1	380.6
42.5°	369.3	368.1	366.9	366.1	365.7	365.4	365.0	364.7
45°	344.2	343.0	341.9	341.1	340.8	340.5	340.2	339.9
47.5°	319.8	318.5	317.2	316.2	315.4	314.6	313.8	313.0
50°	302.8	301.4	299.9	298.8	298.2	297.6	296.9	296.3
52.5°	285.4	284.1	282.8	281.7	280.9	280.1	279.3	278.5
55°	259.7	258.4	257.2	256.2	255.6	255.0	254.3	253.7
57.5°	234.0	232.8	231.6	230.7	230.1	229.5	228.9	228.2
60°	216.3	215.4	214.4	213.7	213.2	212.6	212.1	211.6
62.5°	199.1	198.2	197.3	196.6	196.1	195.6	195.1	194.5
65°	174.0	172.9	171.9	171.1	170.6	170.0	169.5	169.0
67.5°	148.1	147.1	146.1	145.5	145.4	145.2	145.1	144.9
70°	131.8	131.0	130.1	129.5	129.2	128.9	128.6	128.3
72.5°	115.5	114.8	114.1	113.6	113.3	113.0	112.7	112.4
75°	91.9	91.5	91.1	90.8	90.7	90.6	90.5	90.4
77.5°	69.6	69.5	69.4	69.2	68.9	68.6	68.3	68.1
80°	55.4	55.2	55.0	54.9	54.7	54.6	54.5	54.4
82.5°	42.7	42.6	42.5	42.4	42.3	42.1	42.0	41.9
85°	24.6	24.6	24.6	24.6	24.5	24.4	24.2	24.1
87.5°	14.0	14.3	14.5	14.7	14.8	14.9	15.0	15.1
90°	24.6	26.0	27.3	28.2	28.6	29.1	29.5	29.9
92.5°	41.1	41.9	42.7	43.3	43.5	43.8	44.1	44.3
95°	77.2	77.9	78.5	78.9	78.9	78.9	78.9	78.9
97.5°	121.6	122.4	123.2	123.6	123.6	123.6	123.6	123.6
100°	153.6	154.0	154.5	154.7	154.7	154.7	154.7	154.7
102.5°	187.5	188.1	188.7	189.1	189.3	189.5	189.7	189.8
105°	238.9	239.6	240.2	240.9	241.5	242.2	242.9	243.5
107.5°	294.5	295.1	295.7	296.0	296.0	295.9	295.9	295.8
110°	331.5	331.0	330.6	330.7	331.4	332.0	332.7	333.4



TEST NUMBER: P332524

CATALOG NUMBER: S124DIP-S350D1035U835-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	371.3	371.2	371.2	371.2	371.3	371.4	371.6	371.7
115°	432.7	432.5	432.3	432.1	431.9	431.6	431.4	431.2
117.5°	491.8	491.0	490.3	489.7	489.2	488.8	488.3	487.9
120°	531.8	530.7	529.6	529.2	529.7	530.1	530.6	531.0
122.5°	572.4	571.7	570.9	570.1	569.3	568.5	567.7	566.9
125°	631.9	631.5	631.0	630.6	630.2	629.7	629.3	628.8
127.5°	688.8	688.4	687.9	687.5	687.2	686.8	686.5	686.1
130°	728.8	728.3	727.9	727.2	726.3	725.4	724.5	723.6
132.5°	766.3	765.8	765.4	765.0	764.6	764.3	763.9	763.6
135°	822.6	822.1	821.7	821.1	820.5	819.8	819.1	818.5
137.5°	877.0	876.4	875.9	875.6	875.8	875.9	876.0	876.2
140°	912.9	912.6	912.4	912.2	912.0	911.7	911.5	911.3
142.5°	946.7	946.7	946.7	946.6	946.6	946.5	946.5	946.4
145°	997.7	997.5	997.2	996.8	996.1	995.5	994.8	994.1
147.5°	1043.9	1043.7	1043.5	1043.3	1043.1	1042.9	1042.7	1042.5
150°	1073.0	1073.0	1073.0	1072.9	1072.7	1072.4	1072.2	1072.0
152.5°	1100.4	1100.9	1101.5	1101.5	1100.9	1100.3	1099.7	1099.1
155°	1138.7	1139.5	1140.4	1140.4	1139.5	1138.7	1137.8	1136.9
157.5°	1172.3	1173.0	1173.7	1173.6	1172.9	1172.1	1171.4	1170.6
160°	1193.1	1193.8	1194.4	1194.2	1193.1	1192.0	1190.9	1189.8
162.5°	1211.7	1212.9	1214.1	1214.2	1213.1	1212.0	1210.9	1209.7
165°	1236.4	1237.7	1239.0	1239.2	1238.4	1237.5	1236.6	1235.7
167.5°	1257.1	1258.5	1259.8	1259.8	1258.4	1257.0	1255.6	1254.3
170°	1268.3	1269.6	1271.0	1270.8	1269.3	1267.7	1266.2	1264.6
172.5°	1276.6	1278.1	1279.7	1279.6	1278.1	1276.5	1275.0	1273.4
175°	1285.7	1287.3	1288.8	1288.8	1287.3	1285.7	1284.2	1282.6
177.5°	1290.7	1291.9	1293.2	1293.1	1291.7	1290.2	1288.8	1287.4
180°	1290.6	1290.6	1290.6	1290.6	1290.6	1290.6	1290.6	1290.6

(END OF REPORT)