

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: P332521

Luminaire Tested: **S124DIP-S350D1035U835-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332521
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-D1
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 350 LUMENS PER FOOT, DROP 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: 5025.4 lumens
Efficiency: N/A
Efficacy: 134.7 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

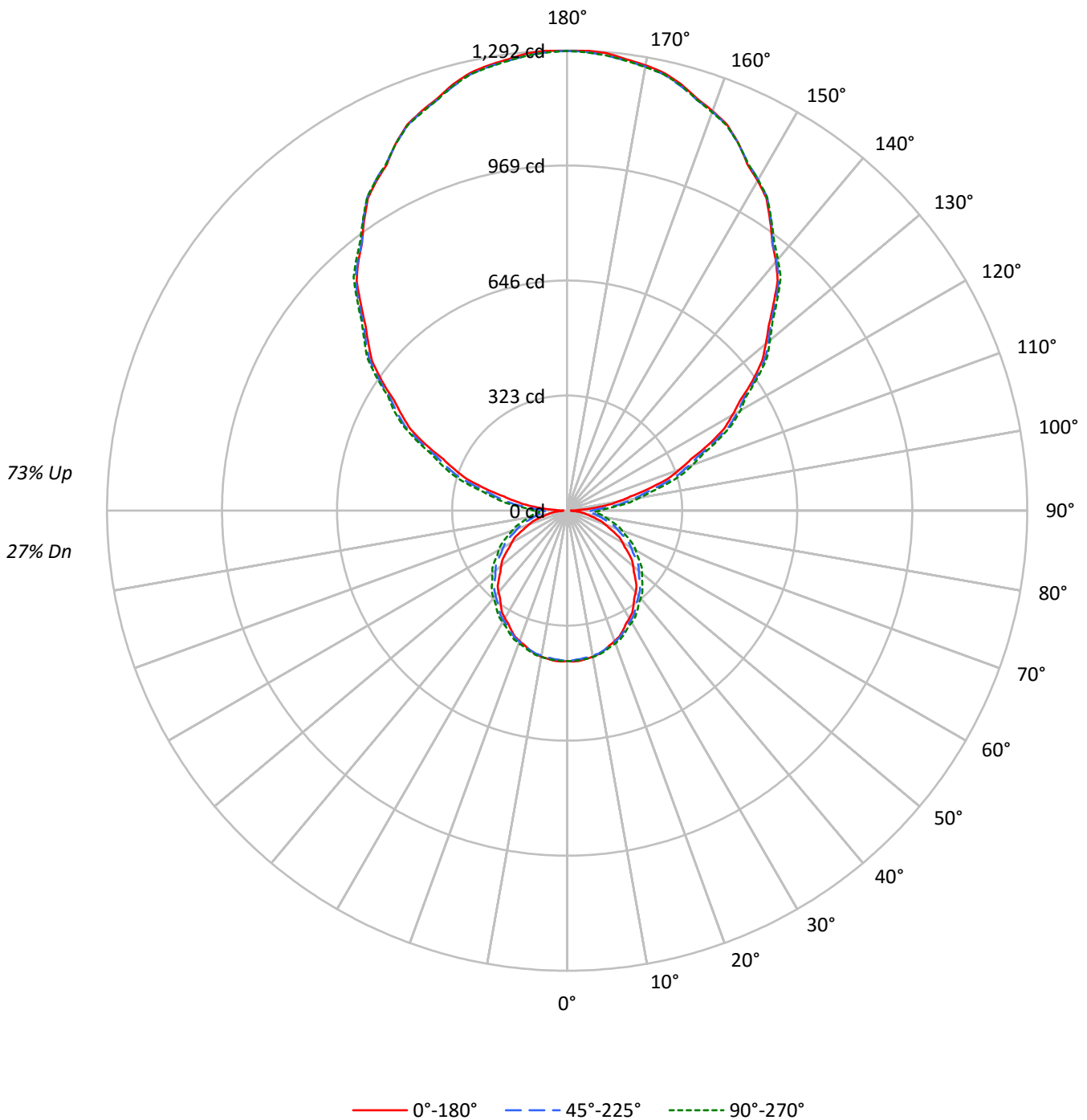
Input Watts (W): 37.3
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	50	30	10	0																
RCR																																														
0	102	102	102	102	91	91	91	91	70	70	70	52	52	52	35	35	35	27																												
1	92	88	84	80	82	78	75	72	61	58	56	45	43	42	30	29	28	21																												
2	83	76	70	65	74	68	63	58	53	49	46	39	36	34	26	24	23	17																												
3	76	67	59	54	67	60	53	48	46	42	38	34	31	29	23	21	19	14																												
4	69	59	51	45	61	53	46	41	41	36	32	30	27	24	20	18	17	12																												
5	63	52	44	38	56	47	40	35	36	32	28	27	24	21	18	16	14	10																												
6	58	46	39	33	52	42	35	30	33	28	24	24	21	18	16	14	12	9																												
7	54	42	34	29	48	38	31	26	29	24	21	22	18	16	15	13	11	8																												
8	50	38	30	25	44	34	27	23	27	22	18	20	17	14	14	11	10	7																												
9	46	34	27	22	41	31	24	20	24	20	16	18	15	12	12	10	9	6																												
10	43	31	24	20	38	28	22	18	22	18	15	17	13	11	11	9	8	6																												

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3412	3412	3412
5°	3423	3335	3344
10°	3402	3281	3278
15°	3371	3217	3200
20°	3325	3147	3124
25°	3274	3070	3039
30°	3217	2992	2954
35°	3154	2912	2878
40°	3103	2836	2800
45°	3027	2766	2732
50°	2964	2686	2661
55°	2899	2610	2577
60°	2796	2513	2501
65°	2682	2410	2407
70°	2547	2292	2298
75°	2356	2161	2199
80°	2145	2037	2102
85°	1878	1926	2046



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	40.0	0.8
10°-20°	114.7	2.3
20°-30°	173.4	3.5
30°-40°	209.8	4.2
40°-50°	221.8	4.4
50°-60°	208.8	4.2
60°-70°	173.2	3.4
70°-80°	121.7	2.4
80°-90°	72.6	1.4
90°-100°	126.0	2.5
100°-110°	282.4	5.6
110°-120°	448.3	8.9
120°-130°	575.8	11.5
130°-140°	638.7	12.7
140°-150°	623.8	12.4
150°-160°	523.8	10.4
160°-170°	348.5	6.9
170°-180°	122.0	2.4
0°-30°	328.1	6.5
0°-40°	537.9	10.7
0°-60°	968.5	19.3
0°-90°	1336.0	26.6
90°-120°	856.6	17.0
90°-150°	2695.0	53.6
90°-180°	3689.0	73.4
0°-180°	5025.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	423	423	423	423	423	
5°	423	422	418	422	422	40
15°	406	406	405	409	408	114
25°	371	374	375	380	381	171
35°	325	330	335	341	343	203
45°	271	280	289	296	299	209
55°	212	222	236	245	248	189
65°	147	162	178	189	194	145
75°	81	99	119	132	136	87
85°	25	45	66	80	85	27
90°	11	40	69	88	94	9
95°	66	91	117	132	137	72
105°	237	248	269	283	290	252
115°	438	443	455	464	467	432
125°	636	636	646	653	654	567
135°	818	824	828	833	833	633
145°	994	997	998	1000	999	622
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°	422.7	422.7	422.7	422.7	422.7	422.7	422.7	422.7	422.7	422.7	422.7
2.5°	424.2	423.9	423.7	423.4	423.2	422.7	422.1	421.4	420.7	420.0	420.6
5°	423.2	422.8	422.5	422.2	421.9	421.4	420.6	419.9	419.2	418.4	419.3
7.5°	419.6	419.4	419.2	419.0	418.8	418.4	417.8	417.2	416.6	416.0	416.9
10°	416.5	416.4	416.3	416.2	416.1	415.8	415.3	414.7	414.2	413.7	414.6
12.5°	412.4	412.3	412.3	412.3	412.3	412.1	411.7	411.4	411.0	410.7	411.5
15°	405.6	405.8	405.9	406.0	406.1	406.0	405.6	405.3	405.0	404.7	405.6
17.5°	396.5	396.8	397.1	397.4	397.7	397.9	397.8	397.7	397.7	397.6	398.6
20°	390.0	390.3	390.7	391.0	391.3	391.5	391.6	391.7	391.8	391.9	393.0
22.5°	382.8	383.2	383.6	384.0	384.4	384.7	384.9	385.1	385.3	385.5	386.5
25°	371.1	371.7	372.4	373.0	373.6	374.1	374.4	374.7	375.0	375.4	376.5
27.5°	358.0	359.0	359.9	360.8	361.7	362.4	362.9	363.4	363.9	364.4	365.4
30°	349.3	350.2	351.0	351.8	352.7	353.5	354.2	354.9	355.7	356.4	357.6
32.5°	339.9	340.9	341.9	342.9	343.9	344.8	345.6	346.4	347.3	348.1	349.4
35°	324.7	326.0	327.2	328.5	329.8	330.9	332.0	333.0	334.1	335.1	336.6
37.5°	309.5	310.9	312.4	313.8	315.3	316.6	318.0	319.3	320.6	321.9	323.4
40°	299.6	301.0	302.4	303.7	305.1	306.5	308.0	309.5	310.9	312.4	314.0
42.5°	288.3	289.8	291.3	292.9	294.4	296.0	297.8	299.5	301.2	302.9	304.7
45°	270.7	272.7	274.7	276.7	278.7	280.7	282.7	284.7	286.7	288.7	290.5
47.5°	254.0	256.1	258.1	260.2	262.2	264.4	266.7	269.1	271.4	273.7	275.5
50°	241.9	244.2	246.5	248.8	251.1	253.4	255.8	258.1	260.4	262.7	264.8
52.5°	229.8	232.1	234.4	236.7	239.0	241.5	244.1	246.8	249.4	252.1	254.2
55°	212.1	214.3	216.5	218.7	220.9	223.6	226.7	229.9	233.0	236.2	238.3
57.5°	192.3	195.0	197.7	200.5	203.2	206.1	209.3	212.4	215.5	218.7	221.2
60°	179.4	182.1	184.9	187.6	190.3	193.4	196.9	200.4	203.8	207.3	209.7
62.5°	166.9	169.9	172.9	175.9	178.8	182.1	185.5	189.0	192.5	196.0	198.4
65°	146.7	150.1	153.5	156.8	160.2	163.7	167.2	170.8	174.4	178.0	180.6
67.5°	127.3	130.9	134.5	138.1	141.6	145.3	149.2	153.0	156.8	160.6	163.3
70°	114.1	117.6	121.2	124.8	128.4	132.2	136.2	140.2	144.2	148.2	151.0
72.5°	101.2	104.9	108.5	112.2	115.8	119.8	124.0	128.3	132.5	136.8	139.5
75°	81.4	85.3	89.2	93.1	97.0	101.1	105.6	110.0	114.4	118.8	121.8
77.5°	63.0	67.1	71.2	75.3	79.4	83.8	88.4	93.1	97.7	102.3	105.3
80°	51.6	55.8	60.0	64.2	68.4	72.8	77.5	82.1	86.7	91.4	94.5
82.5°	40.2	44.6	49.0	53.4	57.7	62.2	66.9	71.5	76.1	80.8	84.0
85°	25.1	29.5	33.9	38.3	42.8	47.3	52.1	56.8	61.5	66.3	69.4
87.5°	14.6	19.4	24.2	28.9	33.7	38.6	43.6	48.5	53.5	58.4	61.8
90°	10.6	17.2	23.9	30.5	37.2	43.6	49.9	56.2	62.5	68.8	73.2
92.5°	28.6	35.1	41.7	48.3	54.9	61.1	66.8	72.6	78.3	84.1	87.9
95°	66.0	71.5	77.0	82.4	87.9	93.6	99.4	105.3	111.2	117.0	120.5
97.5°	110.2	114.8	119.4	123.9	128.5	133.9	140.0	146.0	152.1	158.2	161.8
100°	144.9	148.6	152.2	155.8	159.4	164.3	170.4	176.5	182.6	188.7	192.0
102.5°	181.7	184.4	187.2	189.9	192.7	197.0	202.8	208.7	214.5	220.3	223.7
105°	236.8	239.2	241.5	243.8	246.1	249.7	254.5	259.2	264.0	268.8	272.1
107.5°	295.6	297.6	299.6	301.6	303.6	306.5	310.3	314.1	317.9	321.7	325.0
110°	335.2	337.1	339.0	340.9	342.8	345.5	349.0	352.4	355.9	359.4	361.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	376.3	377.7	379.1	380.5	381.9	384.1	387.3	390.4	393.5	396.6	398.8
115°	438.0	439.0	439.9	440.9	441.8	443.7	446.7	449.6	452.5	455.4	457.5
117.5°	496.6	497.4	498.1	498.9	499.6	501.4	504.2	507.0	509.9	512.7	514.1
120°	535.4	536.6	537.8	539.0	540.2	542.0	544.4	546.7	549.1	551.5	552.5
122.5°	576.1	576.5	576.9	577.3	577.8	579.3	581.8	584.4	587.0	589.5	590.9
125°	635.7	635.6	635.5	635.4	635.3	636.4	638.8	641.3	643.7	646.1	647.6
127.5°	690.1	690.7	691.2	691.8	692.4	693.5	695.1	696.8	698.5	700.1	701.6
130°	728.1	728.6	729.2	729.7	730.3	731.4	733.1	734.8	736.5	738.2	739.6
132.5°	767.2	767.6	768.0	768.3	768.7	769.5	770.7	771.8	773.0	774.2	775.5
135°	818.4	819.8	821.1	822.4	823.7	824.8	825.5	826.2	827.0	827.7	829.0
137.5°	874.7	875.2	875.7	876.3	876.8	877.4	878.1	878.8	879.5	880.2	881.2
140°	912.2	912.6	912.9	913.3	913.6	913.8	913.9	914.0	914.1	914.2	915.4
142.5°	946.2	946.6	947.0	947.5	947.9	948.0	947.7	947.5	947.3	947.0	948.2
145°	993.6	994.4	995.2	996.0	996.7	997.2	997.5	997.7	997.9	998.1	998.5
147.5°	1040.7	1041.7	1042.7	1043.6	1044.6	1045.0	1044.8	1044.6	1044.4	1044.3	1044.2
150°	1069.5	1070.3	1071.0	1071.8	1072.6	1073.0	1073.0	1073.0	1073.0	1073.0	1073.0
152.5°	1096.2	1096.8	1097.3	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°	422.7	422.7	422.7	422.7	422.7	422.7	422.7	422.7
2.5°	421.2	421.8	422.4	422.6	422.6	422.5	422.4	422.3
5°	420.1	420.9	421.8	422.2	422.1	421.9	421.8	421.7
7.5°	417.9	418.8	419.8	420.2	420.1	420.0	419.9	419.8
10°	415.6	416.5	417.5	417.9	417.8	417.7	417.6	417.5
12.5°	412.4	413.3	414.1	414.5	414.5	414.5	414.5	414.4
15°	406.6	407.5	408.5	408.9	408.8	408.7	408.6	408.5
17.5°	399.5	400.5	401.5	401.9	401.8	401.7	401.7	401.6
20°	394.0	395.1	396.1	396.7	396.7	396.7	396.7	396.7
22.5°	387.6	388.6	389.7	390.3	390.5	390.6	390.8	391.0
25°	377.7	378.8	380.0	380.6	380.7	380.8	380.9	381.0
27.5°	366.5	367.6	368.7	369.3	369.4	369.5	369.6	369.8
30°	358.7	359.9	361.0	361.7	361.9	362.2	362.4	362.6
32.5°	350.7	352.1	353.4	354.2	354.4	354.6	354.8	355.0
35°	338.1	339.5	341.0	341.9	342.2	342.5	342.9	343.2
37.5°	324.9	326.3	327.8	328.8	329.1	329.4	329.8	330.1
40°	315.6	317.1	318.7	319.7	320.1	320.6	321.0	321.4
42.5°	306.4	308.2	309.9	311.0	311.3	311.6	312.0	312.3
45°	292.3	294.1	295.9	297.0	297.6	298.1	298.6	299.1
47.5°	277.4	279.2	281.1	282.3	283.0	283.6	284.2	284.9
50°	266.9	269.0	271.1	272.5	273.1	273.7	274.4	275.0
52.5°	256.3	258.4	260.5	261.9	262.5	263.1	263.8	264.4
55°	240.4	242.5	244.6	246.0	246.6	247.2	247.9	248.5
57.5°	223.7	226.2	228.7	230.2	230.8	231.4	232.0	232.6
60°	212.2	214.6	217.0	218.6	219.5	220.3	221.2	222.0
62.5°	200.8	203.2	205.6	207.3	208.1	208.9	209.8	210.6
65°	183.2	185.9	188.5	190.2	191.1	191.9	192.8	193.6
67.5°	166.0	168.7	171.3	173.1	173.9	174.7	175.5	176.4
70°	153.8	156.7	159.5	161.3	162.0	162.8	163.5	164.2
72.5°	142.3	145.1	147.8	149.6	150.4	151.2	152.1	152.9
75°	124.7	127.6	130.6	132.5	133.5	134.4	135.4	136.3
77.5°	108.3	111.3	114.3	116.3	117.3	118.3	119.3	120.3
80°	97.7	100.8	104.0	106.0	106.8	107.7	108.5	109.3
82.5°	87.2	90.5	93.7	95.8	96.7	97.6	98.6	99.5
85°	72.6	75.7	78.9	81.0	82.0	83.1	84.1	85.2
87.5°	65.1	68.4	71.7	73.9	74.9	75.9	76.9	77.9
90°	77.6	82.0	86.3	89.2	90.5	91.7	93.0	94.3
92.5°	91.6	95.4	99.2	101.6	102.7	103.8	104.9	106.0
95°	124.0	127.6	131.1	133.3	134.2	135.2	136.1	137.1
97.5°	165.3	168.9	172.4	174.7	175.6	176.5	177.4	178.3
100°	195.3	198.5	201.8	203.8	204.6	205.3	206.0	206.8
102.5°	227.1	230.5	233.8	236.0	237.0	238.0	239.0	240.0
105°	275.4	278.7	282.0	284.4	285.9	287.4	288.9	290.4
107.5°	328.2	331.4	334.6	336.5	337.3	338.0	338.7	339.4
110°	363.3	365.3	367.3	369.0	370.5	372.0	373.5	375.0



TEST NUMBER: P332521

CATALOG NUMBER: S124DIP-S350D1035U835-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	401.1	403.3	405.6	407.2	408.2	409.1	410.1	411.1
115°	459.6	461.7	463.8	465.1	465.6	466.1	466.7	467.2
117.5°	515.6	517.0	518.4	519.3	519.7	520.1	520.5	520.9
120°	553.5	554.5	555.5	556.6	557.9	559.2	560.5	561.8
122.5°	592.2	593.6	594.9	595.6	595.6	595.5	595.5	595.4
125°	649.2	650.7	652.3	653.2	653.4	653.5	653.7	653.9
127.5°	703.0	704.5	705.9	706.8	707.2	707.6	707.9	708.3
130°	741.1	742.5	744.0	744.6	744.3	744.0	743.8	743.5
132.5°	776.9	778.3	779.6	780.5	780.7	781.0	781.3	781.6
135°	830.2	831.4	832.7	833.3	833.2	833.2	833.2	833.1
137.5°	882.2	883.1	884.1	884.9	885.5	886.2	886.9	887.5
140°	916.5	917.7	918.8	919.5	919.9	920.2	920.5	920.8
142.5°	949.3	950.5	951.6	952.4	952.8	953.2	953.6	954.0
145°	999.0	999.4	999.8	999.9	999.6	999.4	999.1	998.9
147.5°	1044.1	1044.0	1043.9	1043.9	1044.0	1044.1	1044.2	1044.3
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)