

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: P332520-935

Luminaire Tested: **S124DIP-S350D1035U935-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332520-935
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-S350D1035U935-4F0-1E-UDD-D
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 350 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: 4798.6 lumens
Efficiency: N/A
Efficacy: 128.7 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

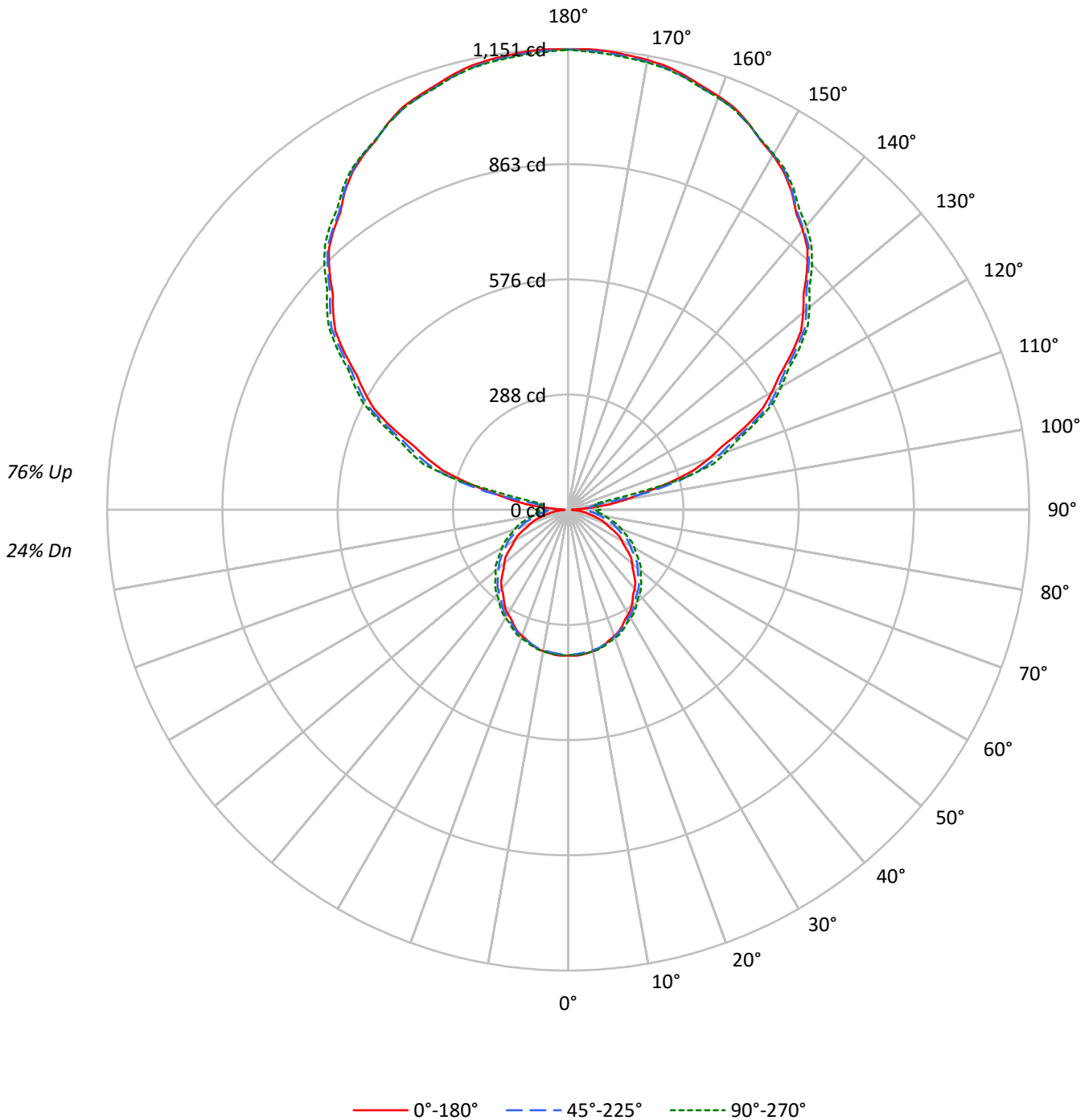
Input Watts (W): 37.3
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P332520-935

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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	101	101	101	101	90	90	90	90	69	69	69	50	50	50	32	32	32	24
1	91	87	83	80	81	77	74	71	59	57	55	43	42	40	28	27	26	19
2	83	76	70	65	73	67	62	58	52	48	45	37	35	33	24	23	22	16
3	76	66	59	53	67	59	53	48	45	41	38	33	30	28	21	19	18	13
4	69	58	51	45	61	52	46	40	40	36	32	29	26	24	19	17	15	11
5	63	52	44	38	56	46	39	34	36	31	27	26	23	20	17	15	13	9
6	58	46	38	33	51	41	35	30	32	27	23	23	20	17	15	13	12	8
7	53	42	34	28	47	37	30	26	29	24	20	21	18	15	14	12	10	7
8	49	37	30	25	44	34	27	23	26	21	18	19	16	14	13	11	9	6
9	46	34	27	22	41	31	24	20	24	19	16	18	14	12	12	10	8	6
10	43	31	24	19	38	28	22	18	22	17	14	16	13	11	11	9	7	5

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2938	2938	2938
5°	2948	2871	2880
10°	2929	2825	2823
15°	2902	2770	2755
20°	2863	2710	2690
25°	2819	2643	2617
30°	2770	2576	2543
35°	2716	2507	2478
40°	2672	2442	2410
45°	2607	2382	2352
50°	2553	2313	2291
55°	2496	2248	2220
60°	2408	2164	2153
65°	2309	2076	2073
70°	2192	1973	1979
75°	2029	1861	1894
80°	1846	1754	1809
85°	1616	1659	1762



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	34.5	0.7
10°-20°	98.7	2.1
20°-30°	149.3	3.1
30°-40°	180.7	3.8
40°-50°	191.0	4.0
50°-60°	179.7	3.7
60°-70°	149.1	3.1
70°-80°	104.7	2.2
80°-90°	62.5	1.3
90°-100°	74.5	1.6
100°-110°	276.6	5.8
110°-120°	496.9	10.4
120°-130°	618.4	12.9
130°-140°	655.4	13.7
140°-150°	609.7	12.7
150°-160°	491.0	10.2
160°-170°	316.7	6.6
170°-180°	109.2	2.3
0°-30°	282.5	5.9
0°-40°	463.2	9.7
0°-60°	833.9	17.4
0°-90°	1150.3	24.0
90°-120°	848.0	17.7
90°-150°	2731.5	56.9
90°-180°	3648.0	76.0
0°-180°	4798.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	364	364	364	364	364	
5°	364	363	360	363	363	35
15°	349	350	348	352	352	98
25°	320	322	323	327	328	147
35°	280	284	288	294	296	175
45°	233	241	249	255	258	180
55°	183	191	203	211	214	163
65°	126	139	153	163	167	125
75°	70	85	102	113	117	75
85°	22	39	57	69	73	23
90°	9	35	59	76	81	7
95°	53	39	54	70	75	65
105°	262	276	295	310	285	275
115°	486	492	504	514	518	478
125°	681	684	692	702	706	608
135°	843	843	849	857	861	649
145°	972	974	974	977	980	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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CATALOG NUMBER: S124DIP-S350D1035U935-4F0-1E-UDD-D

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	363.9	363.9	363.9	363.9	363.9	363.9	363.9	363.9	363.9	363.9	363.9
2.5°	365.2	365.0	364.8	364.5	364.4	363.9	363.4	362.8	362.2	361.6	362.1
5°	364.4	364.0	363.8	363.5	363.3	362.8	362.1	361.5	360.9	360.2	361.0
7.5°	361.3	361.1	360.9	360.8	360.6	360.2	359.7	359.2	358.7	358.2	359.0
10°	358.6	358.5	358.4	358.3	358.3	358.0	357.6	357.1	356.6	356.2	357.0
12.5°	355.1	355.0	355.0	355.0	355.0	354.8	354.5	354.2	353.9	353.6	354.3
15°	349.2	349.4	349.5	349.6	349.7	349.6	349.2	349.0	348.7	348.4	349.2
17.5°	341.4	341.6	341.9	342.2	342.4	342.6	342.5	342.4	342.4	342.3	343.2
20°	335.8	336.0	336.4	336.7	336.9	337.1	337.2	337.3	337.3	337.4	338.4
22.5°	329.6	329.9	330.3	330.6	331.0	331.2	331.4	331.6	331.7	331.9	332.8
25°	319.5	320.0	320.6	321.2	321.7	322.1	322.4	322.6	322.9	323.2	324.2
27.5°	308.2	309.1	309.9	310.6	311.4	312.0	312.5	312.9	313.3	313.7	314.6
30°	300.7	301.5	302.2	302.9	303.7	304.4	305.0	305.6	306.3	306.9	307.9
32.5°	292.7	293.5	294.4	295.2	296.1	296.9	297.6	298.3	299.0	299.7	300.8
35°	279.6	280.7	281.7	282.8	284.0	284.9	285.9	286.7	287.7	288.5	289.8
37.5°	266.5	267.7	269.0	270.2	271.5	272.6	273.8	274.9	276.0	277.2	278.4
40°	258.0	259.2	260.4	261.5	262.7	263.9	265.2	266.5	267.7	269.0	270.4
42.5°	248.2	249.5	250.8	252.2	253.5	254.9	256.4	257.9	259.3	260.8	262.3
45°	233.1	234.8	236.5	238.2	240.0	241.7	243.4	245.1	246.8	248.6	250.1
47.5°	218.7	220.5	222.2	224.0	225.8	227.6	229.6	231.7	233.7	235.7	237.2
50°	208.3	210.3	212.2	214.2	216.2	218.2	220.2	222.2	224.2	226.2	228.0
52.5°	197.9	199.8	201.8	203.8	205.8	207.9	210.2	212.5	214.7	217.1	218.9
55°	182.6	184.5	186.4	188.3	190.2	192.5	195.2	197.9	200.6	203.4	205.2
57.5°	165.6	167.9	170.2	172.6	175.0	177.5	180.2	182.9	185.5	188.3	190.5
60°	154.5	156.8	159.2	161.5	163.8	166.5	169.5	172.5	175.5	178.5	180.6
62.5°	143.7	146.3	148.9	151.4	153.9	156.8	159.7	162.7	165.7	168.8	170.8
65°	126.3	129.2	132.2	135.0	137.9	140.9	144.0	147.1	150.2	153.3	155.5
67.5°	109.6	112.7	115.8	118.9	121.9	125.1	128.5	131.7	135.0	138.3	140.6
70°	98.2	101.3	104.4	107.5	110.6	113.8	117.3	120.7	124.2	127.6	130.0
72.5°	87.1	90.3	93.4	96.6	99.7	103.1	106.8	110.5	114.1	117.8	120.1
75°	70.1	73.4	76.8	80.2	83.5	87.0	90.9	94.7	98.5	102.3	104.9
77.5°	54.2	57.8	61.3	64.8	68.4	72.2	76.1	80.2	84.1	88.1	90.7
80°	44.4	48.0	51.7	55.3	58.9	62.7	66.7	70.7	74.6	78.7	81.4
82.5°	34.6	38.4	42.2	46.0	49.7	53.6	57.6	61.6	65.5	69.6	72.3
85°	21.6	25.4	29.2	33.0	36.9	40.7	44.9	48.9	53.0	57.1	59.8
87.5°	12.6	16.7	20.8	24.9	29.0	33.2	37.5	41.8	46.1	50.3	53.2
90°	9.1	14.8	20.6	26.3	32.0	37.5	43.0	48.4	53.8	59.2	63.0
92.5°	17.0	20.4	23.8	27.1	30.6	35.0	40.4	45.8	51.2	56.7	60.3
95°	52.6	49.1	45.5	42.0	38.6	38.7	42.6	46.6	50.5	54.3	57.9
97.5°	105.2	111.8	118.5	125.1	131.6	126.1	108.6	90.9	73.3	55.6	58.1
100°	145.4	151.3	157.0	162.8	168.6	160.1	137.2	114.4	91.6	68.8	68.0
102.5°	190.8	195.4	200.0	204.6	209.1	211.5	211.5	211.5	211.5	211.5	178.9
105°	262.3	265.4	268.3	271.2	274.2	277.8	282.1	286.5	290.8	295.1	299.0
107.5°	329.5	331.6	333.6	335.7	337.8	341.0	345.5	349.9	354.4	358.9	362.0
110°	374.5	376.4	378.2	380.1	381.9	385.0	389.3	393.6	398.0	402.3	404.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	418.3	420.4	422.6	424.7	426.9	429.7	433.3	436.9	440.4	443.9	445.9
115°	485.5	486.9	488.3	489.7	491.0	493.1	495.8	498.5	501.2	503.9	506.3
117.5°	546.5	547.7	549.0	550.2	551.5	553.6	556.7	559.9	563.0	566.1	567.9
120°	587.4	588.4	589.4	590.5	591.5	593.2	595.6	598.1	600.5	603.0	605.2
122.5°	625.9	626.4	626.9	627.4	627.9	629.6	632.3	635.1	637.8	640.6	642.6
125°	680.6	681.3	682.0	682.7	683.4	684.6	686.5	688.4	690.3	692.2	694.4
127.5°	732.8	732.9	733.1	733.1	733.2	734.6	737.2	739.9	742.4	745.0	746.6
130°	766.2	766.3	766.4	766.5	766.5	767.7	769.6	771.7	773.7	775.8	777.6
132.5°	797.1	797.4	797.6	797.9	798.1	799.2	801.1	803.0	804.9	806.8	808.5
135°	843.2	842.9	842.7	842.6	842.4	843.0	844.4	845.8	847.1	848.6	850.4
137.5°	884.2	884.2	884.2	884.2	884.2	884.8	885.9	887.0	888.2	889.3	891.0
140°	911.0	911.4	911.6	911.9	912.2	912.6	913.1	913.5	914.0	914.5	916.2
142.5°	934.8	935.5	936.1	936.8	937.5	937.9	938.1	938.2	938.4	938.6	940.0
145°	971.6	972.2	972.6	973.1	973.6	973.8	973.8	973.8	973.8	973.8	974.6
147.5°	1001.1	1002.0	1003.0	1004.0	1005.0	1005.4	1005.1	1005.0	1004.8	1004.6	1004.8
150°	1022.4	1023.0	1023.7	1024.4	1025.0	1025.3	1025.1	1024.9	1024.8	1024.5	1024.5
152.5°	1039.9	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°	363.9	363.9	363.9	363.9	363.9	363.9	363.9	363.9
2.5°	362.7	363.2	363.7	363.9	363.9	363.8	363.7	363.6
5°	361.7	362.4	363.2	363.5	363.4	363.3	363.2	363.1
7.5°	359.8	360.6	361.4	361.8	361.7	361.6	361.5	361.4
10°	357.8	358.6	359.5	359.8	359.7	359.6	359.6	359.5
12.5°	355.1	355.9	356.5	356.9	356.9	356.9	356.9	356.8
15°	350.1	350.9	351.7	352.1	352.0	351.9	351.8	351.7
17.5°	344.0	344.8	345.7	346.0	345.9	345.9	345.9	345.8
20°	339.2	340.2	341.0	341.6	341.6	341.6	341.6	341.6
22.5°	333.7	334.6	335.5	336.0	336.2	336.3	336.5	336.7
25°	325.2	326.1	327.2	327.7	327.8	327.9	328.0	328.0
27.5°	315.6	316.5	317.5	318.0	318.1	318.1	318.2	318.4
30°	308.8	309.9	310.8	311.4	311.6	311.9	312.0	312.2
32.5°	302.0	303.2	304.3	305.0	305.1	305.3	305.5	305.7
35°	291.1	292.3	293.6	294.4	294.6	294.9	295.2	295.5
37.5°	279.7	280.9	282.2	283.1	283.4	283.6	284.0	284.2
40°	271.7	273.0	274.4	275.3	275.6	276.0	276.4	276.7
42.5°	263.8	265.4	266.8	267.8	268.0	268.3	268.6	268.9
45°	251.7	253.2	254.8	255.7	256.2	256.7	257.1	257.5
47.5°	238.8	240.4	242.0	243.1	243.7	244.2	244.7	245.3
50°	229.8	231.6	233.4	234.6	235.1	235.7	236.3	236.8
52.5°	220.7	222.5	224.3	225.5	226.0	226.5	227.1	227.6
55°	207.0	208.8	210.6	211.8	212.3	212.8	213.4	214.0
57.5°	192.6	194.8	196.9	198.2	198.7	199.2	199.8	200.3
60°	182.7	184.8	186.8	188.2	189.0	189.7	190.5	191.1
62.5°	172.9	175.0	177.0	178.5	179.2	179.9	180.6	181.3
65°	157.7	160.1	162.3	163.8	164.5	165.2	166.0	166.7
67.5°	142.9	145.3	147.5	149.0	149.7	150.4	151.1	151.9
70°	132.4	134.9	137.3	138.9	139.5	140.2	140.8	141.4
72.5°	122.5	124.9	127.3	128.8	129.5	130.2	131.0	131.6
75°	107.4	109.9	112.4	114.1	114.9	115.7	116.6	117.4
77.5°	93.2	95.8	98.4	100.1	101.0	101.9	102.7	103.6
80°	84.1	86.8	89.5	91.3	92.0	92.7	93.4	94.1
82.5°	75.1	77.9	80.7	82.5	83.3	84.0	84.9	85.7
85°	62.5	65.2	67.9	69.7	70.6	71.5	72.4	73.4
87.5°	56.1	58.9	61.7	63.6	64.5	65.3	66.2	67.1
90°	66.8	70.6	74.3	76.8	77.9	79.0	80.1	81.2
92.5°	64.0	67.7	71.4	73.7	74.5	75.3	76.0	76.9
95°	61.6	65.2	68.7	71.0	72.1	73.0	74.0	75.1
97.5°	60.6	63.1	65.6	67.3	68.3	69.2	70.2	71.2
100°	67.2	66.4	65.6	65.6	66.4	67.2	68.1	68.9
102.5°	146.3	113.6	80.9	65.0	65.7	66.5	67.2	67.9
105°	303.1	307.0	311.0	309.9	303.8	297.6	291.4	285.3
107.5°	365.0	368.1	371.2	373.4	374.8	376.2	377.5	378.9
110°	407.2	409.7	412.2	414.1	415.3	416.6	417.9	419.2



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CATALOG NUMBER: S124DIP-S350D1035U935-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	447.8	449.8	451.7	453.4	454.9	456.3	457.7	459.2
115°	508.7	511.0	513.4	514.9	515.6	516.2	516.9	517.5
117.5°	569.7	571.5	573.3	574.5	575.2	575.8	576.5	577.1
120°	607.3	609.6	611.7	613.0	613.4	613.7	614.1	614.4
122.5°	644.6	646.7	648.7	649.9	650.1	650.4	650.7	650.9
125°	696.7	699.0	701.3	702.8	703.6	704.3	705.1	705.8
127.5°	748.1	749.6	751.1	752.1	752.6	753.0	753.5	754.0
130°	779.4	781.2	783.0	784.2	784.7	785.3	785.8	786.4
132.5°	810.3	812.0	813.7	814.9	815.2	815.6	816.0	816.4
135°	852.2	854.0	855.9	857.3	858.2	859.1	860.1	861.0
137.5°	892.8	894.6	896.3	897.3	897.7	898.0	898.4	898.7
140°	918.0	919.7	921.4	922.6	923.3	923.9	924.6	925.2
142.5°	941.5	943.0	944.3	945.3	945.7	946.2	946.6	947.0
145°	975.3	976.0	976.8	977.5	978.3	979.0	979.7	980.5
147.5°	1005.0	1005.3	1005.5	1005.8	1006.3	1006.9	1007.3	1007.8
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)