

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: P332520-940

Luminaire Tested: **S124DIP-S350D1035U940-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332520-940
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: S124DIP-S350D1035U940-4F0-1E-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: 4969.8 lumens
Efficiency: N/A
Efficacy: 133.2 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

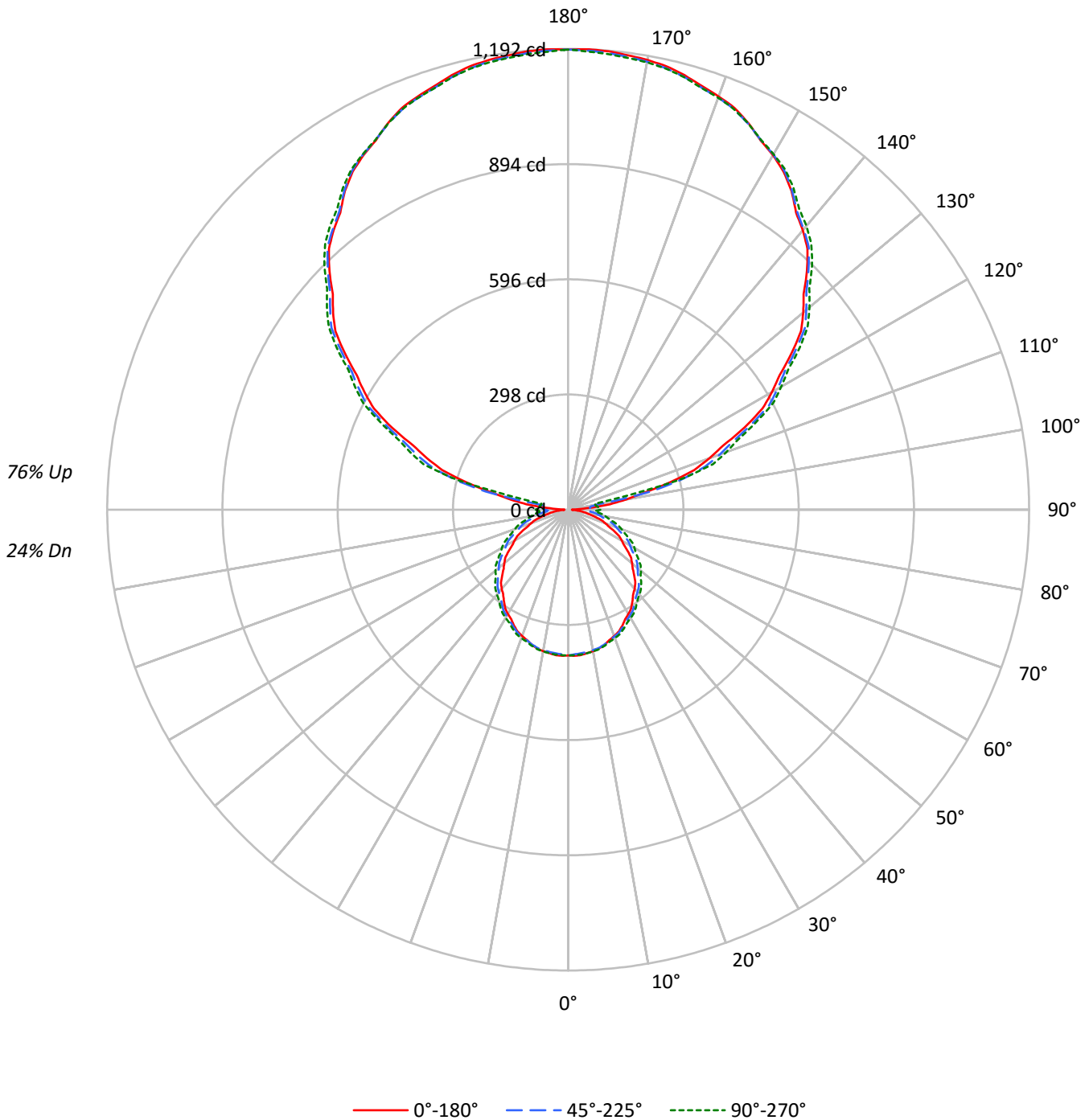
Input Watts (W): 37.3
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	3043	3043	3043
5°	3053	2974	2982
10°	3033	2925	2923
15°	3006	2869	2854
20°	2965	2807	2785
25°	2919	2737	2710
30°	2869	2668	2634
35°	2812	2597	2566
40°	2768	2530	2497
45°	2700	2466	2436
50°	2643	2396	2373
55°	2585	2328	2298
60°	2493	2242	2231
65°	2392	2149	2146
70°	2271	2045	2049
75°	2101	1926	1961
80°	1913	1816	1875
85°	1676	1717	1825



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	35.7	0.7
10°-20°	102.3	2.1
20°-30°	154.6	3.1
30°-40°	187.1	3.8
40°-50°	197.8	4.0
50°-60°	186.2	3.7
60°-70°	154.4	3.1
70°-80°	108.5	2.2
80°-90°	64.8	1.3
90°-100°	77.1	1.6
100°-110°	286.5	5.8
110°-120°	514.6	10.4
120°-130°	640.5	12.9
130°-140°	678.8	13.7
140°-150°	631.5	12.7
150°-160°	508.5	10.2
160°-170°	328.0	6.6
170°-180°	113.0	2.3
0°-30°	292.6	5.9
0°-40°	479.7	9.7
0°-60°	863.6	17.4
0°-90°	1191.3	24.0
90°-120°	878.2	17.7
90°-150°	2828.9	56.9
90°-180°	3778.0	76.0
0°-180°	4969.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	377	377	377	377	377	
5°	377	376	373	376	376	36
15°	362	362	361	364	364	102
25°	331	333	335	339	340	152
35°	290	295	299	304	306	181
45°	241	249	257	264	267	187
55°	189	198	211	219	222	168
65°	131	144	159	169	173	130
75°	73	88	106	117	122	77
85°	22	40	59	71	76	24
90°	10	36	61	78	84	7
95°	54	40	56	72	78	67
105°	272	286	306	322	296	285
115°	503	510	522	532	536	495
125°	705	708	717	727	731	629
135°	873	873	879	887	892	673
145°	1006	1008	1008	1012	1016	629
155°	1103	1104	1101	1104	1102	508
165°	1163	1159	1159	1165	1158	329
175°	1190	1185	1186	1193	1183	113
180°	1190	1190	1190	1190	1190	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	376.9	376.9	376.9	376.9	376.9	376.9	376.9	376.9	376.9	376.9	376.9
2.5°	378.3	378.0	377.8	377.6	377.4	376.9	376.4	375.8	375.1	374.5	375.1
5°	377.4	377.0	376.7	376.5	376.2	375.8	375.1	374.4	373.8	373.1	373.9
7.5°	374.2	374.0	373.8	373.6	373.4	373.1	372.6	372.0	371.5	371.0	371.8
10°	371.4	371.3	371.2	371.1	371.0	370.8	370.3	369.8	369.3	368.9	369.7
12.5°	367.7	367.7	367.7	367.7	367.7	367.5	367.1	366.8	366.5	366.2	366.9
15°	361.7	361.9	361.9	362.0	362.1	362.0	361.7	361.4	361.1	360.9	361.7
17.5°	353.6	353.8	354.1	354.4	354.6	354.8	354.7	354.6	354.6	354.5	355.4
20°	347.8	348.0	348.4	348.7	348.9	349.1	349.2	349.3	349.4	349.5	350.4
22.5°	341.3	341.7	342.1	342.4	342.8	343.0	343.2	343.4	343.6	343.8	344.6
25°	330.9	331.4	332.1	332.6	333.1	333.6	333.9	334.1	334.4	334.7	335.7
27.5°	319.2	320.1	320.9	321.7	322.5	323.2	323.6	324.0	324.5	324.9	325.8
30°	311.5	312.3	313.0	313.7	314.5	315.2	315.8	316.5	317.2	317.8	318.9
32.5°	303.1	304.0	304.9	305.8	306.7	307.5	308.2	308.9	309.7	310.4	311.6
35°	289.5	290.7	291.8	292.9	294.1	295.1	296.0	296.9	297.9	298.8	300.1
37.5°	276.0	277.2	278.6	279.8	281.2	282.3	283.6	284.7	285.9	287.0	288.4
40°	267.2	268.4	269.7	270.8	272.1	273.3	274.6	276.0	277.2	278.6	280.0
42.5°	257.1	258.4	259.8	261.2	262.5	263.9	265.6	267.1	268.6	270.1	271.7
45°	241.4	243.2	245.0	246.7	248.5	250.3	252.1	253.9	255.7	257.4	259.0
47.5°	226.5	228.4	230.2	232.0	233.8	235.8	237.8	240.0	242.0	244.1	245.7
50°	215.7	217.8	219.8	221.9	223.9	226.0	228.1	230.2	232.2	234.3	236.1
52.5°	204.9	207.0	209.0	211.1	213.1	215.3	217.7	220.1	222.4	224.8	226.7
55°	189.1	191.1	193.1	195.0	197.0	199.4	202.2	205.0	207.8	210.6	212.5
57.5°	171.5	173.9	176.3	178.8	181.2	183.8	186.6	189.4	192.2	195.0	197.2
60°	160.0	162.4	164.9	167.3	169.7	172.5	175.6	178.7	181.7	184.9	187.0
62.5°	148.8	151.5	154.2	156.9	159.4	162.4	165.4	168.5	171.7	174.8	176.9
65°	130.8	133.8	136.9	139.8	142.9	146.0	149.1	152.3	155.5	158.7	161.0
67.5°	113.5	116.7	119.9	123.1	126.3	129.6	133.0	136.4	139.8	143.2	145.6
70°	101.7	104.9	108.1	111.3	114.5	117.9	121.5	125.0	128.6	132.2	134.6
72.5°	90.2	93.5	96.8	100.0	103.3	106.8	110.6	114.4	118.2	122.0	124.4
75°	72.6	76.1	79.5	83.0	86.5	90.2	94.2	98.1	102.0	105.9	108.6
77.5°	56.2	59.8	63.5	67.1	70.8	74.7	78.8	83.0	87.1	91.2	93.9
80°	46.0	49.8	53.5	57.2	61.0	64.9	69.1	73.2	77.3	81.5	84.3
82.5°	35.8	39.8	43.7	47.6	51.5	55.5	59.7	63.8	67.9	72.1	74.9
85°	22.4	26.3	30.2	34.2	38.2	42.2	46.5	50.6	54.8	59.1	61.9
87.5°	13.0	17.3	21.6	25.8	30.1	34.4	38.9	43.2	47.7	52.1	55.1
90°	9.5	15.3	21.3	27.2	33.2	38.9	44.5	50.1	55.7	61.3	65.3
92.5°	17.7	21.1	24.6	28.1	31.7	36.2	41.8	47.4	53.1	58.7	62.4
95°	54.5	50.8	47.2	43.5	39.9	40.1	44.1	48.2	52.3	56.3	60.0
97.5°	109.0	115.8	122.7	129.6	136.3	130.6	112.4	94.2	75.9	57.6	60.2
100°	150.6	156.7	162.6	168.6	174.6	165.8	142.1	118.5	94.9	71.2	70.4
102.5°	197.6	202.4	207.1	211.9	216.6	219.0	219.0	219.1	219.1	219.1	185.3
105°	271.7	274.8	277.9	280.9	284.0	287.8	292.2	296.7	301.1	305.6	309.7
107.5°	341.3	343.4	345.5	347.7	349.8	353.2	357.8	362.4	367.0	371.7	374.9
110°	387.9	389.9	391.7	393.7	395.6	398.8	403.2	407.7	412.1	416.6	419.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	433.2	435.4	437.7	439.9	442.1	445.1	448.7	452.5	456.1	459.8	461.8
115°	502.8	504.3	505.7	507.1	508.5	510.7	513.4	516.3	519.1	521.9	524.3
117.5°	566.0	567.2	568.6	569.8	571.1	573.4	576.6	579.9	583.1	586.3	588.2
120°	608.3	609.4	610.5	611.5	612.6	614.4	616.9	619.5	622.0	624.5	626.8
122.5°	648.2	648.7	649.3	649.8	650.3	652.0	654.9	657.7	660.6	663.4	665.5
125°	704.9	705.6	706.3	707.0	707.8	709.0	711.0	712.9	714.9	716.8	719.2
127.5°	758.9	759.0	759.2	759.3	759.4	760.8	763.5	766.2	768.9	771.6	773.2
130°	793.5	793.6	793.7	793.8	793.9	795.0	797.1	799.2	801.3	803.4	805.3
132.5°	825.5	825.8	826.1	826.3	826.6	827.7	829.6	831.6	833.6	835.5	837.3
135°	873.3	873.0	872.8	872.6	872.4	873.1	874.5	875.9	877.4	878.9	880.7
137.5°	915.8	915.8	915.7	915.7	915.7	916.3	917.5	918.6	919.9	921.0	922.8
140°	943.5	943.9	944.1	944.4	944.8	945.1	945.7	946.1	946.6	947.1	948.9
142.5°	968.1	968.8	969.5	970.2	970.9	971.3	971.5	971.7	971.9	972.1	973.6
145°	1006.3	1006.8	1007.3	1007.8	1008.3	1008.5	1008.5	1008.5	1008.5	1008.5	1009.3
147.5°	1036.8	1037.8	1038.8	1039.8	1040.8	1041.3	1041.0	1040.8	1040.6	1040.4	1040.6
150°	1058.8	1059.5	1060.2	1061.0	1061.6	1061.8	1061.7	1061.5	1061.3	1061.0	1061.0
152.5°	1077.0	1077.6	1078.3	1078.9	1079.5	1079.6	1079.2	1078.9	1078.5	1078.2	1078.5
155°	1103.0	1103.1	1103.3	1103.5	1103.7	1103.5	1103.0	1102.3	1101.7	1101.2	1101.9
157.5°	1124.8	1124.7	1124.5	1124.4	1124.4	1123.9	1123.3	1122.6	1122.0	1121.2	1122.3
160°	1137.6	1137.0	1136.5	1135.9	1135.2	1134.9	1134.7	1134.4	1134.3	1134.1	1135.2
162.5°	1149.1	1148.3	1147.5	1146.7	1146.0	1145.6	1145.3	1145.1	1145.0	1144.8	1145.9
165°	1163.4	1162.4	1161.5	1160.5	1159.5	1159.0	1159.0	1159.0	1159.0	1159.0	1160.6
167.5°	1174.8	1173.8	1172.8	1171.8	1170.7	1170.2	1170.0	1169.9	1169.8	1169.7	1171.4
170°	1181.2	1180.1	1178.8	1177.7	1176.5	1176.0	1176.2	1176.4	1176.6	1176.8	1178.4
172.5°	1185.5	1184.4	1183.1	1182.0	1180.8	1180.3	1180.4	1180.7	1180.9	1181.1	1182.7
175°	1190.2	1189.0	1187.8	1186.6	1185.4	1184.9	1185.1	1185.4	1185.5	1185.7	1187.5
177.5°	1192.3	1191.1	1190.1	1189.0	1187.8	1187.5	1187.8	1188.1	1188.4	1188.7	1190.0
180°	1190.2	1190.2	1190.2	1190.2	1190.2	1190.2	1190.2	1190.2	1190.2	1190.2	1190.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	376.9	376.9	376.9	376.9	376.9	376.9	376.9	376.9
2.5°	375.6	376.1	376.7	376.8	376.8	376.7	376.7	376.6
5°	374.6	375.3	376.1	376.5	376.4	376.2	376.1	376.0
7.5°	372.6	373.4	374.3	374.7	374.6	374.5	374.4	374.3
10°	370.6	371.4	372.3	372.6	372.6	372.5	372.4	372.3
12.5°	367.7	368.5	369.3	369.6	369.6	369.6	369.6	369.5
15°	362.6	363.4	364.3	364.6	364.5	364.4	364.4	364.3
17.5°	356.2	357.1	358.0	358.4	358.3	358.2	358.2	358.1
20°	351.3	352.3	353.2	353.7	353.7	353.7	353.7	353.7
22.5°	345.6	346.5	347.5	348.0	348.2	348.3	348.5	348.7
25°	336.8	337.8	338.9	339.4	339.5	339.6	339.7	339.7
27.5°	326.8	327.8	328.8	329.3	329.4	329.5	329.6	329.8
30°	319.9	320.9	321.9	322.5	322.7	323.0	323.2	323.3
32.5°	312.7	314.0	315.1	315.8	316.0	316.2	316.4	316.6
35°	301.5	302.7	304.1	304.9	305.1	305.4	305.8	306.0
37.5°	289.7	291.0	292.3	293.2	293.5	293.7	294.1	294.4
40°	281.4	282.8	284.2	285.1	285.4	285.9	286.2	286.6
42.5°	273.2	274.8	276.3	277.3	277.6	277.9	278.2	278.5
45°	260.6	262.3	263.9	264.8	265.4	265.8	266.3	266.7
47.5°	247.4	249.0	250.7	251.7	252.4	252.9	253.4	254.0
50°	238.0	239.9	241.7	243.0	243.5	244.1	244.7	245.2
52.5°	228.5	230.4	232.3	233.5	234.1	234.6	235.2	235.8
55°	214.4	216.2	218.1	219.4	219.9	220.4	221.1	221.6
57.5°	199.5	201.7	203.9	205.3	205.8	206.3	206.9	207.4
60°	189.2	191.4	193.5	194.9	195.7	196.4	197.2	198.0
62.5°	179.1	181.2	183.3	184.9	185.6	186.3	187.1	187.8
65°	163.4	165.8	168.1	169.6	170.4	171.1	171.9	172.6
67.5°	148.0	150.4	152.8	154.4	155.1	155.8	156.5	157.3
70°	137.1	139.7	142.2	143.8	144.5	145.2	145.8	146.4
72.5°	126.9	129.4	131.8	133.4	134.1	134.8	135.6	136.3
75°	111.2	113.8	116.5	118.2	119.0	119.8	120.7	121.5
77.5°	96.6	99.2	101.9	103.7	104.6	105.5	106.4	107.3
80°	87.1	89.9	92.7	94.5	95.2	96.0	96.8	97.5
82.5°	77.8	80.7	83.6	85.4	86.2	87.0	87.9	88.7
85°	64.7	67.5	70.4	72.2	73.1	74.1	75.0	76.0
87.5°	58.1	61.0	63.9	65.9	66.8	67.7	68.6	69.5
90°	69.2	73.1	77.0	79.5	80.7	81.9	82.9	84.1
92.5°	66.3	70.1	73.9	76.3	77.1	77.9	78.7	79.6
95°	63.8	67.5	71.2	73.6	74.6	75.6	76.7	77.8
97.5°	62.8	65.4	67.9	69.7	70.7	71.7	72.7	73.7
100°	69.6	68.8	67.9	67.9	68.8	69.6	70.5	71.3
102.5°	151.5	117.6	83.8	67.3	68.0	68.8	69.6	70.4
105°	313.9	318.0	322.1	320.9	314.6	308.3	301.8	295.5
107.5°	378.0	381.2	384.4	386.7	388.2	389.6	391.0	392.4
110°	421.7	424.3	426.9	428.8	430.2	431.5	432.8	434.2



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CATALOG NUMBER: S124DIP-S350D1035U940-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	463.8	465.8	467.8	469.6	471.1	472.6	474.0	475.5
115°	526.8	529.2	531.7	533.2	534.0	534.6	535.3	535.9
117.5°	590.0	591.9	593.8	595.0	595.8	596.4	597.1	597.7
120°	629.0	631.3	633.6	634.9	635.3	635.6	636.0	636.3
122.5°	667.6	669.8	671.8	673.1	673.3	673.6	673.9	674.1
125°	721.6	724.0	726.3	727.9	728.7	729.4	730.2	730.9
127.5°	774.8	776.3	777.9	778.9	779.4	779.9	780.3	780.9
130°	807.2	809.0	810.9	812.2	812.7	813.3	813.9	814.4
132.5°	839.2	841.0	842.8	843.9	844.3	844.7	845.1	845.5
135°	882.6	884.5	886.4	887.9	888.8	889.7	890.7	891.7
137.5°	924.6	926.5	928.3	929.3	929.7	930.1	930.4	930.8
140°	950.7	952.5	954.3	955.6	956.3	956.9	957.6	958.2
142.5°	975.1	976.6	978.0	979.0	979.5	979.9	980.3	980.8
145°	1010.0	1010.8	1011.6	1012.4	1013.2	1013.9	1014.7	1015.5
147.5°	1040.9	1041.2	1041.3	1041.7	1042.2	1042.8	1043.2	1043.7
150°	1061.0	1061.0	1061.0	1061.1	1061.4	1061.6	1061.8	1061.9
152.5°	1078.8	1079.1	1079.4	1079.5	1079.4	1079.3	1079.1	1079.1
155°	1102.7	1103.5	1104.3	1104.4	1103.8	1103.2	1102.6	1102.1
157.5°	1123.3	1124.4	1125.3	1125.3	1124.4	1123.3	1122.3	1121.2
160°	1136.5	1137.6	1138.8	1138.8	1137.6	1136.5	1135.2	1134.1
162.5°	1147.1	1148.3	1149.5	1149.4	1148.1	1146.7	1145.4	1144.1
165°	1162.2	1163.8	1165.3	1165.2	1163.4	1161.6	1159.8	1158.1
167.5°	1173.1	1174.9	1176.6	1176.5	1174.6	1172.6	1170.5	1168.6
170°	1180.0	1181.5	1183.1	1182.9	1181.0	1179.0	1177.0	1175.0
172.5°	1184.3	1185.8	1187.4	1187.1	1185.0	1182.9	1180.7	1178.6
175°	1189.3	1191.1	1192.8	1192.5	1190.2	1187.8	1185.4	1183.0
177.5°	1191.2	1192.5	1193.8	1193.5	1191.6	1189.7	1187.8	1185.9
180°	1190.2	1190.2	1190.2	1190.2	1190.2	1190.2	1190.2	1190.2

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