

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: P332493-940

Luminaire Tested: **S124DIP-S350D365U940-4F0-1E-UDD-D**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332493-940  
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-S350D365U940-4F0-1E-UDD-D  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 350 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 365 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2589.4 lumens  
Efficiency: N/A  
Efficacy: 127.6 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: General Diffuse

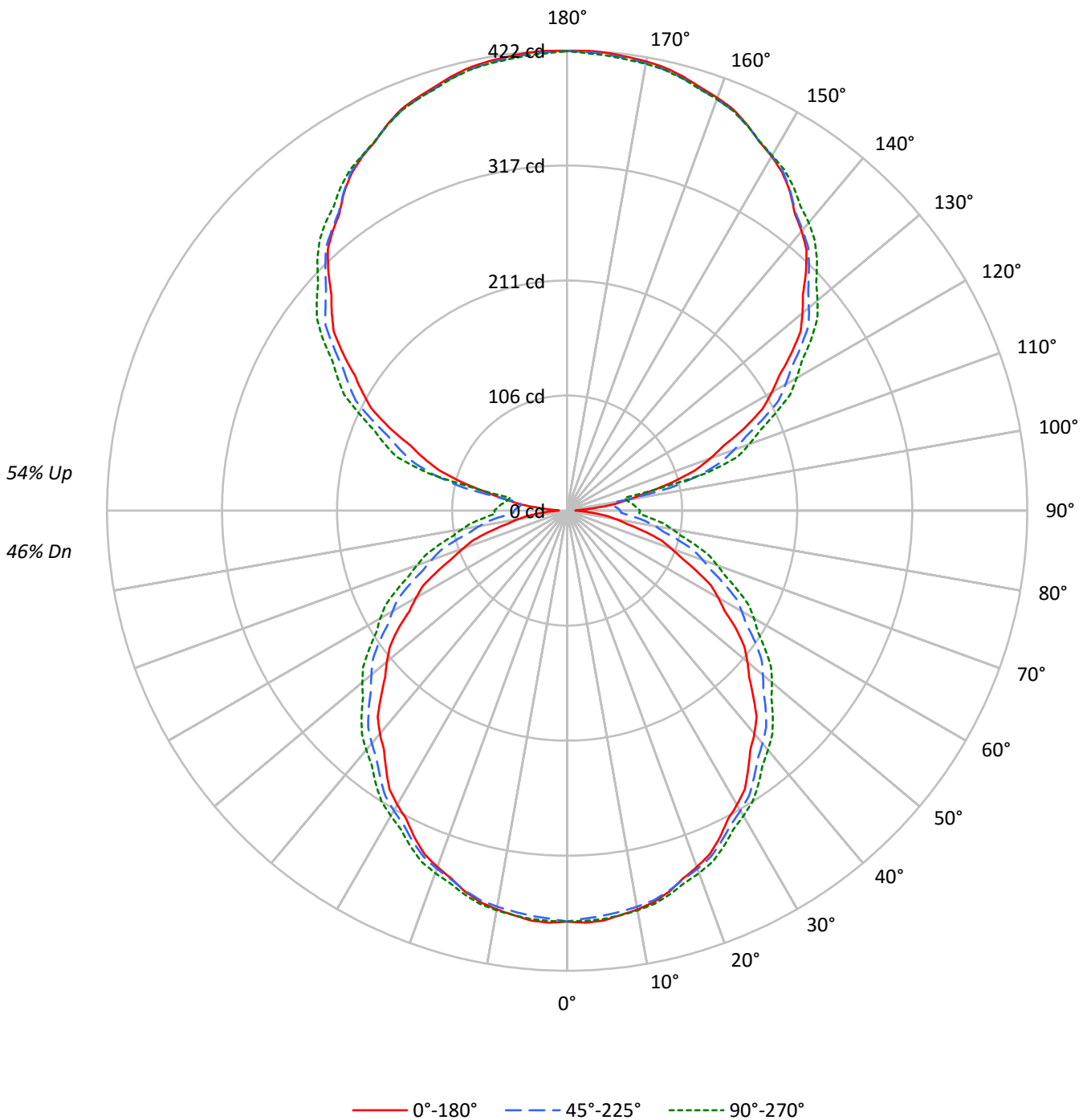
Input Watts (W): 20.3  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P332493-940

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### Luminous Intensity Polar Plot





TEST NUMBER: P332493-940

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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	106	106	106	106	97	97	97	97	81	81	81	66	66	66	52	52	52	46
1	96	91	87	83	88	84	80	77	70	67	65	57	55	53	45	44	42	37
2	87	79	73	67	79	73	67	62	60	56	53	49	46	44	39	37	35	30
3	79	69	62	55	72	64	57	51	53	48	44	43	40	36	34	31	29	25
4	72	61	53	47	66	56	49	43	47	41	37	38	34	31	30	27	25	21
5	66	54	46	40	60	50	42	37	42	36	32	34	30	27	27	24	22	18
6	61	48	40	34	55	45	37	32	37	32	27	31	26	23	25	21	19	16
7	56	44	36	30	51	40	33	28	34	28	24	28	24	20	22	19	17	14
8	52	40	32	26	48	37	29	25	31	25	21	25	21	18	20	17	15	12
9	48	36	28	23	44	33	26	22	28	23	19	23	19	16	19	16	13	11
10	45	33	26	21	41	31	24	20	26	21	17	22	17	15	17	14	12	10

**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	1.4
10°-20°	102.3	3.9
20°-30°	154.6	6.0
30°-40°	187.1	7.2
40°-50°	197.8	7.6
50°-60°	186.2	7.2
60°-70°	154.4	6.0
70°-80°	108.5	4.2
80°-90°	62.6	2.4
90°-100°	50.8	2.0
100°-110°	118.8	4.6
110°-120°	193.9	7.5
120°-130°	233.3	9.0
130°-140°	243.1	9.4
140°-150°	224.1	8.7
150°-160°	180.0	7.0
160°-170°	116.1	4.5
170°-180°	40.0	1.5
0°-30°	292.6	11.3
0°-40°	479.7	18.5
0°-60°	863.6	33.4
0°-90°	1189.1	45.9
90°-120°	363.5	14.0
90°-150°	1064.2	41.1
90°-180°	1400.0	54.1
0°-180°	2589.4	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°	8	28	49	62	67	5
95°	23	27	44	56	61	27
105°	99	109	126	138	132	104
115°	180	185	198	207	210	177
125°	251	252	261	270	273	224
135°	310	310	314	321	324	239
145°	356	357	357	360	362	223
155°	390	391	390	391	390	180
165°	412	410	410	413	410	116
175°	421	420	420	422	419	40
180°	421	421	421	421	421	



TEST NUMBER: P332493-940

CATALOG NUMBER: S124DIP-S350D365U940-4F0-1E-UDD-D

**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°	12.7	16.7	20.7	24.6	28.6	32.7	36.9	41.1	45.4	49.6	52.4
90°	7.7	12.2	16.8	21.2	25.8	30.3	35.0	39.5	44.1	48.7	51.9
92.5°	10.3	13.8	17.2	20.6	24.1	28.1	32.6	37.3	41.8	46.5	49.5
95°	22.8	23.5	24.3	25.0	25.7	28.0	31.9	35.8	39.8	43.7	46.6
97.5°	41.8	45.9	50.1	54.2	58.4	58.5	54.5	50.5	46.5	42.4	44.9
100°	56.4	60.0	63.8	67.4	71.2	70.0	63.9	58.0	52.0	45.9	47.3
102.5°	72.9	76.1	79.1	82.1	85.2	87.9	90.2	92.6	94.9	97.2	86.9
105°	98.6	100.9	103.3	105.6	107.8	110.9	114.8	118.5	122.3	126.2	129.1
107.5°	123.2	124.9	126.7	128.5	130.2	133.0	136.7	140.4	144.3	148.0	150.6
110°	139.6	141.1	142.6	144.1	145.6	148.2	151.9	155.6	159.3	163.0	165.3



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	155.3	156.9	158.4	160.0	161.5	163.9	167.3	170.6	173.9	177.3	179.3
115°	179.7	180.7	181.7	182.8	183.9	185.8	188.8	191.7	194.7	197.6	199.7
117.5°	202.0	202.7	203.5	204.3	205.1	207.0	209.9	212.9	215.8	218.7	220.7
120°	216.7	217.3	217.8	218.4	219.0	220.6	223.2	225.9	228.5	231.1	233.2
122.5°	230.9	231.0	231.3	231.5	231.8	233.2	235.9	238.5	241.2	243.9	245.8
125°	250.7	250.8	251.0	251.2	251.4	252.6	254.8	257.0	259.2	261.4	263.4
127.5°	269.7	269.7	269.7	269.7	269.7	270.7	272.8	274.9	277.1	279.2	280.8
130°	281.8	281.7	281.7	281.7	281.7	282.5	284.2	285.9	287.7	289.4	291.1
132.5°	293.1	293.1	293.2	293.2	293.2	294.0	295.4	296.9	298.4	299.8	301.5
135°	309.7	309.6	309.5	309.5	309.4	309.9	310.8	311.7	312.6	313.6	315.2
137.5°	324.8	324.7	324.6	324.6	324.5	324.8	325.4	326.0	326.6	327.3	328.8
140°	334.6	334.7	334.7	334.7	334.7	334.9	335.1	335.4	335.6	335.8	337.2
142.5°	343.0	343.3	343.6	343.8	344.0	344.1	344.2	344.2	344.2	344.2	345.4
145°	356.5	356.7	356.8	356.9	357.0	357.0	357.0	357.0	357.0	357.0	357.7
147.5°	367.3	367.7	367.9	368.2	368.5	368.6	368.5	368.5	368.4	368.4	368.5
150°	375.1	375.3	375.5	375.7	375.9	375.9	375.9	375.8	375.7	375.7	375.7
152.5°	381.4	381.6	381.7	381.9	382.2	382.2	382.1	381.9	381.8	381.7	381.8
155°	390.5	390.6	390.6	390.7	390.7	390.7	390.5	390.2	390.0	389.9	390.1
157.5°	398.2	398.1	398.1	398.1	398.1	397.9	397.7	397.4	397.2	397.0	397.3
160°	402.8	402.5	402.3	402.2	401.9	401.8	401.7	401.6	401.5	401.4	401.9
162.5°	406.8	406.5	406.3	406.0	405.7	405.6	405.5	405.4	405.4	405.3	405.7
165°	411.9	411.5	411.2	410.8	410.5	410.3	410.3	410.3	410.3	410.3	410.9
167.5°	415.9	415.5	415.2	414.8	414.5	414.3	414.2	414.2	414.1	414.1	414.7
170°	418.2	417.8	417.3	417.0	416.5	416.3	416.4	416.5	416.5	416.6	417.1
172.5°	419.7	419.3	418.8	418.5	418.0	417.9	417.9	418.0	418.0	418.1	418.7
175°	421.3	420.9	420.5	420.1	419.6	419.5	419.5	419.6	419.7	419.7	420.4
177.5°	422.1	421.7	421.3	420.9	420.5	420.4	420.5	420.6	420.7	420.8	421.3
180°	421.3	421.3	421.3	421.3	421.3	421.3	421.3	421.3	421.3	421.3	421.3



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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°	55.2	58.0	60.8	62.6	63.5	64.4	65.2	66.1
90°	55.0	58.1	61.3	63.3	64.2	65.1	66.0	66.9
92.5°	52.6	55.6	58.7	60.6	61.4	62.2	63.0	63.8
95°	49.6	52.5	55.5	57.4	58.3	59.2	60.1	61.1
97.5°	47.4	49.9	52.4	54.1	55.0	55.8	56.7	57.6
100°	48.6	49.9	51.3	52.3	53.1	53.8	54.5	55.3
102.5°	76.4	66.1	55.6	50.8	51.5	52.3	53.1	53.9
105°	132.2	135.1	138.1	138.7	136.9	135.2	133.4	131.6
107.5°	153.2	155.9	158.5	160.2	161.2	162.1	163.1	164.0
110°	167.6	170.0	172.2	173.9	174.8	175.8	176.7	177.7





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CATALOG NUMBER: S124DIP-S350D365U940-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	181.4	183.4	185.5	187.0	188.0	189.0	190.0	191.0
115°	202.0	204.2	206.4	207.9	208.5	209.1	209.8	210.4
117.5°	222.6	224.5	226.4	227.7	228.5	229.2	229.9	230.7
120°	235.2	237.2	239.2	240.6	241.1	241.7	242.4	243.0
122.5°	247.8	249.8	251.7	253.0	253.5	254.0	254.6	255.1
125°	265.4	267.4	269.4	270.7	271.3	272.0	272.6	273.2
127.5°	282.5	284.1	285.8	286.9	287.5	288.0	288.6	289.2
130°	292.8	294.6	296.4	297.6	298.1	298.6	299.3	299.8
132.5°	303.2	304.9	306.6	307.6	308.2	308.7	309.2	309.7
135°	316.8	318.5	320.1	321.3	322.0	322.7	323.4	324.1
137.5°	330.3	331.8	333.4	334.3	334.7	335.2	335.6	336.1
140°	338.7	340.1	341.5	342.5	343.0	343.6	344.2	344.7
142.5°	346.7	347.9	349.1	349.9	350.4	350.8	351.2	351.6
145°	358.3	358.9	359.6	360.2	360.7	361.2	361.7	362.2
147.5°	368.6	368.7	368.9	369.1	369.5	369.9	370.2	370.6
150°	375.7	375.7	375.7	375.7	375.8	375.9	375.9	375.9
152.5°	381.9	382.0	382.2	382.2	382.1	382.1	382.1	382.0
155°	390.4	390.7	390.9	391.0	390.7	390.6	390.4	390.1
157.5°	397.7	398.1	398.4	398.4	398.1	397.7	397.3	397.0
160°	402.3	402.8	403.1	403.1	402.8	402.3	401.9	401.4
162.5°	406.1	406.5	407.0	406.9	406.4	406.0	405.5	405.0
165°	411.4	412.0	412.6	412.5	411.9	411.3	410.6	410.0
167.5°	415.4	416.0	416.5	416.5	415.8	415.1	414.4	413.8
170°	417.8	418.3	418.8	418.7	418.1	417.4	416.7	416.0
172.5°	419.3	419.8	420.4	420.3	419.5	418.7	418.0	417.2
175°	421.1	421.7	422.3	422.2	421.3	420.5	419.6	418.8
177.5°	421.8	422.2	422.7	422.5	421.9	421.2	420.5	419.8
180°	421.3	421.3	421.3	421.3	421.3	421.3	421.3	421.3

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