

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: P332493-935

Luminaire Tested: **S124DIP-S350D365U935-4F0-1E-UDD-D**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332493-935  
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-S350D365U935-4F0-1E-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: 2500.2 lumens  
Efficiency: N/A  
Efficacy: 123.2 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: General Diffuse

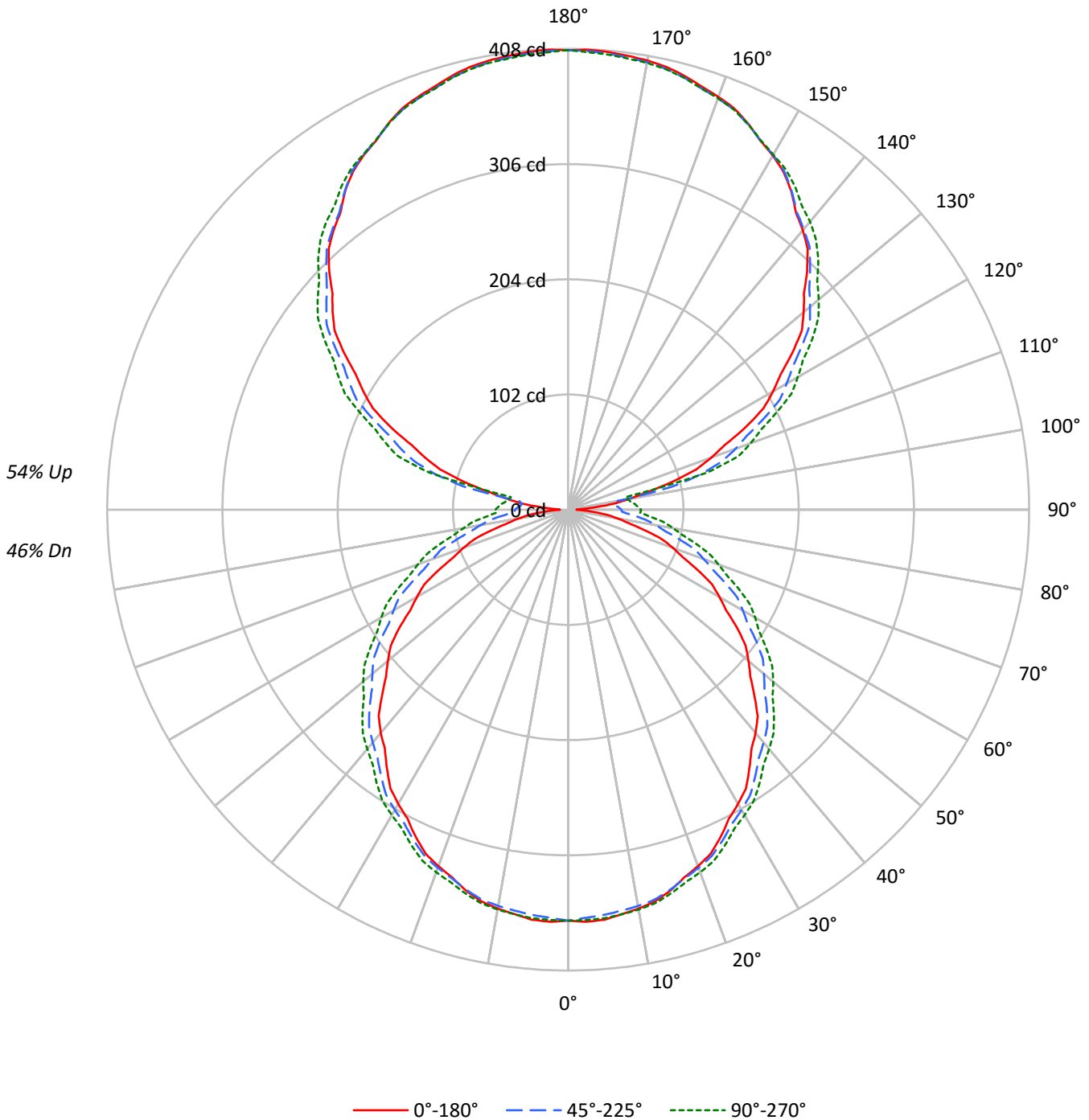
Input Watts (W): 20.3  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





TEST NUMBER: P332493-935

CATALOG NUMBER: S124DIP-S350D365U935-4F0-1E-UDD-D

**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°	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	1.4
10°-20°	98.7	3.9
20°-30°	149.3	6.0
30°-40°	180.7	7.2
40°-50°	191.0	7.6
50°-60°	179.7	7.2
60°-70°	149.1	6.0
70°-80°	104.7	4.2
80°-90°	60.4	2.4
90°-100°	49.1	2.0
100°-110°	114.7	4.6
110°-120°	187.2	7.5
120°-130°	225.3	9.0
130°-140°	234.8	9.4
140°-150°	216.4	8.7
150°-160°	173.8	7.0
160°-170°	112.1	4.5
170°-180°	38.6	1.5
0°-30°	282.5	11.3
0°-40°	463.2	18.5
0°-60°	833.9	33.4
0°-90°	1148.1	45.9
90°-120°	351.0	14.0
90°-150°	1027.5	41.1
90°-180°	1352.0	54.1
0°-180°	2500.2	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°	7	27	47	60	65	5
95°	22	26	42	54	59	26
105°	95	106	122	134	127	100
115°	174	178	191	200	203	171
125°	242	243	252	261	264	216
135°	299	299	303	310	313	230
145°	344	345	345	348	350	215
155°	377	377	376	378	377	174
165°	398	396	396	398	396	112
175°	407	405	405	408	404	39
180°	407	407	407	407	407	



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**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°	12.2	16.1	20.0	23.8	27.6	31.6	35.6	39.7	43.8	47.9	50.6
90°	7.4	11.8	16.2	20.5	24.9	29.3	33.8	38.1	42.6	47.0	50.1
92.5°	10.0	13.3	16.6	19.9	23.2	27.1	31.5	36.0	40.4	44.9	47.8
95°	22.0	22.7	23.4	24.1	24.8	27.0	30.8	34.6	38.4	42.2	45.0
97.5°	40.4	44.3	48.4	52.3	56.4	56.5	52.6	48.7	44.9	41.0	43.4
100°	54.4	57.9	61.6	65.1	68.7	67.6	61.7	56.0	50.2	44.3	45.6
102.5°	70.4	73.4	76.4	79.3	82.3	84.9	87.1	89.4	91.6	93.8	83.9
105°	95.2	97.5	99.7	101.9	104.1	107.1	110.8	114.4	118.1	121.8	124.7
107.5°	119.0	120.6	122.3	124.1	125.7	128.4	132.0	135.6	139.3	142.9	145.4
110°	134.7	136.2	137.7	139.1	140.6	143.1	146.7	150.2	153.9	157.4	159.6



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	150.0	151.4	152.9	154.5	155.9	158.3	161.5	164.7	167.9	171.2	173.1
115°	173.5	174.4	175.5	176.5	177.5	179.4	182.3	185.1	188.0	190.8	192.9
117.5°	195.0	195.7	196.5	197.3	198.0	199.8	202.7	205.5	208.4	211.2	213.1
120°	209.2	209.8	210.3	210.9	211.5	213.0	215.5	218.1	220.7	223.2	225.2
122.5°	222.9	223.1	223.3	223.5	223.8	225.2	227.7	230.3	232.9	235.5	237.4
125°	242.0	242.2	242.4	242.5	242.7	243.9	246.0	248.1	250.3	252.4	254.3
127.5°	260.5	260.5	260.4	260.4	260.4	261.4	263.4	265.4	267.5	269.6	271.1
130°	272.1	272.0	272.0	272.0	272.0	272.8	274.4	276.0	277.8	279.4	281.0
132.5°	283.0	283.0	283.1	283.1	283.1	283.9	285.2	286.7	288.1	289.5	291.1
135°	299.0	298.9	298.9	298.9	298.8	299.2	300.1	301.0	301.9	302.8	304.4
137.5°	313.6	313.5	313.4	313.4	313.3	313.6	314.2	314.8	315.4	316.0	317.5
140°	323.0	323.1	323.1	323.2	323.2	323.4	323.6	323.8	324.1	324.3	325.6
142.5°	331.2	331.5	331.7	331.9	332.2	332.3	332.3	332.3	332.3	332.3	333.6
145°	344.2	344.4	344.5	344.6	344.7	344.7	344.7	344.7	344.7	344.7	345.3
147.5°	354.6	355.0	355.2	355.5	355.9	355.9	355.9	355.8	355.7	355.7	355.8
150°	362.2	362.4	362.6	362.7	362.9	363.0	362.9	362.8	362.7	362.7	362.7
152.5°	368.2	368.4	368.6	368.8	369.0	369.0	368.9	368.8	368.7	368.6	368.7
155°	377.0	377.1	377.1	377.2	377.3	377.2	377.0	376.8	376.6	376.4	376.7
157.5°	384.5	384.4	384.4	384.4	384.4	384.2	384.0	383.7	383.5	383.3	383.7
160°	388.9	388.7	388.5	388.3	388.1	388.0	387.9	387.8	387.7	387.6	388.1
162.5°	392.8	392.5	392.3	392.0	391.8	391.6	391.5	391.4	391.4	391.3	391.8
165°	397.7	397.4	397.0	396.7	396.3	396.1	396.1	396.1	396.1	396.1	396.7
167.5°	401.6	401.2	400.9	400.5	400.2	400.0	399.9	399.9	399.8	399.8	400.5
170°	403.8	403.4	402.9	402.6	402.2	402.0	402.1	402.2	402.2	402.3	402.8
172.5°	405.3	404.8	404.4	404.1	403.6	403.5	403.6	403.6	403.6	403.7	404.2
175°	406.8	406.4	406.0	405.6	405.2	405.0	405.1	405.2	405.3	405.3	406.0
177.5°	407.6	407.2	406.8	406.4	406.0	405.9	406.0	406.1	406.2	406.3	406.8
180°	406.8	406.8	406.8	406.8	406.8	406.8	406.8	406.8	406.8	406.8	406.8



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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°	53.3	56.0	58.7	60.4	61.3	62.2	62.9	63.8
90°	53.1	56.1	59.2	61.1	62.0	62.9	63.7	64.6
92.5°	50.8	53.7	56.7	58.5	59.3	60.0	60.8	61.6
95°	47.9	50.7	53.6	55.4	56.3	57.2	58.0	59.0
97.5°	45.8	48.2	50.6	52.3	53.1	53.9	54.8	55.6
100°	46.9	48.2	49.5	50.5	51.2	51.9	52.6	53.4
102.5°	73.8	63.8	53.7	49.1	49.8	50.5	51.2	52.0
105°	127.6	130.4	133.4	133.9	132.2	130.5	128.8	127.1
107.5°	147.9	150.5	153.0	154.7	155.7	156.5	157.5	158.3
110°	161.9	164.1	166.3	167.9	168.8	169.7	170.7	171.6





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CATALOG NUMBER: S124DIP-S350D365U935-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	175.1	177.1	179.1	180.6	181.5	182.5	183.5	184.4
115°	195.0	197.2	199.3	200.7	201.3	201.9	202.6	203.2
117.5°	214.9	216.8	218.6	219.9	220.6	221.3	222.0	222.7
120°	227.1	229.0	231.0	232.3	232.8	233.4	234.0	234.6
122.5°	239.3	241.2	243.1	244.3	244.8	245.3	245.8	246.3
125°	256.2	258.2	260.1	261.4	262.0	262.6	263.2	263.8
127.5°	272.8	274.3	276.0	277.0	277.6	278.1	278.7	279.2
130°	282.8	284.5	286.2	287.3	287.8	288.3	289.0	289.5
132.5°	292.7	294.4	296.0	297.0	297.6	298.1	298.5	299.0
135°	305.9	307.5	309.1	310.2	310.9	311.6	312.3	313.0
137.5°	318.9	320.4	321.9	322.8	323.2	323.6	324.1	324.5
140°	327.0	328.4	329.8	330.7	331.2	331.7	332.3	332.9
142.5°	334.8	336.0	337.1	337.9	338.3	338.7	339.1	339.5
145°	345.9	346.6	347.2	347.8	348.3	348.8	349.2	349.7
147.5°	355.9	356.0	356.2	356.4	356.8	357.1	357.5	357.8
150°	362.7	362.7	362.7	362.7	362.8	362.9	362.9	363.0
152.5°	368.8	368.9	369.0	369.0	368.9	368.9	368.9	368.9
155°	376.9	377.2	377.5	377.5	377.3	377.1	376.9	376.7
157.5°	384.0	384.4	384.7	384.7	384.4	384.0	383.7	383.3
160°	388.5	388.9	389.3	389.3	388.9	388.5	388.1	387.6
162.5°	392.1	392.5	393.0	392.9	392.4	392.0	391.5	391.1
165°	397.3	397.8	398.4	398.3	397.7	397.1	396.5	395.9
167.5°	401.1	401.7	402.2	402.2	401.5	400.8	400.1	399.5
170°	403.4	403.9	404.4	404.3	403.7	403.0	402.3	401.7
172.5°	404.8	405.4	405.9	405.8	405.1	404.3	403.6	402.9
175°	406.6	407.2	407.8	407.7	406.8	406.0	405.2	404.4
177.5°	407.3	407.7	408.1	407.9	407.3	406.7	406.0	405.4
180°	406.8	406.8	406.8	406.8	406.8	406.8	406.8	406.8

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