

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: P332874-927

Luminaire Tested: **SA4XXRDIP-C350D590U927-4F0-1E-UDD-F**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P332874-927  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-6,  
Test Lab: INNOVATION CENTER  
Issue Date: 10/7/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: SA4XXRDIP-C350D590U927-4F0-1E-UDD-F  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 350 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 590 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3002.0 lumens  
Efficiency: N/A  
Efficacy: 117.3 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24  
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')  
CIE Type: Semi-Indirect

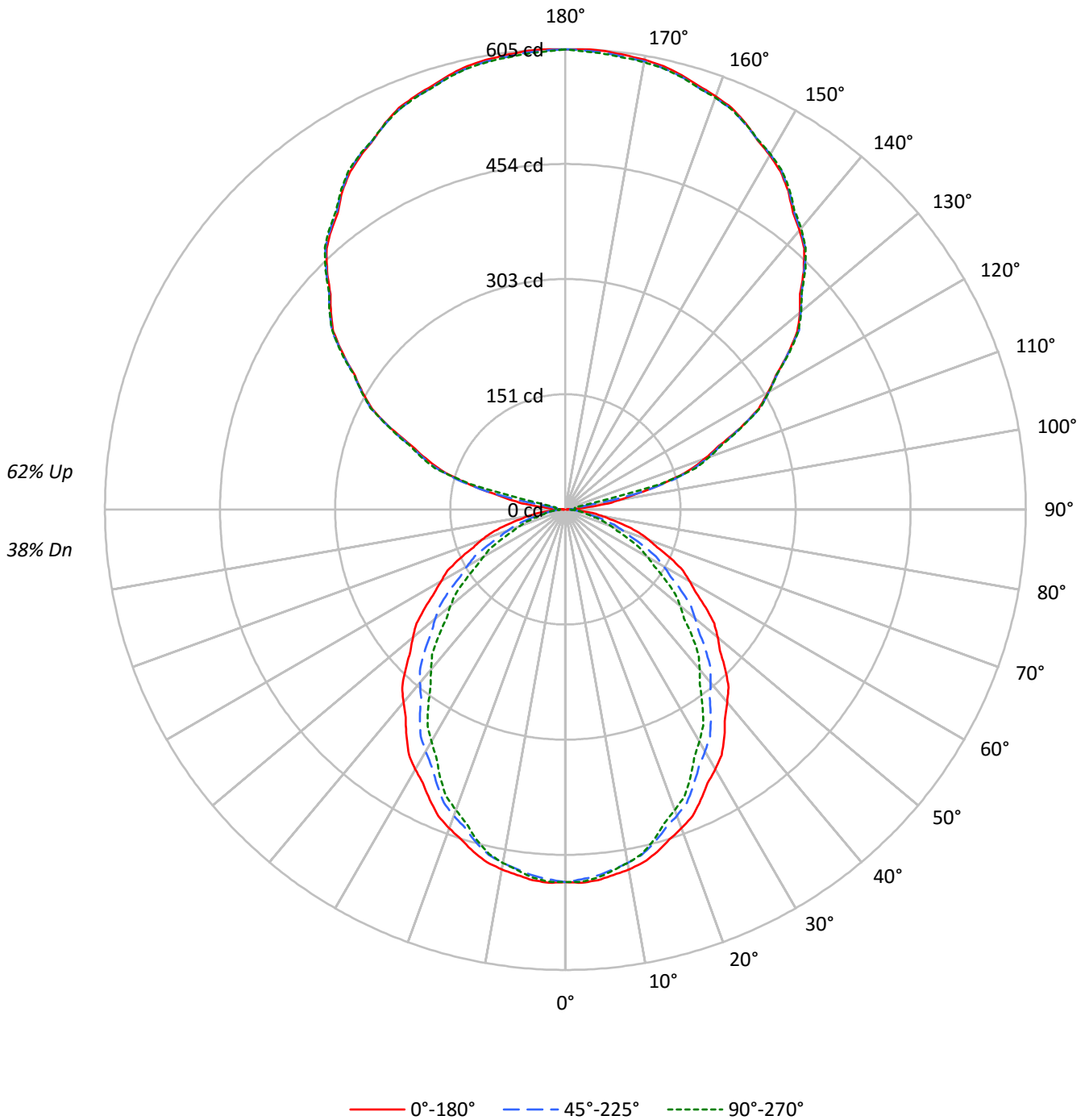
Input Watts (W): 25.6  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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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	0	
RCR																						
0	104	104	104	104	95	95	95	95	77	77	77	60	60	60	45	45	45	38				
1	95	91	87	84	86	83	80	77	67	65	63	53	52	50	40	39	38	32				
2	87	80	74	69	79	73	68	63	59	56	53	47	44	42	35	34	32	27				
3	79	70	63	58	72	64	58	53	52	48	44	42	38	36	31	30	28	23				
4	73	62	55	49	66	57	50	45	47	42	38	37	34	31	28	26	24	20				
5	67	55	48	42	60	51	44	39	42	37	33	33	30	27	26	23	21	18				
6	61	50	42	36	56	45	39	34	38	32	29	30	26	24	23	21	19	16				
7	57	45	37	32	51	41	34	29	34	29	25	27	24	21	21	19	17	14				
8	53	41	33	28	48	37	31	26	31	26	22	25	21	19	19	17	15	12				
9	49	37	30	25	44	34	28	23	28	23	20	23	19	17	18	15	13	11				
10	46	34	27	22	41	31	25	21	26	21	18	21	18	15	17	14	12	10				

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	3953	3953	3953
5°	3962	3914	3938
10°	3937	3867	3867
15°	3892	3786	3758
20°	3830	3679	3611
25°	3751	3553	3463
30°	3674	3422	3278
35°	3588	3286	3094
40°	3485	3130	2893
45°	3391	2975	2689
50°	3282	2798	2473
55°	3167	2612	2238
60°	3039	2409	1997
65°	2923	2157	1761
70°	2752	1876	1496
75°	2539	1556	1216
80°	2213	1186	1116
85°	1880	1074	1010



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	46.0	1.5
10°-20°	128.3	4.3
20°-30°	185.2	6.2
30°-40°	210.0	7.0
40°-50°	202.8	6.8
50°-60°	168.6	5.6
60°-70°	116.4	3.9
70°-80°	59.0	2.0
80°-90°	16.9	0.6
90°-100°	20.7	0.7
100°-110°	131.7	4.4
110°-120°	252.0	8.4
120°-130°	319.9	10.7
130°-140°	342.3	11.4
140°-150°	320.1	10.7
150°-160°	258.1	8.6
160°-170°	166.5	5.5
170°-180°	57.4	1.9
0°-30°	359.5	12.0
0°-40°	569.5	19.0
0°-60°	940.8	31.3
0°-90°	1133.2	37.7
90°-120°	404.5	13.5
90°-150°	1386.8	46.2
90°-180°	1869.0	62.3
0°-180°	3002.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	490	490	490	490	490	
5°	489	487	483	486	486	46
15°	466	462	453	452	450	131
25°	421	414	399	393	389	194
35°	364	352	333	321	314	227
45°	297	283	261	243	236	229
55°	225	209	186	167	159	201
65°	153	136	113	97	92	151
75°	81	67	50	42	39	86
85°	20	13	12	11	11	23
90°	1	6	10	13	14	2
95°	25	10	10	13	13	32
105°	136	139	141	144	129	142
115°	254	255	255	256	256	250
125°	357	359	358	359	360	319
135°	443	442	444	445	446	341
145°	511	512	512	512	513	319
155°	560	560	559	561	559	258
165°	591	588	588	592	588	167
175°	604	602	602	605	601	58
180°	604	604	604	604	604	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	489.7	489.7	489.7	489.7	489.7	489.7	489.7	489.7	489.7	489.7	489.7
2.5°	490.9	490.6	490.4	490.1	489.8	489.3	488.6	487.9	487.1	486.4	487.1
5°	488.9	488.6	488.3	488.0	487.6	487.0	485.9	485.0	483.9	483.0	483.8
7.5°	484.5	484.2	483.9	483.5	483.2	482.3	481.0	479.7	478.4	477.1	477.6
10°	480.3	479.9	479.5	479.1	478.6	477.7	476.2	474.7	473.2	471.7	472.1
12.5°	474.9	474.4	474.0	473.5	473.0	471.9	470.1	468.3	466.6	464.8	465.0
15°	465.7	464.9	464.2	463.4	462.7	461.3	459.2	457.1	455.0	453.0	452.8
17.5°	454.6	453.4	452.3	451.3	450.2	448.4	445.9	443.4	440.9	438.4	437.9
20°	445.8	444.7	443.7	442.6	441.5	439.6	436.7	433.9	431.0	428.2	427.5
22.5°	436.3	435.0	433.8	432.6	431.3	429.2	426.2	423.2	420.2	417.1	416.1
25°	421.1	419.6	418.1	416.6	415.1	412.6	409.2	405.8	402.3	398.9	397.5
27.5°	405.2	403.3	401.4	399.6	397.7	394.9	391.3	387.6	384.0	380.3	378.5
30°	394.1	392.0	389.9	387.9	385.8	382.8	378.8	374.9	371.0	367.1	365.0
32.5°	382.4	380.0	377.7	375.3	373.0	369.8	365.8	361.7	357.7	353.6	351.2
35°	364.1	361.4	358.8	356.1	353.4	350.0	345.9	341.7	337.5	333.4	330.5
37.5°	344.5	341.7	339.1	336.3	333.5	329.9	325.2	320.6	316.0	311.4	308.2
40°	330.7	328.0	325.2	322.5	319.7	316.0	311.2	306.5	301.7	297.0	293.5
42.5°	317.5	314.7	311.7	308.9	306.0	302.1	297.1	292.2	287.2	282.3	278.7
45°	297.0	293.9	290.8	287.7	284.6	280.6	275.6	270.6	265.6	260.6	256.5
47.5°	275.8	272.6	269.4	266.2	263.0	258.8	253.7	248.4	243.2	238.1	233.8
50°	261.3	258.1	254.8	251.6	248.3	244.1	238.8	233.4	228.1	222.8	218.6
52.5°	246.7	243.4	240.3	237.1	233.9	229.6	224.1	218.6	213.2	207.7	203.5
55°	225.0	221.7	218.3	215.0	211.7	207.2	201.8	196.5	191.0	185.6	181.3
57.5°	203.5	200.0	196.6	193.1	189.6	185.3	179.9	174.6	169.3	163.9	159.5
60°	188.2	184.9	181.6	178.2	174.9	170.6	165.2	159.9	154.6	149.2	144.9
62.5°	174.4	171.0	167.5	164.1	160.6	156.1	150.7	145.2	139.7	134.3	130.2
65°	153.0	149.4	145.8	142.3	138.6	134.2	128.9	123.5	118.2	112.9	109.3
67.5°	130.7	127.3	123.8	120.4	117.0	112.8	107.8	102.9	97.9	93.0	89.9
70°	116.6	113.1	109.6	106.2	102.6	98.5	93.7	89.0	84.2	79.5	76.8
72.5°	101.6	98.5	95.3	92.1	89.0	85.2	80.6	76.1	71.7	67.2	64.9
75°	81.4	78.3	75.2	72.1	69.0	65.5	61.6	57.7	53.8	49.9	47.9
77.5°	60.8	58.2	55.6	53.0	50.4	47.5	44.3	41.1	37.9	34.8	33.7
80°	47.6	45.2	42.8	40.4	37.9	35.5	33.0	30.5	28.0	25.5	25.3
82.5°	36.2	34.0	31.8	29.5	27.3	25.5	24.1	22.7	21.2	19.8	19.6
85°	20.3	18.6	17.0	15.2	13.5	12.6	12.4	12.1	11.9	11.6	11.5
87.5°	7.2	6.9	6.6	6.3	5.9	5.8	5.9	6.0	6.1	6.2	6.3
90°	1.3	2.5	3.6	4.7	5.8	6.7	7.5	8.3	9.1	9.9	10.5
92.5°	5.7	5.8	5.8	5.9	5.9	6.3	7.2	8.0	8.8	9.6	10.2
95°	24.9	21.5	18.1	14.6	11.2	9.5	9.7	9.7	9.8	9.9	10.5
97.5°	52.8	54.9	57.0	59.2	61.3	56.7	45.6	34.4	23.1	12.0	12.0
100°	74.1	75.9	77.7	79.5	81.4	75.3	61.5	47.6	33.7	19.9	18.1
102.5°	98.0	99.3	100.6	102.0	103.3	103.1	101.2	99.4	97.6	95.8	77.4
105°	136.0	136.7	137.2	137.8	138.4	138.9	139.5	140.0	140.5	141.0	141.9
107.5°	171.3	171.7	172.0	172.2	172.5	173.0	173.7	174.4	175.1	175.8	176.3
110°	195.2	195.5	195.8	196.1	196.4	196.9	197.5	198.0	198.7	199.3	199.5



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	218.3	218.9	219.4	220.0	220.5	220.9	221.2	221.5	221.8	222.0	222.0
115°	254.0	254.3	254.5	254.8	255.2	255.2	255.2	255.1	254.9	254.8	255.1
117.5°	286.1	286.5	286.8	287.2	287.6	288.0	288.2	288.4	288.6	288.8	288.8
120°	307.8	308.2	308.6	309.0	309.3	309.5	309.4	309.3	309.2	309.1	309.3
122.5°	328.0	328.2	328.4	328.7	328.9	329.2	329.3	329.4	329.5	329.7	329.8
125°	357.0	357.4	357.8	358.2	358.6	358.7	358.5	358.3	358.1	357.9	358.2
127.5°	384.4	384.5	384.7	384.8	384.8	385.2	385.6	386.0	386.5	387.0	386.9
130°	402.2	402.3	402.3	402.5	402.6	402.7	403.1	403.4	403.7	404.0	404.1
132.5°	418.4	418.6	418.8	419.0	419.1	419.5	419.9	420.2	420.6	421.0	421.0
135°	442.8	442.8	442.7	442.5	442.4	442.6	443.0	443.4	443.8	444.2	444.4
137.5°	464.5	464.5	464.5	464.5	464.6	464.9	465.2	465.7	466.2	466.6	466.8
140°	478.6	478.7	479.0	479.1	479.3	479.5	479.7	480.0	480.1	480.4	480.6
142.5°	491.2	491.5	491.9	492.3	492.7	492.9	493.0	493.1	493.2	493.4	493.6
145°	510.6	511.0	511.2	511.5	511.8	512.0	512.0	512.0	512.0	512.0	512.1
147.5°	526.1	526.6	527.2	527.8	528.3	528.5	528.5	528.4	528.2	528.1	528.2
150°	537.3	537.7	538.1	538.5	538.9	539.1	538.9	538.8	538.8	538.6	538.6
152.5°	546.7	547.0	547.3	547.6	548.0	548.0	547.9	547.7	547.5	547.3	547.5
155°	559.9	560.0	560.1	560.2	560.3	560.2	559.9	559.6	559.3	559.0	559.4
157.5°	571.0	570.9	570.8	570.8	570.8	570.5	570.2	569.9	569.5	569.2	569.7
160°	577.5	577.2	576.9	576.6	576.3	576.1	576.0	575.9	575.8	575.7	576.3
162.5°	583.3	582.9	582.5	582.2	581.8	581.5	581.4	581.3	581.2	581.1	581.7
165°	590.6	590.1	589.6	589.1	588.6	588.4	588.4	588.4	588.4	588.4	589.1
167.5°	596.4	595.9	595.3	594.8	594.3	594.0	594.0	593.9	593.8	593.7	594.7
170°	599.7	599.0	598.4	597.9	597.2	597.0	597.1	597.1	597.3	597.4	598.2
172.5°	601.8	601.2	600.6	600.0	599.4	599.1	599.3	599.4	599.4	599.5	600.4
175°	604.2	603.6	602.9	602.4	601.7	601.5	601.6	601.7	601.8	601.9	602.8
177.5°	605.2	604.7	604.1	603.6	603.0	602.8	602.9	603.1	603.2	603.4	604.1
180°	604.2	604.2	604.2	604.2	604.2	604.2	604.2	604.2	604.2	604.2	604.2



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	489.7	489.7	489.7	489.7	489.7	489.7	489.7	489.7
2.5°	487.9	488.6	489.3	489.6	489.6	489.6	489.5	489.4
5°	484.7	485.4	486.3	486.6	486.5	486.3	486.1	485.9
7.5°	478.2	478.7	479.3	479.3	479.1	478.9	478.6	478.3
10°	472.4	472.7	473.0	473.0	472.7	472.4	472.1	471.7
12.5°	465.2	465.4	465.6	465.5	465.0	464.5	464.1	463.6
15°	452.7	452.5	452.3	451.9	451.3	450.8	450.2	449.6
17.5°	437.4	437.0	436.6	435.9	435.0	434.1	433.2	432.4
20°	426.9	426.2	425.6	424.7	423.6	422.5	421.4	420.3
22.5°	415.1	414.1	413.1	412.2	411.3	410.4	409.6	408.6
25°	396.1	394.7	393.3	392.2	391.3	390.5	389.7	388.8
27.5°	376.8	375.0	373.3	371.9	370.6	369.4	368.2	367.0
30°	362.9	360.8	358.8	357.0	355.7	354.4	353.1	351.7
32.5°	348.8	346.3	344.0	342.1	340.8	339.5	338.3	337.0
35°	327.6	324.9	322.0	319.9	318.4	316.9	315.4	313.9
37.5°	305.1	301.9	298.7	296.4	294.9	293.3	291.8	290.3
40°	289.9	286.5	283.0	280.5	279.0	277.5	276.0	274.5
42.5°	275.1	271.6	268.0	265.5	263.9	262.3	260.7	259.2
45°	252.5	248.3	244.2	241.5	240.0	238.4	236.9	235.5
47.5°	229.6	225.3	221.1	218.2	216.5	214.8	213.2	211.6
50°	214.4	210.2	206.0	203.2	201.6	200.0	198.4	196.9
52.5°	199.2	195.0	190.8	187.8	186.2	184.6	182.9	181.3
55°	177.0	172.6	168.3	165.3	163.7	162.2	160.6	159.0
57.5°	155.1	150.8	146.3	143.5	142.4	141.2	139.9	138.7
60°	140.5	136.3	131.9	129.0	127.7	126.4	125.1	123.7
62.5°	126.3	122.2	118.3	115.7	114.6	113.6	112.5	111.5
65°	105.7	102.1	98.5	96.3	95.2	94.3	93.2	92.2
67.5°	86.8	83.7	80.6	78.6	77.5	76.4	75.3	74.1
70°	74.0	71.2	68.5	66.7	65.8	65.0	64.2	63.4
72.5°	62.5	60.1	57.8	56.2	55.5	54.7	53.9	53.2
75°	46.0	44.1	42.2	41.0	40.5	40.0	39.5	39.0
77.5°	32.6	31.4	30.3	29.7	29.5	29.4	29.2	29.1
80°	25.0	24.7	24.5	24.3	24.2	24.2	24.1	24.0
82.5°	19.4	19.3	19.1	18.9	18.9	18.8	18.7	18.6
85°	11.3	11.1	10.9	10.9	10.9	10.9	10.9	10.9
87.5°	6.3	6.3	6.4	6.5	6.6	6.7	6.8	6.9
90°	11.2	11.7	12.4	12.8	13.0	13.2	13.4	13.5
92.5°	10.8	11.4	12.0	12.3	12.4	12.4	12.4	12.4
95°	11.2	11.7	12.4	12.7	12.8	12.9	13.0	13.1
97.5°	12.0	12.1	12.2	12.3	12.4	12.4	12.5	12.7
100°	16.5	14.7	13.1	12.3	12.4	12.4	12.5	12.7
102.5°	58.9	40.6	22.1	12.9	13.0	13.0	13.0	13.0
105°	142.8	143.7	144.6	143.2	139.7	136.0	132.4	128.8
107.5°	176.7	177.1	177.5	177.9	178.3	178.7	179.1	179.5
110°	199.7	199.9	200.1	200.3	200.7	200.9	201.2	201.5





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CATALOG NUMBER: SA4XXRDIP-C350D590U927-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	222.0	222.0	221.9	222.0	222.4	222.8	223.2	223.6
115°	255.2	255.5	255.6	255.8	255.8	255.8	255.8	255.8
117.5°	288.8	288.8	288.7	288.7	288.6	288.6	288.5	288.5
120°	309.5	309.7	309.9	309.9	309.7	309.5	309.3	309.1
122.5°	329.9	330.0	330.2	330.1	329.9	329.7	329.5	329.3
125°	358.5	358.8	359.1	359.3	359.4	359.5	359.6	359.7
127.5°	386.9	386.8	386.7	386.7	386.6	386.5	386.4	386.3
130°	404.2	404.3	404.4	404.4	404.4	404.4	404.4	404.4
132.5°	421.2	421.3	421.4	421.4	421.3	421.2	421.1	421.0
135°	444.6	444.8	445.0	445.2	445.4	445.6	445.8	446.0
137.5°	467.1	467.3	467.5	467.5	467.5	467.5	467.4	467.3
140°	480.9	481.3	481.6	481.7	481.9	482.0	482.0	482.1
142.5°	493.8	494.0	494.2	494.4	494.4	494.4	494.4	494.5
145°	512.1	512.3	512.4	512.5	512.7	512.9	513.2	513.3
147.5°	528.3	528.4	528.5	528.5	528.7	528.8	528.9	528.9
150°	538.6	538.6	538.6	538.7	538.8	538.9	539.0	539.1
152.5°	547.6	547.8	548.0	548.0	548.0	547.9	547.8	547.8
155°	559.8	560.2	560.5	560.6	560.3	560.0	559.8	559.4
157.5°	570.2	570.8	571.2	571.2	570.8	570.2	569.7	569.2
160°	576.9	577.5	578.1	578.1	577.5	576.9	576.3	575.7
162.5°	582.3	582.9	583.5	583.5	582.8	582.1	581.5	580.7
165°	589.9	590.7	591.6	591.5	590.6	589.7	588.8	587.9
167.5°	595.6	596.4	597.3	597.2	596.3	595.2	594.2	593.3
170°	599.0	599.8	600.6	600.5	599.5	598.5	597.5	596.5
172.5°	601.2	602.0	602.8	602.6	601.6	600.5	599.4	598.3
175°	603.7	604.6	605.5	605.4	604.2	602.9	601.7	600.6
177.5°	604.8	605.4	606.0	605.9	604.9	604.0	602.9	602.0
180°	604.2	604.2	604.2	604.2	604.2	604.2	604.2	604.2

(END OF REPORT)