

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: P332869

Luminaire Tested: **SA4XXRDIP-C350D365U835-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P332869  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,  
Test Lab: INNOVATION CENTER  
Issue Date: 10/7/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: SA4XXRDIP-C350D365U835-4F0-1E-UDD-F1  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 350 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 365 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

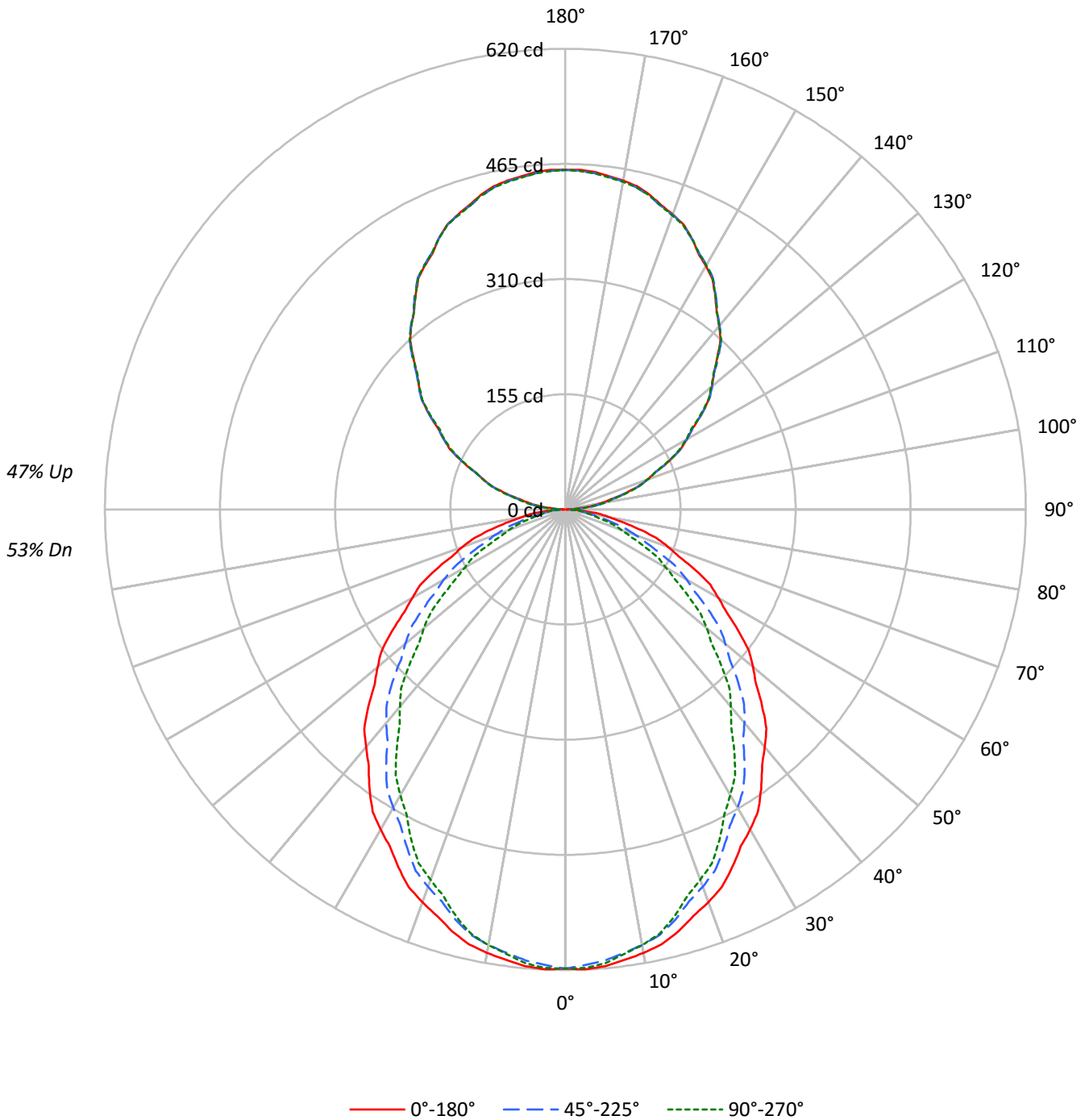
Lumens per Lamp: N/A  
Luminaire Lumens: 2697.3 lumens  
Efficiency: N/A  
Efficacy: 132.9 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24  
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')  
CIE Type: General Diffuse

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





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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	108	108	108	108	100	100	100	100	85	85	85	71	71	71	59	59	59	53				
1	99	95	91	87	91	88	84	81	75	73	70	63	62	60	52	51	50	45				
2	90	83	77	72	83	77	72	67	66	62	59	56	53	51	47	45	43	38				
3	82	73	66	60	76	68	62	57	58	54	50	50	46	43	41	39	37	33				
4	76	65	57	51	70	60	54	48	52	47	43	44	40	37	37	34	32	28				
5	69	58	50	44	64	54	47	42	47	41	37	40	36	32	34	30	28	25				
6	64	52	44	38	59	49	41	36	42	37	32	36	32	28	31	27	25	22				
7	59	47	39	34	55	44	37	32	38	33	29	33	29	25	28	25	22	19				
8	55	43	35	30	51	40	33	28	35	29	25	30	26	23	26	22	20	17				
9	51	39	32	27	48	37	30	25	32	27	23	28	24	20	24	20	18	16				
10	48	36	29	24	45	34	27	23	30	24	21	26	22	19	22	19	16	14				

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

	0°	45°	90°
0°	4991	4991	4991
5°	5002	4941	4971
10°	4970	4882	4882
15°	4914	4779	4743
20°	4835	4643	4558
25°	4735	4486	4372
30°	4638	4320	4139
35°	4529	4147	3905
40°	4400	3951	3652
45°	4280	3756	3394
50°	4143	3532	3121
55°	3997	3298	2825
60°	3836	3042	2522
65°	3689	2722	2223
70°	3474	2367	1888
75°	3203	1965	1535
80°	2794	1497	1409
85°	2371	1362	1269



TEST NUMBER: P332869

CATALOG NUMBER: SA4XXRDIP-C350D365U835-4F0-1E-UDD-F1

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	58.1	2.2
10°-20°	161.9	6.0
20°-30°	233.8	8.7
30°-40°	265.1	9.8
40°-50°	255.9	9.5
50°-60°	212.8	7.9
60°-70°	147.0	5.4
70°-80°	74.5	2.8
80°-90°	20.5	0.8
90°-100°	30.1	1.1
100°-110°	89.3	3.3
110°-120°	151.5	5.6
120°-130°	199.8	7.4
130°-140°	224.4	8.3
140°-150°	220.5	8.2
150°-160°	185.4	6.9
160°-170°	123.4	4.6
170°-180°	43.2	1.6
0°-30°	453.8	16.8
0°-40°	718.9	26.7
0°-60°	1187.7	44.0
0°-90°	1429.6	53.0
90°-120°	270.9	10.0
90°-150°	915.6	33.9
90°-180°	1268.0	47.0
0°-180°	2697.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	618	618	618	618	618	
5°	617	615	610	614	613	59
15°	588	583	572	571	568	166
25°	532	522	504	496	491	245
35°	460	444	421	405	396	287
45°	375	357	329	307	297	289
55°	284	264	234	211	201	254
65°	193	172	142	123	116	191
75°	103	85	63	53	49	108
85°	26	16	15	14	14	29
90°	1	5	8	10	11	3
95°	21	24	27	28	28	24
105°	82	83	84	85	86	87
115°	154	154	153	153	153	152
125°	224	224	224	223	223	200
135°	289	291	292	291	290	224
145°	352	353	353	353	352	220
155°	403	403	402	404	402	185
165°	438	438	437	439	438	124
175°	456	454	454	456	454	43
180°	457	457	457	457	457	



TEST NUMBER: P332869

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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	618.2	618.2	618.2	618.2	618.2	618.2	618.2	618.2	618.2	618.2	618.2
2.5°	619.7	619.3	619.0	618.7	618.3	617.7	616.8	615.9	614.9	614.0	614.9
5°	617.2	616.8	616.4	616.0	615.5	614.7	613.4	612.2	610.9	609.7	610.7
7.5°	611.6	611.2	610.8	610.3	609.9	608.8	607.2	605.5	603.9	602.3	602.9
10°	606.3	605.8	605.3	604.8	604.2	603.0	601.1	599.2	597.3	595.5	595.9
12.5°	599.5	598.9	598.3	597.7	597.1	595.7	593.4	591.2	589.0	586.7	587.0
15°	587.9	586.9	586.0	585.0	584.1	582.3	579.7	577.0	574.4	571.8	571.6
17.5°	573.8	572.4	571.0	569.7	568.3	566.0	562.9	559.7	556.6	553.4	552.8
20°	562.8	561.4	560.1	558.7	557.3	554.9	551.3	547.7	544.1	540.5	539.7
22.5°	550.7	549.1	547.6	546.1	544.5	541.8	538.0	534.2	530.4	526.5	525.3
25°	531.6	529.7	527.8	525.9	524.0	520.9	516.6	512.3	507.9	503.6	501.8
27.5°	511.5	509.1	506.7	504.4	502.0	498.5	493.9	489.3	484.7	480.1	477.8
30°	497.5	494.8	492.2	489.6	487.0	483.2	478.2	473.3	468.3	463.4	460.8
32.5°	482.7	479.7	476.8	473.8	470.8	466.8	461.7	456.6	451.5	446.4	443.3
35°	459.6	456.2	452.9	449.5	446.1	441.8	436.6	431.3	426.1	420.8	417.2
37.5°	434.9	431.4	428.0	424.5	421.0	416.4	410.5	404.7	398.9	393.1	389.1
40°	417.5	414.0	410.5	407.1	403.6	398.9	392.9	386.9	380.9	374.9	370.5
42.5°	400.8	397.2	393.5	389.9	386.3	381.3	375.1	368.8	362.6	356.3	351.8
45°	374.9	371.0	367.1	363.2	359.3	354.2	347.9	341.6	335.3	329.0	323.8
47.5°	348.1	344.1	340.1	336.0	332.0	326.7	320.2	313.6	307.0	300.5	295.1
50°	329.9	325.8	321.7	317.6	313.5	308.1	301.4	294.6	287.9	281.2	275.9
52.5°	311.4	307.3	303.3	299.3	295.3	289.8	282.9	276.0	269.1	262.2	256.9
55°	284.0	279.8	275.6	271.4	267.2	261.6	254.8	248.0	241.1	234.3	228.8
57.5°	256.9	252.5	248.2	243.8	239.4	233.9	227.1	220.4	213.7	206.9	201.4
60°	237.6	233.4	229.2	225.0	220.8	215.3	208.6	201.8	195.1	188.4	182.9
62.5°	220.2	215.8	211.4	207.1	202.7	197.1	190.2	183.3	176.4	169.5	164.4
65°	193.1	188.6	184.1	179.6	175.0	169.4	162.7	155.9	149.2	142.5	138.0
67.5°	165.0	160.7	156.3	152.0	147.7	142.4	136.1	129.9	123.6	117.4	113.5
70°	147.2	142.8	138.4	134.0	129.5	124.3	118.3	112.3	106.3	100.3	96.9
72.5°	128.3	124.3	120.3	116.3	112.3	107.5	101.8	96.1	90.5	84.8	81.9
75°	102.7	98.8	94.9	91.0	87.1	82.7	77.8	72.8	67.9	63.0	60.5
77.5°	76.8	73.5	70.2	66.9	63.6	59.9	55.9	51.9	47.9	43.9	42.5
80°	60.1	57.1	54.0	51.0	47.9	44.8	41.7	38.5	35.3	32.2	31.9
82.5°	45.7	42.9	40.1	37.3	34.5	32.2	30.4	28.6	26.8	25.0	24.8
85°	25.6	23.5	21.4	19.2	17.1	15.9	15.6	15.3	15.0	14.7	14.5
87.5°	8.9	8.4	7.9	7.4	6.9	6.7	6.7	6.8	6.8	6.9	6.9
90°	1.1	1.9	2.8	3.7	4.5	5.3	5.9	6.5	7.1	7.8	8.2
92.5°	7.6	8.6	9.5	10.5	11.5	12.2	12.7	13.1	13.6	14.0	14.3
95°	21.2	21.9	22.6	23.3	24.0	24.7	25.2	25.8	26.3	26.9	27.1
97.5°	37.0	37.6	38.2	38.7	39.3	39.9	40.5	41.2	41.8	42.5	42.8
100°	49.5	49.8	50.1	50.4	50.7	51.2	51.9	52.7	53.4	54.1	54.2
102.5°	62.5	62.6	62.7	62.9	63.0	63.4	64.0	64.7	65.3	65.9	66.2
105°	82.3	82.4	82.5	82.6	82.6	82.8	83.2	83.5	83.8	84.1	84.3
107.5°	103.2	103.3	103.4	103.5	103.6	103.6	103.7	103.7	103.8	103.8	104.0
110°	117.3	117.5	117.6	117.8	117.9	118.0	117.9	117.8	117.7	117.7	117.5



TEST NUMBER: P332869

CATALOG NUMBER: SA4XXRDIP-C350D365U835-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	132.0	132.0	132.1	132.1	132.1	132.1	131.9	131.8	131.7	131.5	131.5
115°	154.1	154.1	154.1	154.1	154.1	154.0	153.8	153.7	153.5	153.4	153.3
117.5°	174.8	174.9	175.0	175.0	175.1	175.1	175.0	174.9	174.7	174.6	174.4
120°	188.7	189.0	189.3	189.6	190.0	190.0	189.8	189.5	189.3	189.1	188.7
122.5°	203.1	203.2	203.4	203.5	203.6	203.6	203.5	203.4	203.3	203.2	202.9
125°	224.4	224.4	224.4	224.4	224.4	224.3	224.3	224.2	224.1	224.0	223.9
127.5°	243.7	243.9	244.2	244.4	244.6	244.7	244.6	244.4	244.3	244.2	244.0
130°	257.3	257.5	257.7	258.0	258.2	258.3	258.3	258.3	258.3	258.3	258.2
132.5°	271.1	271.3	271.4	271.6	271.8	271.8	271.8	271.7	271.7	271.6	271.4
135°	289.4	289.9	290.3	290.8	291.3	291.5	291.5	291.5	291.5	291.5	291.4
137.5°	309.3	309.6	309.8	310.0	310.2	310.4	310.5	310.6	310.8	310.9	310.7
140°	322.6	322.8	322.9	323.1	323.3	323.3	323.3	323.3	323.3	323.3	323.3
142.5°	334.8	334.9	335.1	335.2	335.4	335.5	335.4	335.3	335.3	335.2	335.2
145°	351.6	351.9	352.2	352.5	352.9	353.1	353.1	353.2	353.3	353.4	353.3
147.5°	368.3	368.7	369.0	369.4	369.8	369.9	369.9	369.8	369.8	369.7	369.6
150°	378.5	378.8	379.1	379.4	379.7	379.9	379.9	379.9	379.9	379.9	379.9
152.5°	388.1	388.3	388.4	388.6	388.8	388.9	389.0	389.1	389.1	389.2	389.4
155°	402.8	402.8	402.8	402.8	402.8	402.8	402.7	402.6	402.6	402.5	402.8
157.5°	415.3	415.1	415.0	414.9	414.7	414.6	414.6	414.6	414.6	414.6	414.8
160°	422.6	422.5	422.5	422.4	422.3	422.2	422.2	422.1	422.0	421.9	422.2
162.5°	429.4	429.2	429.0	428.8	428.6	428.5	428.4	428.3	428.2	428.1	428.6
165°	438.5	438.3	438.1	437.8	437.6	437.4	437.2	437.1	436.9	436.8	437.2
167.5°	445.5	445.2	444.9	444.5	444.2	444.0	444.1	444.1	444.1	444.1	444.6
170°	449.5	449.1	448.7	448.3	447.9	447.8	447.8	447.9	448.0	448.1	448.5
172.5°	452.3	452.0	451.6	451.3	451.0	450.8	450.8	450.9	450.9	450.9	451.4
175°	456.2	455.8	455.4	455.0	454.6	454.4	454.3	454.2	454.2	454.1	454.6
177.5°	457.5	457.2	456.8	456.5	456.2	456.1	456.1	456.1	456.1	456.1	456.5
180°	456.9	456.9	456.9	456.9	456.9	456.9	456.9	456.9	456.9	456.9	456.9



TEST NUMBER: P332869

CATALOG NUMBER: SA4XXRDIP-C350D365U835-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	618.2	618.2	618.2	618.2	618.2	618.2	618.2	618.2
2.5°	615.9	616.8	617.7	618.1	618.0	618.0	617.9	617.8
5°	611.8	612.8	613.9	614.3	614.1	613.9	613.6	613.4
7.5°	603.6	604.3	605.0	605.1	604.8	604.5	604.1	603.8
10°	596.3	596.7	597.1	597.1	596.7	596.3	595.9	595.5
12.5°	587.2	587.5	587.8	587.6	587.0	586.4	585.8	585.2
15°	571.4	571.2	570.9	570.5	569.7	569.0	568.3	567.5
17.5°	552.2	551.7	551.1	550.2	549.1	548.0	546.9	545.8
20°	538.9	538.0	537.2	536.1	534.7	533.3	532.0	530.6
22.5°	524.0	522.7	521.5	520.3	519.2	518.1	517.0	515.8
25°	500.0	498.3	496.5	495.1	494.0	492.9	491.9	490.8
27.5°	475.6	473.4	471.2	469.4	467.8	466.3	464.8	463.3
30°	458.1	455.5	452.9	450.7	449.0	447.4	445.7	444.0
32.5°	440.3	437.2	434.2	431.8	430.2	428.6	427.0	425.4
35°	413.6	410.1	406.5	403.8	401.9	400.0	398.1	396.2
37.5°	385.1	381.1	377.1	374.1	372.2	370.3	368.4	366.5
40°	366.0	361.6	357.2	354.1	352.2	350.3	348.4	346.5
42.5°	347.3	342.8	338.3	335.1	333.1	331.1	329.1	327.2
45°	318.7	313.5	308.3	304.8	302.9	301.0	299.1	297.3
47.5°	289.8	284.4	279.1	275.4	273.3	271.2	269.1	267.1
50°	270.6	265.4	260.1	256.5	254.5	252.5	250.5	248.5
52.5°	251.5	246.2	240.9	237.1	235.1	233.0	230.9	228.8
55°	223.4	217.9	212.4	208.7	206.7	204.7	202.7	200.7
57.5°	195.8	190.3	184.7	181.2	179.7	178.2	176.6	175.1
60°	177.4	172.0	166.5	162.9	161.2	159.6	157.9	156.2
62.5°	159.4	154.3	149.3	146.1	144.7	143.4	142.0	140.7
65°	133.4	128.9	124.4	121.5	120.2	119.0	117.7	116.4
67.5°	109.6	105.7	101.8	99.2	97.8	96.4	95.0	93.6
70°	93.4	89.9	86.5	84.2	83.1	82.1	81.0	80.0
72.5°	78.9	75.9	73.0	71.0	70.0	69.1	68.1	67.1
75°	58.1	55.7	53.3	51.8	51.1	50.5	49.9	49.2
77.5°	41.1	39.7	38.3	37.5	37.3	37.1	36.9	36.7
80°	31.6	31.2	30.9	30.7	30.6	30.5	30.4	30.3
82.5°	24.5	24.3	24.1	23.9	23.8	23.7	23.6	23.5
85°	14.3	14.0	13.8	13.7	13.7	13.7	13.7	13.7
87.5°	6.9	6.9	6.9	7.0	7.1	7.2	7.3	7.4
90°	8.7	9.2	9.7	10.0	10.1	10.3	10.4	10.6
92.5°	14.6	14.8	15.1	15.3	15.4	15.5	15.6	15.7
95°	27.3	27.6	27.8	27.9	27.9	27.9	27.9	27.9
97.5°	43.0	43.3	43.6	43.7	43.7	43.7	43.7	43.7
100°	54.4	54.5	54.7	54.8	54.8	54.8	54.8	54.8
102.5°	66.4	66.6	66.8	67.0	67.0	67.1	67.1	67.2
105°	84.6	84.8	85.0	85.3	85.5	85.8	86.0	86.2
107.5°	104.3	104.5	104.7	104.8	104.8	104.8	104.8	104.7
110°	117.4	117.2	117.0	117.1	117.3	117.6	117.8	118.0





TEST NUMBER: P332869

CATALOG NUMBER: SA4XXRDIP-C350D365U835-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	131.5	131.4	131.4	131.4	131.5	131.5	131.5	131.6
115°	153.2	153.1	153.0	153.0	152.9	152.8	152.7	152.7
117.5°	174.1	173.8	173.6	173.4	173.2	173.0	172.9	172.7
120°	188.3	187.9	187.5	187.4	187.5	187.7	187.8	188.0
122.5°	202.7	202.4	202.1	201.8	201.6	201.3	201.0	200.7
125°	223.7	223.6	223.4	223.2	223.1	222.9	222.8	222.6
127.5°	243.9	243.7	243.5	243.4	243.3	243.2	243.0	242.9
130°	258.0	257.8	257.7	257.4	257.1	256.8	256.5	256.2
132.5°	271.3	271.1	271.0	270.8	270.7	270.6	270.5	270.3
135°	291.2	291.1	290.9	290.7	290.5	290.2	290.0	289.8
137.5°	310.5	310.3	310.1	310.0	310.0	310.1	310.1	310.2
140°	323.2	323.1	323.0	322.9	322.9	322.8	322.7	322.6
142.5°	335.2	335.2	335.1	335.1	335.1	335.1	335.1	335.1
145°	353.2	353.1	353.1	352.9	352.7	352.4	352.2	352.0
147.5°	369.6	369.5	369.4	369.4	369.3	369.2	369.1	369.1
150°	379.9	379.9	379.9	379.8	379.8	379.7	379.6	379.5
152.5°	389.6	389.8	390.0	389.9	389.7	389.5	389.3	389.1
155°	403.1	403.4	403.7	403.7	403.4	403.1	402.8	402.5
157.5°	415.0	415.3	415.5	415.5	415.2	415.0	414.7	414.4
160°	422.4	422.6	422.9	422.8	422.4	422.0	421.6	421.2
162.5°	429.0	429.4	429.8	429.8	429.5	429.1	428.7	428.3
165°	437.7	438.2	438.6	438.7	438.4	438.1	437.8	437.5
167.5°	445.1	445.5	446.0	446.0	445.5	445.0	444.5	444.0
170°	449.0	449.5	450.0	449.9	449.4	448.8	448.3	447.7
172.5°	452.0	452.5	453.0	453.0	452.5	451.9	451.4	450.8
175°	455.2	455.7	456.3	456.3	455.7	455.2	454.6	454.1
177.5°	456.9	457.4	457.8	457.8	457.3	456.8	456.3	455.8
180°	456.9	456.9	456.9	456.9	456.9	456.9	456.9	456.9

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