

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: P332498-927

Luminaire Tested: **SA4XXDIP-C350D365U927-4F0-1E-UDD-F4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P332498-927
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-18,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA4XXDIP-C350D365U927-4F0-1E-UDD-F4
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 350 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 365 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2238.1 lumens
Efficiency: N/A
Efficacy: 110.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: General Diffuse

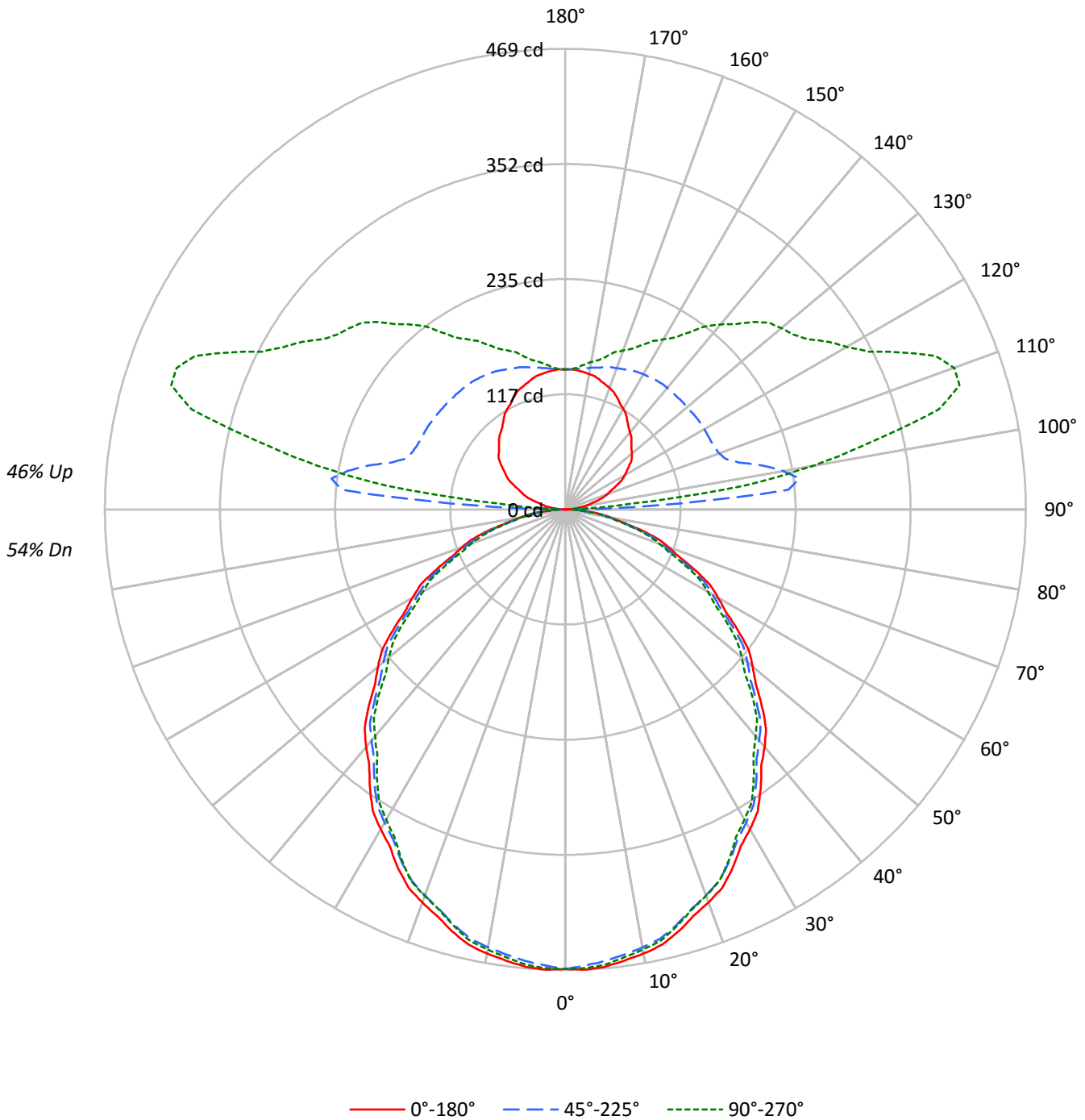
Input Watts (W): 20.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332498-927

CATALOG NUMBER: SA4XXDIP-C350D365U927-4F0-1E-UDD-F4

Luminous Intensity Polar Plot





TEST NUMBER: P332498-927

CATALOG NUMBER: SA4XXDIP-C350D365U927-4F0-1E-UDD-F4

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	72	72	72	60	60	60	54				
1	99	94	90	87	91	87	84	81	75	72	70	63	61	60	53	51	50	45				
2	90	82	76	71	83	76	71	66	66	61	58	56	53	50	46	44	42	38				
3	82	72	65	59	76	67	61	56	58	53	49	49	45	42	41	38	36	32				
4	75	64	56	50	69	60	53	47	51	46	42	44	40	36	37	34	31	27				
5	69	57	49	43	63	53	46	40	46	40	36	39	35	31	33	30	27	24				
6	63	51	43	37	59	48	41	35	41	36	31	36	31	28	30	26	24	21				
7	59	46	38	33	54	43	36	31	38	32	28	32	28	24	27	24	21	19				
8	54	42	34	29	50	39	32	27	34	29	25	30	25	22	25	22	19	17				
9	51	38	31	26	47	36	29	24	31	26	22	27	23	20	23	20	17	15				
10	47	35	28	23	44	33	26	22	29	24	20	25	21	18	22	18	16	14				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3777	3777	3777
5°	3789	3743	3771
10°	3765	3713	3731
15°	3719	3661	3670
20°	3660	3594	3598
25°	3591	3520	3510
30°	3506	3432	3402
35°	3418	3341	3297
40°	3327	3236	3177
45°	3232	3134	3075
50°	3127	3042	2948
55°	3013	2923	2829
60°	2900	2792	2706
65°	2772	2665	2558
70°	2629	2497	2398
75°	2408	2293	2233
80°	2143	2060	2004
85°	1880	1806	1769



TEST NUMBER: P332498-927

CATALOG NUMBER: SA4XXDIP-C350D365U927-4F0-1E-UDD-F4

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	44.1	2.0
10°-20°	124.2	5.5
20°-30°	182.8	8.2
30°-40°	212.5	9.5
40°-50°	212.5	9.5
50°-60°	185.9	8.3
60°-70°	138.0	6.2
70°-80°	78.4	3.5
80°-90°	23.4	1.0
90°-100°	102.9	4.6
100°-110°	214.2	9.6
110°-120°	191.9	8.6
120°-130°	161.4	7.2
130°-140°	134.6	6.0
140°-150°	102.8	4.6
150°-160°	72.3	3.2
160°-170°	42.5	1.9
170°-180°	13.8	0.6
0°-30°	351.0	15.7
0°-40°	563.5	25.2
0°-60°	961.8	43.0
0°-90°	1201.7	53.7
90°-120°	509.0	22.7
90°-150°	907.8	40.6
90°-180°	1036.0	46.3
0°-180°	2238.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	468	468	468	468	468	
5°	468	466	462	466	465	44
15°	445	443	438	440	439	125
25°	403	400	395	396	394	185
35°	347	344	339	336	334	217
45°	283	280	274	270	269	218
55°	214	213	208	203	201	192
65°	145	143	140	136	134	144
75°	77	75	74	72	72	82
85°	20	20	20	20	19	22
90°	0	2	5	6	6	2
95°	9	29	228	113	68	10
105°	33	47	184	396	394	35
115°	58	72	164	315	378	57
125°	80	96	163	268	302	72
135°	96	114	162	238	270	74
145°	110	126	161	200	220	69
155°	125	135	156	177	184	58
165°	136	141	150	159	161	38
175°	142	142	144	146	145	13
180°	142	142	142	142	142	



TEST NUMBER: P332498-927

CATALOG NUMBER: SA4XXDIP-C350D365U927-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	467.9	467.9	467.9	467.9	467.9	467.9	467.9	467.9	467.9	467.9	467.9
2.5°	469.1	469.0	468.7	468.6	468.3	467.9	467.1	466.4	465.7	464.9	465.6
5°	467.5	467.2	466.9	466.6	466.3	465.6	464.7	463.8	462.9	461.9	462.9
7.5°	463.3	462.9	462.6	462.2	461.9	461.2	460.2	459.2	458.2	457.2	457.9
10°	459.3	459.0	458.7	458.4	458.0	457.3	456.2	455.1	454.1	453.0	453.6
12.5°	454.2	453.9	453.6	453.2	452.9	452.2	451.0	449.9	448.7	447.6	448.3
15°	445.0	444.7	444.4	444.1	443.8	443.0	441.7	440.5	439.2	438.0	438.5
17.5°	434.0	433.6	433.2	432.8	432.4	431.6	430.4	429.2	428.0	426.8	427.1
20°	426.0	425.6	425.2	424.7	424.3	423.5	422.2	421.0	419.7	418.4	418.7
22.5°	417.2	416.7	416.1	415.6	415.0	414.2	412.9	411.7	410.4	409.2	409.6
25°	403.1	402.5	402.0	401.3	400.8	399.9	398.7	397.5	396.4	395.2	395.3
27.5°	386.9	386.3	385.7	385.1	384.5	383.7	382.5	381.5	380.4	379.3	379.1
30°	376.1	375.4	374.8	374.1	373.4	372.6	371.5	370.3	369.3	368.2	367.9
32.5°	364.7	364.1	363.5	362.9	362.3	361.4	360.3	359.1	358.0	356.8	356.4
35°	346.8	346.3	345.7	345.1	344.5	343.6	342.5	341.3	340.2	339.0	338.4
37.5°	328.0	327.5	326.9	326.5	325.9	325.0	323.8	322.5	321.2	320.0	319.3
40°	315.7	315.1	314.4	313.7	313.1	312.1	310.9	309.6	308.3	307.1	306.3
42.5°	302.5	302.1	301.7	301.3	301.0	300.0	298.7	297.2	295.9	294.5	293.5
45°	283.1	282.5	281.9	281.4	280.7	279.8	278.5	277.1	275.8	274.5	273.5
47.5°	262.8	262.4	262.0	261.6	261.2	260.4	259.1	257.9	256.7	255.4	254.4
50°	249.0	248.7	248.3	248.0	247.6	246.9	245.7	244.5	243.4	242.2	241.1
52.5°	235.5	235.0	234.6	234.2	233.9	233.1	231.8	230.6	229.3	228.1	227.1
55°	214.1	213.9	213.6	213.3	213.1	212.4	211.2	210.1	208.9	207.7	206.8
57.5°	193.7	193.5	193.1	192.9	192.6	191.9	190.7	189.6	188.4	187.3	186.3
60°	179.6	179.2	178.8	178.3	177.9	177.2	176.1	175.0	174.0	172.9	172.1
62.5°	165.8	165.5	165.1	164.8	164.4	163.7	162.5	161.4	160.2	159.1	158.4
65°	145.1	144.7	144.3	143.9	143.5	142.8	142.0	141.2	140.3	139.5	138.6
67.5°	124.3	123.9	123.5	123.1	122.7	122.2	121.4	120.6	119.8	118.9	118.1
70°	111.4	110.7	110.2	109.6	109.0	108.4	107.7	107.1	106.4	105.8	105.0
72.5°	97.6	97.0	96.4	95.9	95.2	94.7	94.1	93.6	93.1	92.5	92.0
75°	77.2	76.8	76.4	76.0	75.6	75.2	74.8	74.3	73.9	73.5	73.2
77.5°	57.8	57.7	57.4	57.3	57.1	56.8	56.5	56.1	55.7	55.4	55.2
80°	46.1	45.9	45.6	45.4	45.2	44.9	44.8	44.6	44.4	44.3	44.0
82.5°	34.7	34.6	34.5	34.4	34.2	34.1	34.1	34.1	34.1	34.1	34.0
85°	20.3	20.3	20.3	20.3	20.3	20.2	20.0	19.8	19.6	19.5	19.5
87.5°	7.8	7.9	8.0	8.0	8.0	7.9	8.2	8.1	8.2	8.2	8.2
90°	0.3	0.9	1.7	2.0	2.2	2.2	3.9	3.9	4.5	5.1	4.8
92.5°	3.2	4.7	7.3	10.7	14.8	20.6	34.9	56.6	77.7	88.8	74.0
95°	9.3	10.1	12.9	16.6	23.2	35.0	59.3	105.3	172.2	228.1	234.6
97.5°	16.6	16.6	19.0	22.3	28.1	37.9	56.7	94.7	161.1	240.3	294.8
100°	21.3	21.3	23.2	26.6	31.9	40.9	57.4	89.0	146.2	225.1	296.8
102.5°	25.7	26.2	28.0	31.1	36.2	44.7	59.7	87.5	136.1	206.0	280.0
105°	32.8	33.6	35.0	38.3	43.4	51.5	65.0	88.2	127.4	183.6	249.5
107.5°	40.5	41.0	42.5	46.0	50.9	58.9	71.1	92.4	125.8	171.1	224.8
110°	45.6	46.2	47.6	50.9	56.0	63.5	75.9	95.5	126.3	166.8	212.5



TEST NUMBER: P332498-927

CATALOG NUMBER: SA4XXDIP-C350D365U927-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	50.5	51.1	52.8	55.8	60.9	68.4	80.3	98.9	127.6	164.9	205.6
115°	57.7	58.5	60.4	63.3	68.6	76.1	87.4	104.2	130.2	163.8	199.1
117.5°	65.0	65.8	67.6	70.7	75.7	83.5	94.1	109.6	132.9	163.5	196.1
120°	70.0	70.6	72.5	75.6	80.3	88.2	98.9	113.4	135.0	163.5	194.6
122.5°	74.5	75.0	77.0	79.9	85.1	92.7	103.3	117.0	137.0	163.3	192.8
125°	80.3	81.4	83.2	86.3	91.6	99.4	109.5	122.3	140.0	163.0	189.8
127.5°	85.6	86.4	88.5	92.0	97.5	105.4	115.2	127.0	142.4	162.3	185.8
130°	88.5	89.6	91.8	96.0	101.3	109.5	119.0	129.9	144.2	162.1	183.4
132.5°	91.4	92.3	95.2	99.2	105.0	112.6	122.2	132.8	145.8	161.9	181.2
135°	95.5	96.6	99.4	104.2	110.0	117.3	126.5	136.7	148.1	161.5	177.8
137.5°	99.6	100.6	103.7	108.2	114.3	121.3	129.9	139.3	149.5	161.5	174.9
140°	102.5	103.3	106.4	111.1	117.0	123.7	132.1	141.1	150.6	161.3	173.3
142.5°	105.6	106.5	109.3	113.8	119.5	126.0	134.2	142.4	151.5	161.3	172.0
145°	110.0	110.9	113.7	117.6	122.9	129.0	136.3	143.9	152.0	160.7	169.7
147.5°	115.0	115.3	117.8	121.8	126.2	131.7	138.6	145.2	152.3	159.7	167.6
150°	118.1	118.4	120.6	124.1	128.3	133.6	139.7	145.8	152.3	159.0	166.0
152.5°	121.0	121.1	123.3	126.5	130.2	135.1	140.6	146.3	151.9	157.9	164.2
155°	125.2	125.4	127.1	129.9	133.0	137.2	142.0	146.7	151.2	156.2	161.5
157.5°	129.1	129.1	130.7	132.8	135.5	138.9	142.9	146.7	150.4	154.5	158.8
160°	131.6	131.6	132.7	134.7	136.9	140.0	143.4	146.7	149.8	153.1	156.8
162.5°	133.8	133.6	134.5	136.3	138.2	140.7	143.8	146.7	149.1	151.8	155.0
165°	136.3	136.3	136.9	138.3	139.7	141.4	143.9	146.2	147.8	149.8	152.0
167.5°	138.9	138.6	138.9	139.9	140.7	142.0	143.9	145.4	146.5	147.7	149.3
170°	140.0	139.7	140.0	140.9	141.4	142.2	143.6	145.0	145.6	146.4	147.6
172.5°	141.1	140.9	140.9	141.5	141.8	142.4	143.4	144.6	144.7	145.0	146.0
175°	142.2	142.0	142.0	142.2	142.5	142.5	143.1	143.9	143.6	143.6	144.2
177.5°	142.8	142.5	142.3	142.5	142.5	142.5	142.8	143.1	142.8	142.8	143.0
180°	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5



TEST NUMBER: P332498-927

CATALOG NUMBER: SA4XXDIP-C350D365U927-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	467.9	467.9	467.9	467.9	467.9	467.9	467.9	467.9
2.5°	466.3	467.0	467.6	467.9	467.9	467.8	467.7	467.6
5°	463.8	464.7	465.6	466.0	465.8	465.6	465.5	465.3
7.5°	458.6	459.4	460.1	460.4	460.3	460.2	460.1	460.0
10°	454.3	455.0	455.7	455.9	455.7	455.5	455.3	455.2
12.5°	449.0	449.7	450.5	450.8	450.5	450.3	450.0	449.8
15°	438.9	439.4	440.0	440.1	439.8	439.6	439.3	439.1
17.5°	427.5	427.8	428.1	428.2	428.0	427.9	427.7	427.5
20°	419.0	419.2	419.5	419.5	419.3	419.1	419.0	418.8
22.5°	410.0	410.5	411.0	411.1	410.7	410.4	410.1	409.9
25°	395.4	395.5	395.5	395.5	395.1	394.7	394.4	394.1
27.5°	378.9	378.7	378.5	378.2	377.8	377.4	376.9	376.5
30°	367.6	367.3	366.9	366.5	366.1	365.7	365.3	364.9
32.5°	356.0	355.6	355.2	354.8	354.4	353.9	353.6	353.2
35°	337.8	337.2	336.6	336.1	335.7	335.3	334.9	334.5
37.5°	318.7	318.1	317.4	316.9	316.3	315.8	315.2	314.7
40°	305.5	304.6	303.8	303.2	302.7	302.3	301.9	301.5
42.5°	292.6	291.6	290.7	290.0	289.7	289.5	289.1	288.9
45°	272.7	271.7	270.8	270.2	270.0	269.7	269.5	269.3
47.5°	253.3	252.3	251.3	250.5	249.9	249.2	248.6	248.0
50°	239.9	238.8	237.6	236.7	236.2	235.8	235.2	234.7
52.5°	226.1	225.1	224.0	223.2	222.5	221.9	221.3	220.6
55°	205.7	204.7	203.7	203.0	202.5	202.0	201.5	201.0
57.5°	185.4	184.4	183.5	182.8	182.3	181.8	181.3	180.8
60°	171.3	170.6	169.8	169.3	168.9	168.4	168.0	167.6
62.5°	157.7	157.0	156.3	155.7	155.3	155.0	154.6	154.1
65°	137.8	137.0	136.2	135.5	135.1	134.7	134.3	133.9
67.5°	117.3	116.5	115.7	115.3	115.2	115.0	114.9	114.8
70°	104.4	103.8	103.1	102.6	102.3	102.1	101.9	101.6
72.5°	91.5	90.9	90.4	90.0	89.8	89.5	89.3	89.0
75°	72.8	72.5	72.2	71.9	71.9	71.8	71.7	71.6
77.5°	55.1	55.1	55.0	54.8	54.6	54.3	54.1	53.9
80°	43.9	43.7	43.6	43.5	43.3	43.3	43.2	43.1
82.5°	33.8	33.7	33.7	33.6	33.5	33.4	33.3	33.2
85°	19.5	19.5	19.5	19.5	19.4	19.3	19.2	19.1
87.5°	8.2	8.2	8.3	8.3	8.4	8.4	8.4	8.4
90°	5.1	5.3	5.6	5.6	5.9	6.2	5.9	5.9
92.5°	55.0	41.4	33.0	27.3	24.0	22.5	21.5	21.5
95°	207.5	164.1	126.5	99.4	85.6	77.0	71.9	68.3
97.5°	306.5	290.4	263.0	233.8	213.7	196.9	188.5	182.6
100°	337.6	343.3	329.5	308.8	284.5	267.4	259.0	256.7
102.5°	336.1	363.8	367.8	359.2	344.3	331.9	323.1	321.2
105°	313.5	362.0	389.8	401.2	401.8	399.5	395.6	394.0
107.5°	281.6	333.2	372.2	397.2	411.0	417.4	420.2	420.9
110°	262.4	310.8	351.4	382.1	402.0	413.8	418.8	421.4



TEST NUMBER: P332498-927

CATALOG NUMBER: SA4XXDIP-C350D365U927-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	248.2	291.0	329.4	360.2	382.8	397.0	404.1	408.1
115°	234.1	268.5	301.3	328.1	350.2	367.0	376.0	378.3
117.5°	227.1	255.6	281.4	304.2	323.1	337.2	346.2	347.9
120°	223.9	250.0	272.4	292.3	308.2	320.6	327.9	331.0
122.5°	221.3	246.4	266.8	284.2	297.7	308.2	314.4	317.5
125°	216.7	240.7	260.1	275.5	286.7	294.9	300.2	301.8
127.5°	211.1	234.1	253.4	268.0	279.2	286.5	291.0	292.6
130°	206.6	228.8	247.8	262.6	274.1	281.1	285.6	287.2
132.5°	201.9	222.7	241.3	256.1	267.4	275.3	279.6	281.2
135°	195.4	213.7	230.7	244.7	255.9	263.7	268.2	269.9
137.5°	189.6	204.9	219.4	232.0	242.5	250.2	253.9	255.9
140°	186.2	199.3	211.9	223.7	233.5	239.6	243.6	245.8
142.5°	183.1	194.6	205.4	215.6	224.3	230.0	233.5	235.0
145°	178.6	188.1	196.5	204.4	211.4	216.1	219.0	220.3
147.5°	175.0	182.5	189.3	195.4	200.6	204.7	206.8	207.3
150°	172.8	179.2	184.8	189.8	194.3	198.0	199.6	199.9
152.5°	170.3	175.9	181.0	185.1	188.9	191.9	192.9	193.2
155°	166.6	171.0	175.2	178.6	181.4	183.6	184.5	184.5
157.5°	162.6	166.4	169.9	172.6	174.7	176.4	176.9	176.9
160°	160.2	163.2	166.3	168.6	170.2	171.9	172.2	172.2
162.5°	157.7	160.3	162.7	164.8	166.0	167.6	167.9	167.7
165°	154.2	156.0	157.9	159.3	160.4	161.5	161.3	161.0
167.5°	151.0	152.3	153.8	154.6	155.2	156.0	155.9	155.7
170°	148.9	149.8	150.9	151.8	152.3	152.6	152.3	152.3
172.5°	147.2	147.7	148.5	149.1	149.4	149.6	149.4	148.9
175°	144.7	145.0	145.6	145.6	145.6	146.2	145.6	145.0
177.5°	143.1	143.4	143.4	143.6	143.4	143.6	143.1	142.8
180°	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5

(END OF REPORT)