

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: P332551-927

Luminaire Tested: **SA4XXDIP-C575D590U927-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P332551-927
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: SA4XXDIP-C575D590U927-4F0-1E-UDD-F1
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 590 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3596.8 lumens
Efficiency: N/A
Efficacy: 109.7 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

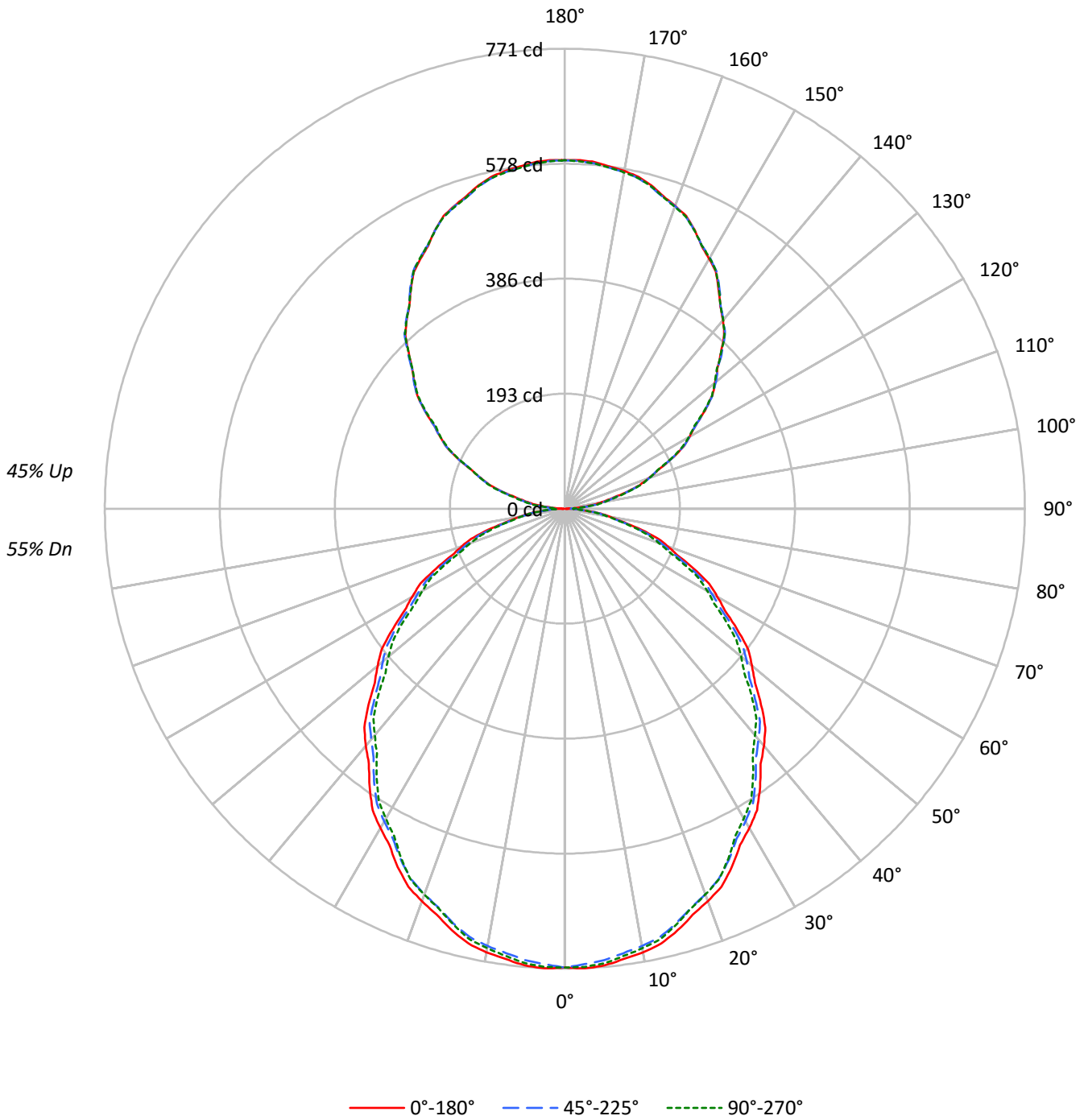
Input Watts (W): 32.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332551-927

CATALOG NUMBER: SA4XXDIP-C575D590U927-4F0-1E-UDD-F1

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	101	101	101	101	86	86	86	73	73	73	61	61	61	55				
1	99	94	91	87	92	88	84	81	75	73	71	64	62	61	54	52	51	46				
2	90	82	76	71	83	77	71	67	66	62	58	56	53	51	47	45	43	39				
3	82	73	65	59	76	68	61	56	58	53	49	50	46	43	42	39	37	33				
4	75	64	56	50	69	60	53	47	52	46	42	44	40	37	37	34	32	28				
5	69	57	49	43	64	53	46	41	46	41	36	40	35	32	34	30	28	24				
6	64	51	43	37	59	48	41	35	42	36	32	36	31	28	31	27	24	21				
7	59	46	38	33	54	43	36	31	38	32	28	33	28	25	28	24	22	19				
8	55	42	34	29	51	40	32	28	35	29	25	30	25	22	26	22	19	17				
9	51	39	31	26	47	36	29	25	32	26	22	28	23	20	24	20	17	15				
10	48	35	28	23	44	33	27	22	29	24	20	26	21	18	22	18	16	14				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6211	6211	6211
5°	6229	6155	6199
10°	6190	6105	6135
15°	6115	6018	6033
20°	6016	5910	5916
25°	5903	5787	5770
30°	5764	5643	5591
35°	5619	5492	5419
40°	5469	5321	5223
45°	5313	5151	5053
50°	5141	5001	4847
55°	4954	4807	4650
60°	4766	4589	4448
65°	4556	4380	4204
70°	4322	4102	3944
75°	3961	3768	3671
80°	3524	3380	3296
85°	3084	2973	2908



TEST NUMBER: P332551-927

CATALOG NUMBER: SA4XXDIP-C575D590U927-4F0-1E-UDD-F1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.5	2.0
10°-20°	204.1	5.7
20°-30°	300.5	8.4
30°-40°	349.3	9.7
40°-50°	349.3	9.7
50°-60°	305.5	8.5
60°-70°	226.9	6.3
70°-80°	128.9	3.6
80°-90°	39.0	1.1
90°-100°	38.5	1.1
100°-110°	114.1	3.2
110°-120°	193.7	5.4
120°-130°	255.5	7.1
130°-140°	286.9	8.0
140°-150°	281.9	7.8
150°-160°	237.1	6.6
160°-170°	157.8	4.4
170°-180°	55.2	1.5
0°-30°	577.0	16.0
0°-40°	926.3	25.8
0°-60°	1581.2	44.0
0°-90°	1975.9	54.9
90°-120°	346.4	9.6
90°-150°	1170.7	32.5
90°-180°	1621.0	45.1
0°-180°	3596.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	769	769	769	769	769	
5°	769	766	760	766	765	73
15°	732	729	720	723	722	206
25°	663	658	650	650	648	305
35°	570	566	557	553	550	356
45°	465	461	451	445	443	359
55°	352	350	342	334	330	315
65°	238	235	229	223	220	236
75°	127	124	121	118	118	135
85°	33	33	32	32	31	37
90°	1	6	10	13	14	3
95°	27	31	34	36	36	30
105°	105	106	108	109	110	112
115°	197	197	196	196	195	194
125°	287	287	286	286	285	256
135°	370	373	373	372	370	286
145°	450	451	452	451	450	281
155°	515	515	515	516	515	237
165°	561	559	558	561	559	158
175°	583	581	581	583	581	55
180°	584	584	584	584	584	



TEST NUMBER: P332551-927

CATALOG NUMBER: SA4XXDIP-C575D590U927-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	769.3	769.3	769.3	769.3	769.3	769.3	769.3	769.3	769.3	769.3	769.3
2.5°	771.3	771.0	770.6	770.3	770.0	769.2	768.0	766.8	765.6	764.4	765.5
5°	768.7	768.2	767.6	767.1	766.5	765.5	764.0	762.5	761.0	759.5	761.0
7.5°	761.5	761.0	760.5	759.9	759.4	758.3	756.6	754.9	753.2	751.5	752.8
10°	755.1	754.6	754.1	753.5	753.0	751.8	750.0	748.2	746.5	744.7	745.8
12.5°	746.8	746.2	745.7	745.1	744.6	743.4	741.5	739.6	737.7	735.8	737.0
15°	731.7	731.2	730.6	730.1	729.5	728.3	726.2	724.1	722.1	720.0	720.8
17.5°	713.6	712.9	712.3	711.5	710.8	709.6	707.6	705.7	703.7	701.8	702.3
20°	700.3	699.6	698.9	698.2	697.5	696.2	694.1	692.1	690.0	687.9	688.3
22.5°	686.0	685.1	684.2	683.3	682.4	680.9	678.8	676.8	674.7	672.6	673.4
25°	662.7	661.7	660.8	659.8	658.9	657.4	655.5	653.6	651.6	649.7	649.9
27.5°	636.0	635.1	634.1	633.1	632.1	630.7	628.9	627.2	625.3	623.6	623.3
30°	618.3	617.2	616.1	615.0	613.9	612.4	610.7	608.9	607.1	605.4	604.8
32.5°	599.5	598.6	597.5	596.6	595.6	594.1	592.3	590.4	588.5	586.6	586.0
35°	570.2	569.3	568.3	567.4	566.4	564.9	563.0	561.1	559.2	557.3	556.3
37.5°	539.2	538.4	537.5	536.6	535.8	534.3	532.3	530.2	528.1	526.1	525.1
40°	519.0	517.9	516.8	515.8	514.7	513.1	511.0	509.0	506.9	504.9	503.5
42.5°	497.3	496.7	496.1	495.4	494.7	493.2	491.0	488.7	486.4	484.2	482.6
45°	465.4	464.5	463.5	462.6	461.6	460.0	457.8	455.6	453.4	451.2	449.7
47.5°	432.0	431.3	430.7	430.0	429.4	428.0	426.0	424.0	421.9	419.9	418.2
50°	409.3	408.8	408.2	407.7	407.1	405.9	404.0	402.0	400.1	398.2	396.3
52.5°	387.1	386.5	385.8	385.2	384.5	383.2	381.1	379.1	377.1	375.0	373.4
55°	352.0	351.6	351.2	350.8	350.4	349.2	347.3	345.3	343.4	341.5	339.8
57.5°	318.5	318.0	317.5	317.0	316.6	315.4	313.5	311.6	309.7	307.8	306.3
60°	295.2	294.6	293.9	293.2	292.6	291.3	289.5	287.7	286.0	284.2	283.0
62.5°	272.6	272.0	271.4	270.8	270.3	269.0	267.2	265.3	263.4	261.5	260.4
65°	238.5	237.9	237.2	236.5	235.8	234.8	233.5	232.0	230.7	229.3	227.9
67.5°	204.3	203.7	203.0	202.4	201.8	200.8	199.5	198.2	196.9	195.5	194.2
70°	183.1	182.1	181.2	180.2	179.3	178.2	177.1	176.0	174.9	173.8	172.8
72.5°	160.4	159.5	158.5	157.5	156.5	155.7	154.8	153.9	153.0	152.1	151.2
75°	127.0	126.3	125.6	124.9	124.2	123.6	122.9	122.2	121.5	120.8	120.3
77.5°	95.1	94.7	94.4	94.2	93.9	93.4	92.8	92.2	91.6	91.0	90.8
80°	75.8	75.4	75.0	74.6	74.1	73.8	73.6	73.3	73.0	72.7	72.5
82.5°	57.1	56.9	56.7	56.5	56.3	56.2	56.2	56.1	56.0	56.0	55.8
85°	33.3	33.3	33.3	33.3	33.3	33.1	32.9	32.6	32.3	32.1	32.1
87.5°	13.1	13.2	13.3	13.4	13.5	13.6	13.7	13.7	13.8	13.9	13.9
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°	9.7	10.9	12.2	13.5	14.7	15.6	16.2	16.8	17.3	17.9	18.2
95°	27.1	28.0	28.9	29.8	30.7	31.5	32.2	33.0	33.7	34.3	34.6
97.5°	47.4	48.1	48.8	49.5	50.2	51.0	51.8	52.7	53.5	54.3	54.7
100°	63.2	63.7	64.1	64.5	64.9	65.5	66.4	67.3	68.2	69.2	69.3
102.5°	79.9	80.0	80.2	80.3	80.5	81.0	81.8	82.6	83.5	84.3	84.6
105°	105.3	105.4	105.4	105.6	105.7	105.9	106.3	106.7	107.1	107.5	107.8
107.5°	131.9	132.1	132.1	132.3	132.5	132.5	132.5	132.6	132.7	132.8	133.0
110°	150.0	150.2	150.4	150.6	150.8	150.8	150.8	150.7	150.6	150.4	150.3



TEST NUMBER: P332551-927

CATALOG NUMBER: SA4XXDIP-C575D590U927-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	168.8	168.8	168.9	168.9	169.0	168.9	168.7	168.5	168.3	168.2	168.1
115°	197.0	197.0	197.0	197.0	197.0	196.9	196.7	196.5	196.3	196.1	196.0
117.5°	223.6	223.6	223.7	223.8	223.9	223.9	223.7	223.6	223.4	223.3	222.9
120°	241.3	241.7	242.1	242.5	242.9	243.0	242.6	242.3	242.0	241.7	241.2
122.5°	259.7	259.8	260.0	260.2	260.3	260.4	260.2	260.1	259.9	259.8	259.4
125°	286.9	286.9	286.9	286.9	286.9	286.8	286.8	286.7	286.5	286.5	286.2
127.5°	311.6	311.9	312.2	312.5	312.8	312.8	312.7	312.5	312.4	312.2	312.0
130°	328.9	329.2	329.5	329.9	330.1	330.3	330.3	330.3	330.3	330.3	330.1
132.5°	346.7	346.9	347.1	347.3	347.5	347.6	347.5	347.5	347.4	347.3	347.1
135°	370.0	370.7	371.2	371.9	372.5	372.7	372.7	372.7	372.7	372.7	372.6
137.5°	395.5	395.8	396.1	396.3	396.6	396.9	397.0	397.2	397.4	397.5	397.3
140°	412.5	412.7	412.9	413.1	413.3	413.4	413.4	413.4	413.4	413.4	413.3
142.5°	428.0	428.3	428.5	428.6	428.9	428.9	428.8	428.7	428.6	428.6	428.6
145°	449.6	450.0	450.4	450.8	451.1	451.4	451.5	451.6	451.7	451.8	451.7
147.5°	470.9	471.3	471.8	472.3	472.9	473.0	472.9	472.9	472.8	472.7	472.6
150°	483.9	484.3	484.7	485.1	485.5	485.7	485.7	485.7	485.7	485.7	485.7
152.5°	496.2	496.5	496.7	496.9	497.2	497.3	497.4	497.5	497.6	497.6	497.9
155°	515.1	515.1	515.1	515.1	515.1	515.0	514.9	514.8	514.8	514.6	515.0
157.5°	531.0	530.8	530.6	530.4	530.3	530.1	530.1	530.1	530.1	530.0	530.4
160°	540.3	540.3	540.2	540.1	540.0	539.9	539.8	539.7	539.6	539.5	539.8
162.5°	549.1	548.8	548.5	548.3	548.0	547.8	547.7	547.6	547.6	547.4	548.0
165°	560.7	560.4	560.1	559.8	559.5	559.3	559.0	558.9	558.6	558.5	559.0
167.5°	569.7	569.3	568.8	568.4	568.0	567.8	567.8	567.8	567.8	567.8	568.5
170°	574.7	574.3	573.7	573.2	572.7	572.5	572.6	572.7	572.8	572.9	573.5
172.5°	578.3	577.9	577.5	577.1	576.6	576.5	576.5	576.5	576.5	576.6	577.2
175°	583.3	582.8	582.3	581.8	581.3	581.0	580.9	580.8	580.7	580.6	581.3
177.5°	584.9	584.6	584.2	583.8	583.3	583.1	583.1	583.1	583.1	583.1	583.7
180°	584.2	584.2	584.2	584.2	584.2	584.2	584.2	584.2	584.2	584.2	584.2



TEST NUMBER: P332551-927

CATALOG NUMBER: SA4XXDIP-C575D590U927-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	769.3	769.3	769.3	769.3	769.3	769.3	769.3	769.3
2.5°	766.6	767.7	768.8	769.3	769.1	769.1	769.0	768.8
5°	762.5	764.0	765.5	766.1	765.8	765.6	765.2	765.0
7.5°	754.0	755.2	756.4	756.9	756.8	756.6	756.5	756.2
10°	746.9	748.0	749.1	749.5	749.2	748.9	748.6	748.4
12.5°	738.2	739.4	740.6	741.0	740.6	740.2	739.9	739.5
15°	721.7	722.5	723.3	723.5	723.1	722.7	722.2	721.8
17.5°	702.8	703.3	703.9	703.9	703.7	703.4	703.1	702.9
20°	688.8	689.2	689.6	689.7	689.4	689.1	688.9	688.6
22.5°	674.1	674.9	675.7	675.7	675.3	674.8	674.3	673.8
25°	650.0	650.1	650.3	650.1	649.5	649.0	648.4	647.8
27.5°	623.0	622.6	622.3	621.8	621.1	620.4	619.7	619.0
30°	604.3	603.7	603.2	602.5	601.8	601.2	600.5	599.8
32.5°	585.3	584.6	584.0	583.3	582.7	581.9	581.2	580.6
35°	555.3	554.4	553.4	552.6	551.9	551.2	550.6	549.9
37.5°	524.0	522.9	521.9	520.9	520.1	519.1	518.2	517.3
40°	502.2	500.7	499.4	498.4	497.6	497.0	496.3	495.6
42.5°	481.0	479.3	477.8	476.7	476.3	475.9	475.4	474.9
45°	448.2	446.7	445.2	444.3	443.9	443.5	443.0	442.6
47.5°	416.5	414.8	413.1	411.8	410.7	409.6	408.6	407.6
50°	394.3	392.4	390.5	389.2	388.3	387.5	386.7	385.9
52.5°	371.6	369.9	368.3	366.9	365.8	364.8	363.8	362.7
55°	338.3	336.6	334.9	333.7	332.9	332.1	331.2	330.4
57.5°	304.8	303.2	301.6	300.4	299.6	298.8	298.0	297.2
60°	281.7	280.5	279.2	278.3	277.6	276.9	276.2	275.5
62.5°	259.3	258.1	257.0	256.1	255.4	254.8	254.1	253.3
65°	226.6	225.2	223.9	222.8	222.1	221.4	220.8	220.1
67.5°	192.9	191.6	190.3	189.5	189.3	189.2	188.9	188.8
70°	171.7	170.6	169.4	168.7	168.3	167.9	167.5	167.1
72.5°	150.4	149.5	148.6	148.0	147.6	147.2	146.8	146.3
75°	119.7	119.1	118.7	118.3	118.1	118.0	117.9	117.7
77.5°	90.6	90.5	90.3	90.1	89.7	89.4	89.0	88.6
80°	72.2	71.9	71.6	71.5	71.3	71.1	71.1	70.9
82.5°	55.6	55.5	55.3	55.1	55.1	54.9	54.7	54.6
85°	32.1	32.1	32.1	32.0	31.8	31.7	31.6	31.4
87.5°	14.1	14.2	14.3	14.4	14.4	14.5	14.5	14.6
90°	11.2	11.7	12.4	12.8	13.0	13.2	13.4	13.5
92.5°	18.6	19.0	19.3	19.6	19.7	19.8	20.0	20.0
95°	34.9	35.3	35.6	35.7	35.7	35.7	35.7	35.7
97.5°	55.1	55.4	55.8	55.9	55.9	55.9	55.9	55.9
100°	69.6	69.7	69.9	70.0	70.0	70.0	70.0	70.0
102.5°	84.8	85.2	85.4	85.6	85.7	85.8	85.9	86.0
105°	108.1	108.4	108.8	109.0	109.3	109.6	110.0	110.3
107.5°	133.3	133.6	133.9	134.0	134.0	134.0	134.0	134.0
110°	150.0	149.9	149.6	149.7	150.0	150.3	150.6	150.9



TEST NUMBER: P332551-927

CATALOG NUMBER: SA4XXDIP-C575D590U927-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	168.1	168.0	168.0	168.0	168.1	168.1	168.2	168.3
115°	195.9	195.8	195.7	195.6	195.5	195.4	195.3	195.2
117.5°	222.6	222.3	221.9	221.7	221.4	221.3	221.0	220.9
120°	240.7	240.2	239.7	239.6	239.8	240.0	240.2	240.3
122.5°	259.1	258.8	258.4	258.1	257.7	257.4	257.0	256.7
125°	286.1	285.8	285.7	285.4	285.3	285.0	284.9	284.6
127.5°	311.8	311.6	311.4	311.2	311.1	310.9	310.8	310.6
130°	329.9	329.7	329.5	329.2	328.8	328.4	328.0	327.6
132.5°	346.9	346.7	346.5	346.3	346.1	345.9	345.8	345.6
135°	372.3	372.2	371.9	371.7	371.4	371.1	370.8	370.5
137.5°	397.0	396.7	396.5	396.3	396.4	396.5	396.6	396.6
140°	413.2	413.1	413.0	412.9	412.8	412.7	412.6	412.5
142.5°	428.6	428.6	428.5	428.5	428.5	428.5	428.4	428.4
145°	451.6	451.5	451.4	451.2	450.9	450.6	450.3	450.0
147.5°	472.5	472.5	472.4	472.3	472.2	472.1	472.0	471.9
150°	485.7	485.7	485.7	485.7	485.5	485.4	485.4	485.3
152.5°	498.1	498.4	498.6	498.6	498.4	498.0	497.8	497.6
155°	515.4	515.8	516.3	516.3	515.8	515.4	515.0	514.6
157.5°	530.7	531.0	531.3	531.2	530.9	530.6	530.2	529.9
160°	540.1	540.3	540.7	540.6	540.1	539.6	539.1	538.6
162.5°	548.5	549.1	549.6	549.6	549.1	548.6	548.1	547.6
165°	559.7	560.2	560.9	560.9	560.5	560.2	559.8	559.4
167.5°	569.0	569.7	570.3	570.2	569.7	569.0	568.4	567.8
170°	574.1	574.7	575.3	575.3	574.6	573.9	573.1	572.4
172.5°	577.9	578.6	579.2	579.2	578.5	577.8	577.1	576.5
175°	582.0	582.7	583.4	583.4	582.7	582.0	581.3	580.6
177.5°	584.2	584.8	585.3	585.3	584.7	584.1	583.4	582.7
180°	584.2	584.2	584.2	584.2	584.2	584.2	584.2	584.2

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