

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: P332548-927

Luminaire Tested: **SA4XXDIP-C575D590U927-4F0-1E-UDD-D1**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P332548-927  
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-D1  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 575 LUMENS PER FOOT, DROP 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: 3499.1 lumens  
Efficiency: N/A  
Efficacy: 106.7 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

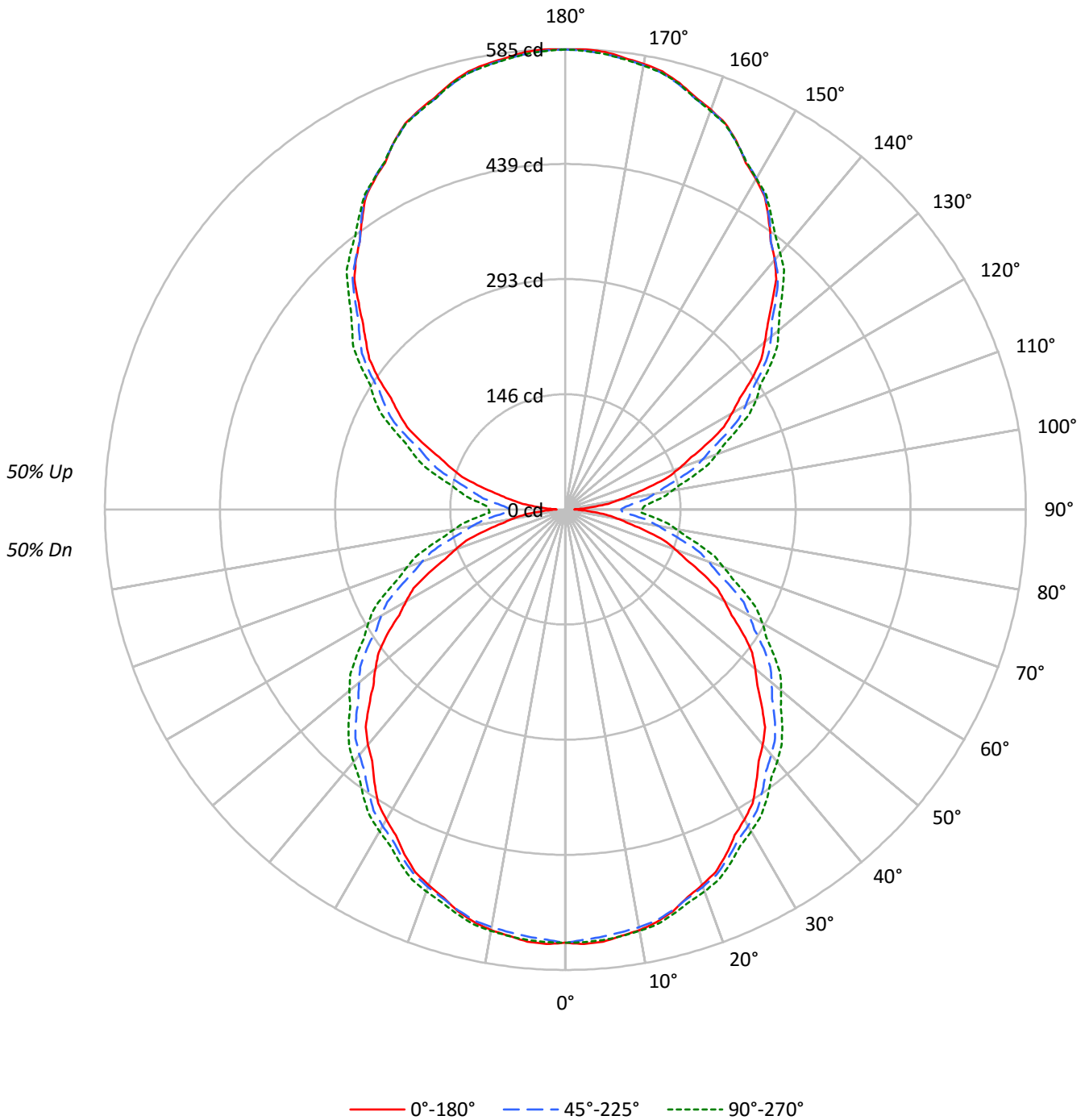
Input Watts (W): 32.8  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P332548-927

CATALOG NUMBER: SA4XXDIP-C575D590U927-4F0-1E-UDD-D1

### 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	107	107	107	107	99	99	99	99	83	83	83	69	69	69	56	56	56	50				
1	97	92	88	84	89	85	81	78	71	69	66	59	57	55	48	46	45	40				
2	88	80	73	68	80	74	68	63	62	58	54	51	48	45	41	39	37	32				
3	80	70	62	56	73	64	58	52	54	49	45	45	41	38	36	34	31	27				
4	73	61	53	47	67	57	49	44	48	42	38	40	36	32	32	29	27	23				
5	67	55	46	40	61	50	43	37	43	37	32	36	31	28	29	26	23	20				
6	61	49	40	34	56	45	38	32	38	33	28	32	28	24	26	23	20	17				
7	57	44	36	30	52	41	33	28	35	29	25	29	25	21	24	20	18	15				
8	52	40	32	26	48	37	30	25	32	26	22	27	22	19	22	18	16	13				
9	49	36	29	23	45	34	27	22	29	23	19	24	20	17	20	17	14	12				
10	46	33	26	21	42	31	24	20	27	21	17	23	18	15	19	15	13	11				

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

	0°	45°	90°
0°	4444	4444	4444
5°	4458	4343	4355
10°	4431	4273	4269
15°	4391	4190	4167
20°	4331	4099	4068
25°	4264	3998	3958
30°	4191	3896	3847
35°	4108	3792	3748
40°	4041	3694	3646
45°	3943	3603	3558
50°	3860	3498	3465
55°	3775	3400	3356
60°	3640	3274	3257
65°	3494	3139	3136
70°	3315	2985	2993
75°	3068	2814	2864
80°	2794	2652	2738
85°	2439	2507	2665



TEST NUMBER: P332548-927

CATALOG NUMBER: SA4XXDIP-C575D590U927-4F0-1E-UDD-D1

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	52.1	1.5
10°-20°	149.4	4.3
20°-30°	225.8	6.5
30°-40°	273.2	7.8
40°-50°	288.9	8.3
50°-60°	271.9	7.8
60°-70°	225.6	6.4
70°-80°	158.4	4.5
80°-90°	91.3	2.6
90°-100°	91.7	2.6
100°-110°	153.5	4.4
110°-120°	220.2	6.3
120°-130°	270.4	7.7
130°-140°	293.3	8.4
140°-150°	283.2	8.1
150°-160°	237.1	6.8
160°-170°	157.8	4.5
170°-180°	55.2	1.6
0°-30°	427.3	12.2
0°-40°	700.6	20.0
0°-60°	1261.3	36.0
0°-90°	1736.6	49.6
90°-120°	465.4	13.3
90°-150°	1312.3	37.5
90°-180°	1762.0	50.4
0°-180°	3499.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	550	550	550	550	550	
5°	551	549	545	550	549	52
15°	528	529	527	532	532	149
25°	483	487	489	495	496	223
35°	423	430	436	445	447	265
45°	353	364	376	386	390	272
55°	276	289	308	319	324	246
65°	191	211	232	247	252	189
75°	106	129	155	171	178	113
85°	33	59	86	104	111	35
90°	11	41	71	91	97	8
95°	35	60	88	105	112	37
105°	111	124	148	164	171	118
115°	201	207	225	238	242	198
125°	289	290	304	314	317	258
135°	371	374	378	387	390	287
145°	450	451	452	455	456	282
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: P332548-927

CATALOG NUMBER: SA4XXDIP-C575D590U927-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	550.5	550.5	550.5	550.5	550.5	550.5	550.5	550.5	550.5	550.5	550.5
2.5°	552.5	552.2	551.8	551.4	551.1	550.6	549.7	548.8	547.9	547.0	547.8
5°	551.1	550.7	550.2	549.9	549.5	548.7	547.8	546.8	545.9	544.9	546.1
7.5°	546.4	546.1	545.9	545.7	545.4	544.9	544.2	543.4	542.5	541.7	543.0
10°	542.5	542.3	542.2	542.1	541.9	541.5	540.8	540.1	539.5	538.8	540.0
12.5°	537.0	537.0	537.0	536.9	536.9	536.7	536.2	535.8	535.3	534.8	535.9
15°	528.3	528.5	528.5	528.7	528.9	528.7	528.3	527.9	527.4	527.0	528.3
17.5°	516.3	516.7	517.1	517.5	518.0	518.2	518.1	518.0	517.9	517.8	519.0
20°	507.9	508.3	508.7	509.2	509.6	509.8	510.0	510.2	510.2	510.4	511.7
22.5°	498.6	499.1	499.6	500.1	500.7	501.1	501.3	501.5	501.8	502.0	503.4
25°	483.3	484.1	485.0	485.8	486.6	487.2	487.6	488.0	488.5	488.9	490.4
27.5°	466.3	467.5	468.7	469.9	471.1	472.0	472.6	473.2	473.9	474.5	475.9
30°	455.0	456.1	457.1	458.2	459.3	460.3	461.3	462.2	463.2	464.2	465.7
32.5°	442.6	443.9	445.2	446.6	447.9	449.1	450.1	451.2	452.3	453.4	455.0
35°	422.9	424.5	426.2	427.8	429.4	430.9	432.3	433.7	435.1	436.4	438.4
37.5°	403.1	404.9	406.8	408.7	410.6	412.4	414.1	415.8	417.5	419.1	421.1
40°	390.2	392.0	393.8	395.5	397.4	399.2	401.1	403.0	405.0	406.9	408.9
42.5°	375.4	377.4	379.4	381.4	383.4	385.6	387.8	390.0	392.3	394.5	396.8
45°	352.6	355.2	357.8	360.4	363.0	365.6	368.2	370.8	373.4	376.0	378.3
47.5°	330.8	333.4	336.1	338.8	341.5	344.4	347.4	350.4	353.4	356.4	358.9
50°	315.0	318.0	321.0	324.1	327.1	330.1	333.1	336.1	339.1	342.1	344.8
52.5°	299.2	302.2	305.2	308.2	311.2	314.5	318.0	321.4	324.9	328.3	331.1
55°	276.2	279.0	281.9	284.8	287.6	291.1	295.2	299.4	303.5	307.6	310.4
57.5°	250.4	254.0	257.5	261.1	264.7	268.5	272.5	276.6	280.7	284.8	288.0
60°	233.6	237.2	240.7	244.3	247.9	251.9	256.4	260.9	265.5	270.0	273.1
62.5°	217.4	221.3	225.1	229.0	232.9	237.1	241.6	246.1	250.7	255.2	258.3
65°	191.1	195.5	199.9	204.2	208.7	213.2	217.8	222.4	227.1	231.8	235.2
67.5°	165.8	170.5	175.2	179.8	184.4	189.3	194.2	199.2	204.2	209.2	212.7
70°	148.5	153.2	157.9	162.6	167.2	172.1	177.3	182.5	187.7	193.0	196.6
72.5°	131.8	136.6	141.3	146.1	150.8	156.0	161.5	167.1	172.6	178.2	181.7
75°	106.0	111.1	116.1	121.2	126.3	131.7	137.4	143.2	149.0	154.7	158.6
77.5°	82.0	87.4	92.8	98.1	103.5	109.2	115.2	121.2	127.2	133.2	137.1
80°	67.2	72.6	78.2	83.7	89.1	94.8	100.9	106.9	113.0	119.0	123.1
82.5°	52.4	58.1	63.8	69.5	75.2	81.0	87.1	93.1	99.1	105.2	109.4
85°	32.6	38.4	44.2	49.9	55.7	61.6	67.8	74.0	80.2	86.3	90.4
87.5°	18.5	24.3	30.1	36.0	41.7	47.8	53.9	60.0	66.2	72.4	76.4
90°	11.2	17.8	24.4	31.0	37.5	44.2	50.9	57.6	64.2	71.0	75.6
92.5°	19.0	25.3	31.4	37.6	43.8	50.1	56.6	63.1	69.5	76.0	80.2
95°	35.1	40.6	45.9	51.4	56.8	62.7	69.0	75.3	81.7	87.9	92.0
97.5°	54.7	59.3	63.8	68.4	73.0	78.6	85.0	91.3	97.8	104.1	108.1
100°	70.0	74.0	78.0	81.9	85.9	91.0	97.2	103.5	109.7	116.0	119.9
102.5°	86.7	89.9	93.2	96.5	99.8	104.5	110.5	116.6	122.6	128.7	132.5
105°	110.8	113.7	116.5	119.4	122.2	126.4	131.8	137.3	142.8	148.2	151.9
107.5°	137.4	139.7	142.1	144.5	146.8	150.4	155.3	160.2	165.0	169.8	173.5
110°	155.0	157.1	159.1	161.3	163.4	166.8	171.5	176.2	180.9	185.6	188.5



TEST NUMBER: P332548-927

CATALOG NUMBER: SA4XXDIP-C575D590U927-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	173.3	175.0	176.7	178.5	180.2	183.2	187.7	192.0	196.5	200.8	203.8
115°	200.7	201.9	203.2	204.4	205.7	208.3	212.5	216.7	220.9	225.1	228.0
117.5°	227.1	228.0	228.8	229.6	230.4	232.8	236.7	240.7	244.6	248.6	251.0
120°	244.4	245.2	246.0	246.8	247.6	249.9	253.5	257.2	260.9	264.5	266.8
122.5°	262.8	263.0	263.2	263.5	263.8	265.7	269.3	272.9	276.6	280.1	282.6
125°	289.4	289.2	289.1	289.0	288.8	290.4	293.7	297.1	300.4	303.7	306.1
127.5°	313.9	314.1	314.3	314.4	314.6	315.9	318.4	320.8	323.3	325.7	328.0
130°	330.7	331.0	331.1	331.3	331.4	332.6	334.8	337.0	339.2	341.4	343.6
132.5°	348.5	348.6	348.6	348.7	348.8	349.7	351.4	353.1	354.7	356.4	358.5
135°	371.3	371.9	372.5	373.1	373.7	374.5	375.4	376.4	377.3	378.3	380.3
137.5°	396.7	396.9	397.0	397.2	397.4	397.8	398.3	398.9	399.6	400.2	402.0
140°	413.8	413.8	413.8	413.9	414.0	414.1	414.2	414.4	414.5	414.6	416.3
142.5°	428.8	429.0	429.1	429.3	429.5	429.5	429.4	429.2	429.0	428.8	430.4
145°	450.2	450.4	450.7	451.0	451.2	451.4	451.5	451.6	451.7	451.8	452.6
147.5°	471.5	471.8	472.2	472.5	472.9	473.0	472.9	472.9	472.8	472.7	472.7
150°	484.5	484.8	485.1	485.3	485.6	485.7	485.7	485.7	485.7	485.7	485.7
152.5°	496.3	496.5	496.8	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: P332548-927

CATALOG NUMBER: SA4XXDIP-C575D590U927-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	550.5	550.5	550.5	550.5	550.5	550.5	550.5	550.5
2.5°	548.6	549.3	550.1	550.4	550.3	550.2	550.1	550.0
5°	547.2	548.2	549.3	549.8	549.7	549.5	549.4	549.2
7.5°	544.2	545.4	546.7	547.2	547.1	546.9	546.8	546.7
10°	541.2	542.5	543.7	544.2	544.2	544.0	543.8	543.7
12.5°	537.1	538.2	539.3	539.9	539.9	539.8	539.8	539.8
15°	529.5	530.8	532.0	532.5	532.4	532.3	532.1	532.0
17.5°	520.3	521.6	522.8	523.4	523.3	523.2	523.1	523.0
20°	513.2	514.5	515.9	516.6	516.6	516.6	516.6	516.6
22.5°	504.8	506.1	507.5	508.3	508.5	508.7	509.0	509.2
25°	491.9	493.4	494.9	495.7	495.8	496.0	496.1	496.2
27.5°	477.4	478.7	480.1	480.9	481.1	481.3	481.4	481.6
30°	467.2	468.7	470.2	471.1	471.3	471.7	471.9	472.2
32.5°	456.8	458.5	460.3	461.2	461.5	461.8	462.1	462.3
35°	440.3	442.2	444.1	445.3	445.7	446.1	446.5	446.9
37.5°	423.1	425.0	427.0	428.2	428.6	429.0	429.4	429.9
40°	411.0	413.0	415.1	416.4	416.9	417.5	418.0	418.6
42.5°	399.1	401.3	403.6	405.0	405.4	405.8	406.3	406.7
45°	380.7	383.0	385.3	386.8	387.5	388.2	388.9	389.6
47.5°	361.2	363.7	366.1	367.7	368.5	369.3	370.2	371.0
50°	347.6	350.4	353.1	354.9	355.7	356.5	357.4	358.1
52.5°	333.8	336.5	339.3	341.0	341.9	342.7	343.5	344.4
55°	313.1	315.8	318.5	320.4	321.2	322.0	322.8	323.6
57.5°	291.3	294.6	297.9	299.8	300.6	301.3	302.1	302.9
60°	276.3	279.5	282.6	284.7	285.8	286.9	288.0	289.1
62.5°	261.5	264.7	267.8	269.9	271.0	272.1	273.2	274.3
65°	238.6	242.1	245.5	247.7	248.8	249.9	251.0	252.2
67.5°	216.2	219.7	223.2	225.4	226.5	227.5	228.6	229.7
70°	200.3	204.1	207.7	210.1	211.0	212.0	212.9	213.9
72.5°	185.3	188.9	192.5	194.8	195.9	196.9	198.0	199.1
75°	162.4	166.2	170.1	172.6	173.8	175.1	176.3	177.5
77.5°	141.1	145.0	148.9	151.5	152.7	154.1	155.3	156.7
80°	127.2	131.3	135.4	138.0	139.1	140.2	141.3	142.4
82.5°	113.6	117.8	122.1	124.8	126.0	127.1	128.3	129.6
85°	94.5	98.6	102.7	105.5	106.9	108.2	109.6	111.0
87.5°	80.6	84.7	88.7	91.4	92.7	94.0	95.1	96.4
90°	80.1	84.7	89.3	92.2	93.5	94.8	96.1	97.4
92.5°	84.4	88.6	92.8	95.6	96.8	98.0	99.3	100.4
95°	95.9	100.0	103.9	106.5	107.8	109.1	110.3	111.5
97.5°	112.0	116.0	119.9	122.5	123.7	124.8	126.0	127.2
100°	123.7	127.7	131.6	134.0	135.0	135.9	136.9	137.8
102.5°	136.4	140.3	144.2	146.7	147.8	149.0	150.1	151.3
105°	155.7	159.4	163.1	165.6	167.1	168.5	169.8	171.3
107.5°	177.1	180.8	184.4	186.8	187.7	188.7	189.6	190.6
110°	191.5	194.5	197.4	199.6	201.0	202.3	203.7	205.2





TEST NUMBER: P332548-927

CATALOG NUMBER: SA4XXDIP-C575D590U927-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	206.8	209.8	212.9	214.9	216.1	217.2	218.4	219.5
115°	230.9	233.8	236.7	238.6	239.5	240.3	241.1	242.0
117.5°	253.6	256.1	258.6	260.3	261.2	262.1	263.0	263.9
120°	269.0	271.2	273.5	275.3	276.6	277.8	279.2	280.4
122.5°	284.9	287.3	289.7	291.2	291.8	292.5	293.1	293.7
125°	308.6	310.9	313.3	314.8	315.4	316.1	316.7	317.3
127.5°	330.3	332.6	334.9	336.4	337.2	337.9	338.7	339.5
130°	345.9	348.2	350.5	351.8	352.2	352.6	353.1	353.5
132.5°	360.7	362.8	365.0	366.4	367.1	367.7	368.4	369.1
135°	382.3	384.3	386.3	387.5	388.0	388.6	389.1	389.6
137.5°	403.7	405.4	407.2	408.4	409.2	409.9	410.7	411.4
140°	418.0	419.7	421.4	422.5	423.1	423.7	424.3	424.8
142.5°	431.9	433.5	435.0	436.1	436.7	437.2	437.8	438.3
145°	453.3	454.0	454.7	455.2	455.4	455.7	455.9	456.1
147.5°	472.8	472.8	472.8	473.0	473.3	473.6	474.0	474.4
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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