

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: P332547-830

Luminaire Tested: **SA4XXDIP-C575D590U830-4F0-1E-UDD-D**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P332547-830  
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: SA4XXDIP-C575D590U830-4F0-1E-UDD-D  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 575 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 590 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

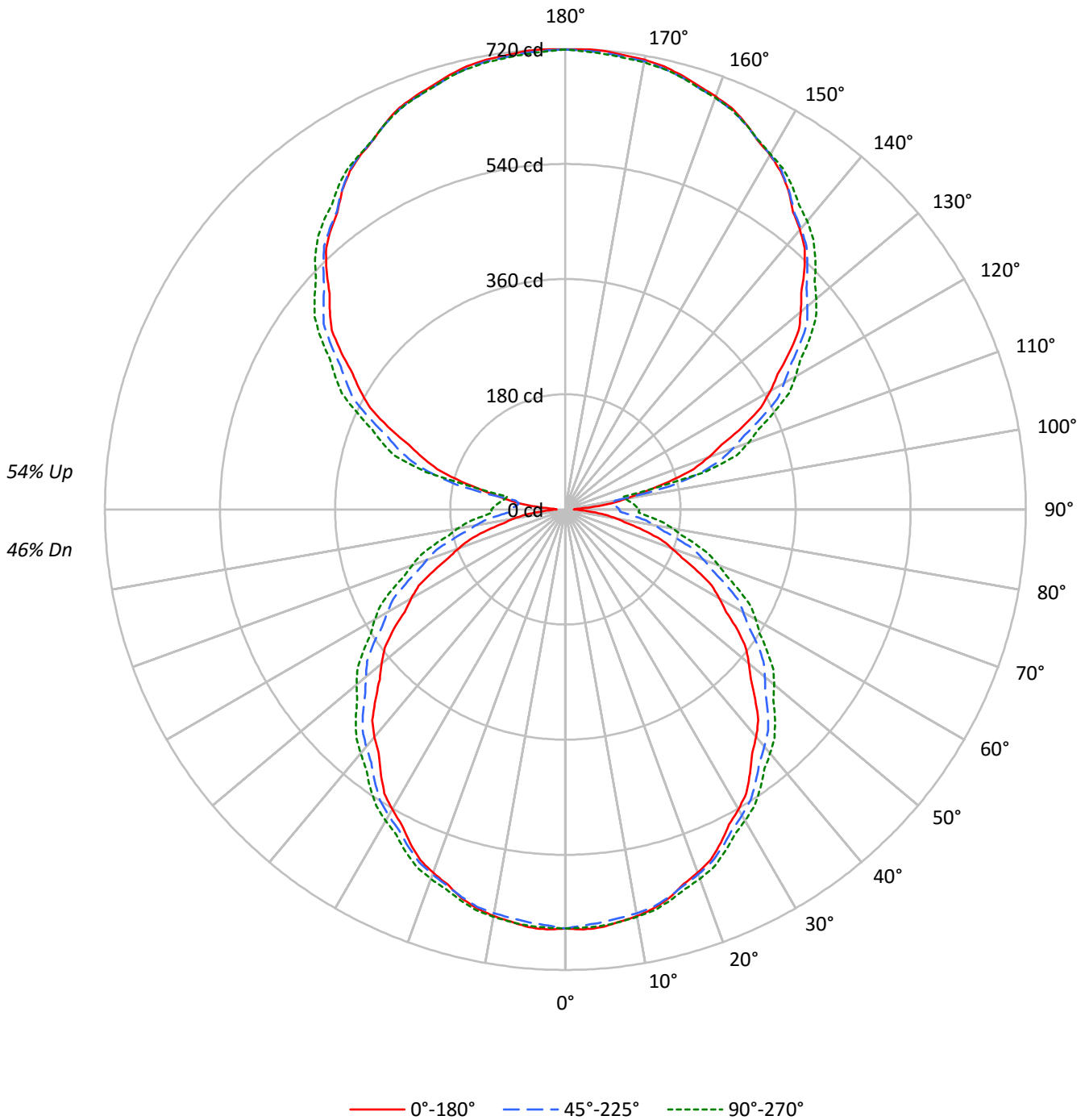
Lumens per Lamp: N/A  
Luminaire Lumens: 4458.3 lumens  
Efficiency: N/A  
Efficacy: 135.9 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39  
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')  
CIE Type: General Diffuse

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: P332547-830  
CATALOG NUMBER: SA4XXDIP-C575D590U830-4F0-1E-UDD-D

### Luminous Intensity Polar Plot





TEST NUMBER: P332547-830

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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	0
RCR																		
0	106	106	106	106	98	98	98	98	81	81	81	66	66	66	53	53	53	46
1	96	91	87	83	88	84	80	77	70	67	65	57	55	53	45	44	43	37
2	87	79	73	67	79	73	67	62	61	56	53	49	46	44	39	37	35	30
3	79	69	62	55	72	64	57	52	53	48	44	43	40	37	34	32	29	25
4	72	61	53	47	66	56	49	43	47	41	37	38	34	31	30	28	25	21
5	66	54	46	40	60	50	43	37	42	36	32	34	30	27	27	24	22	18
6	61	48	40	34	56	45	37	32	38	32	28	31	27	23	25	21	19	16
7	56	44	36	30	51	40	33	28	34	28	24	28	24	20	23	19	17	14
8	52	40	32	26	48	37	30	25	31	25	21	26	21	18	21	17	15	12
9	48	36	28	23	44	33	27	22	28	23	19	24	19	16	19	16	13	11
10	45	33	26	21	41	31	24	20	26	21	17	22	18	15	18	14	12	10

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

	0°	45°	90°
0°	5288	5288	5288
5°	5304	5168	5182
10°	5272	5083	5079
15°	5225	4985	4958
20°	5153	4877	4840
25°	5073	4756	4710
30°	4986	4636	4576
35°	4887	4512	4460
40°	4809	4395	4338
45°	4692	4287	4233
50°	4593	4163	4123
55°	4491	4045	3993
60°	4332	3894	3876
65°	4156	3735	3731
70°	3945	3551	3561
75°	3649	3349	3408
80°	3322	3156	3259
85°	2903	2980	3172



TEST NUMBER: P332547-830

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	62.0	1.4
10°-20°	177.7	4.0
20°-30°	268.7	6.0
30°-40°	325.1	7.3
40°-50°	343.7	7.7
50°-60°	323.5	7.3
60°-70°	268.4	6.0
70°-80°	188.5	4.2
80°-90°	108.6	2.4
90°-100°	87.9	2.0
100°-110°	203.6	4.6
110°-120°	331.3	7.4
120°-130°	398.4	8.9
130°-140°	415.0	9.3
140°-150°	382.4	8.6
150°-160°	307.2	6.9
160°-170°	198.1	4.4
170°-180°	68.3	1.5
0°-30°	508.4	11.4
0°-40°	833.5	18.7
0°-60°	1500.7	33.7
0°-90°	2066.2	46.3
90°-120°	622.8	14.0
90°-150°	1818.6	40.8
90°-180°	2392.0	53.7
0°-180°	4458.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	655	655	655	655	655	
5°	656	653	648	654	654	62
15°	629	629	627	633	633	177
25°	575	579	582	589	590	265
35°	503	512	519	529	532	315
45°	420	433	447	459	464	324
55°	329	344	366	380	385	293
65°	227	251	276	293	300	225
75°	126	153	184	204	211	134
85°	39	70	103	124	132	41
90°	13	49	84	108	116	9
95°	39	46	76	98	106	46
105°	168	187	216	237	226	177
115°	306	316	338	354	360	302
125°	428	430	446	461	467	382
135°	528	528	535	548	553	407
145°	608	609	609	614	618	380
155°	666	667	665	667	666	307
165°	703	700	700	704	700	198
175°	719	716	716	720	714	68
180°	719	719	719	719	719	



TEST NUMBER: P332547-830

CATALOG NUMBER: SA4XXDIP-C575D590U830-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	655.0	655.0	655.0	655.0	655.0	655.0	655.0	655.0	655.0	655.0	655.0
2.5°	657.3	657.0	656.6	656.1	655.7	655.1	654.0	653.0	651.9	650.8	651.8
5°	655.7	655.3	654.7	654.2	653.7	652.9	651.8	650.6	649.5	648.4	649.7
7.5°	650.2	649.8	649.5	649.2	648.9	648.4	647.4	646.5	645.5	644.5	646.0
10°	645.5	645.3	645.1	645.0	644.8	644.3	643.5	642.6	641.9	641.0	642.5
12.5°	638.9	638.9	638.9	638.9	638.9	638.6	638.0	637.4	636.9	636.3	637.6
15°	628.6	628.8	628.9	629.1	629.2	629.1	628.6	628.1	627.5	627.1	628.6
17.5°	614.3	614.8	615.3	615.8	616.3	616.5	616.4	616.3	616.2	616.1	617.6
20°	604.4	604.8	605.3	605.9	606.3	606.6	606.8	607.0	607.1	607.3	608.9
22.5°	593.2	593.8	594.5	595.0	595.7	596.2	596.4	596.7	597.0	597.3	599.0
25°	575.0	576.0	577.0	578.0	578.9	579.7	580.1	580.6	581.2	581.6	583.4
27.5°	554.8	556.2	557.6	559.1	560.5	561.6	562.3	563.1	563.8	564.6	566.3
30°	541.3	542.6	543.8	545.2	546.5	547.7	548.8	550.0	551.1	552.3	554.1
32.5°	526.6	528.2	529.7	531.3	532.9	534.3	535.6	536.9	538.1	539.4	541.4
35°	503.1	505.1	507.1	509.0	511.0	512.7	514.3	516.0	517.6	519.2	521.6
37.5°	479.6	481.7	484.0	486.3	488.5	490.7	492.7	494.7	496.7	498.7	501.1
40°	464.3	466.4	468.5	470.6	472.8	474.9	477.2	479.5	481.8	484.1	486.5
42.5°	446.7	449.0	451.4	453.8	456.2	458.7	461.4	464.0	466.7	469.4	472.1
45°	419.5	422.6	425.7	428.9	431.9	435.0	438.1	441.2	444.3	447.4	450.2
47.5°	393.6	396.7	399.9	403.1	406.3	409.7	413.3	416.9	420.5	424.0	427.0
50°	374.8	378.3	381.9	385.6	389.2	392.8	396.3	399.9	403.5	407.1	410.3
52.5°	356.0	359.6	363.2	366.7	370.3	374.2	378.3	382.4	386.5	390.6	393.9
55°	328.6	332.0	335.5	338.8	342.2	346.4	351.3	356.2	361.1	366.0	369.3
57.5°	297.9	302.2	306.4	310.7	314.9	319.4	324.2	329.1	334.0	338.8	342.7
60°	278.0	282.2	286.4	290.7	294.9	299.7	305.1	310.5	315.8	321.2	325.0
62.5°	258.6	263.3	267.9	272.5	277.1	282.1	287.5	292.8	298.3	303.7	307.4
65°	227.3	232.6	237.8	243.0	248.3	253.6	259.1	264.7	270.2	275.8	279.8
67.5°	197.3	202.8	208.4	214.0	219.4	225.2	231.1	237.0	243.0	248.9	253.1
70°	176.7	182.3	187.8	193.4	199.0	204.8	210.9	217.2	223.4	229.6	233.9
72.5°	156.8	162.5	168.1	173.8	179.5	185.6	192.2	198.8	205.4	212.0	216.2
75°	126.1	132.1	138.2	144.2	150.2	156.7	163.5	170.4	177.3	184.1	188.7
77.5°	97.6	104.0	110.4	116.7	123.1	129.9	137.0	144.2	151.4	158.5	163.2
80°	79.9	86.4	93.0	99.5	106.0	112.8	120.1	127.2	134.4	141.6	146.5
82.5°	62.3	69.1	75.9	82.7	89.4	96.4	103.6	110.7	117.9	125.2	130.2
85°	38.8	45.7	52.6	59.4	66.3	73.3	80.7	88.0	95.4	102.6	107.5
87.5°	22.1	28.9	35.8	42.8	49.7	56.8	64.1	71.4	78.8	86.1	91.0
90°	13.4	21.2	29.0	36.9	44.7	52.6	60.5	68.5	76.4	84.5	89.9
92.5°	17.9	23.8	29.8	35.7	41.7	48.6	56.6	64.6	72.5	80.5	85.8
95°	39.1	40.4	41.8	43.1	44.4	48.4	55.2	62.0	68.8	75.6	80.8
97.5°	71.4	78.6	85.8	92.9	100.1	100.3	93.6	86.9	80.2	73.4	77.8
100°	96.2	102.6	109.1	115.4	121.8	119.9	109.8	99.6	89.5	79.4	81.8
102.5°	124.6	129.9	135.3	140.5	145.8	150.5	154.6	158.6	162.7	166.8	149.1
105°	168.4	172.4	176.3	180.4	184.4	189.6	196.2	202.9	209.5	216.1	221.3
107.5°	210.4	213.4	216.4	219.4	222.4	227.2	233.8	240.3	246.8	253.3	257.9
110°	238.1	240.8	243.5	246.1	248.7	253.3	259.7	266.1	272.5	278.9	282.9



TEST NUMBER: P332547-830  
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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	265.0	267.8	270.4	273.1	275.7	279.9	285.8	291.5	297.3	303.0	306.6
115°	306.5	308.4	310.2	312.1	313.9	317.4	322.4	327.5	332.6	337.7	341.6
117.5°	344.6	345.9	347.3	348.6	350.1	353.3	358.4	363.5	368.6	373.7	377.1
120°	369.9	370.8	371.7	372.7	373.7	376.5	381.1	385.7	390.3	394.9	398.4
122.5°	393.9	394.3	394.6	395.0	395.4	397.9	402.6	407.2	411.8	416.5	419.9
125°	427.6	428.0	428.3	428.7	429.0	431.0	434.9	438.7	442.5	446.4	449.8
127.5°	460.2	460.1	460.1	460.1	460.1	461.8	465.5	469.2	472.9	476.5	479.5
130°	480.7	480.7	480.6	480.6	480.5	482.0	484.9	488.0	490.9	493.9	496.9
132.5°	500.0	500.1	500.2	500.2	500.3	501.5	504.1	506.6	509.2	511.7	514.6
135°	528.4	528.2	528.1	528.0	527.9	528.7	530.3	531.9	533.5	535.1	538.0
137.5°	554.0	553.9	553.8	553.7	553.6	554.1	555.2	556.3	557.3	558.4	561.0
140°	570.8	570.9	571.0	571.1	571.2	571.4	571.7	572.2	572.6	573.0	575.4
142.5°	585.3	585.7	586.1	586.5	586.9	587.1	587.2	587.2	587.3	587.3	589.5
145°	608.3	608.5	608.7	608.9	609.1	609.2	609.2	609.2	609.2	609.2	610.3
147.5°	626.7	627.2	627.6	628.2	628.7	628.9	628.8	628.7	628.5	628.4	628.7
150°	640.0	640.3	640.6	640.9	641.3	641.4	641.2	641.1	641.0	640.8	640.8
152.5°	650.6	650.9	651.3	651.7	652.0	652.1	651.9	651.7	651.4	651.2	651.4
155°	666.2	666.3	666.4	666.5	666.7	666.5	666.2	665.8	665.4	665.1	665.5
157.5°	679.4	679.3	679.2	679.2	679.1	678.8	678.4	678.1	677.6	677.2	677.9
160°	687.1	686.7	686.4	686.1	685.7	685.4	685.3	685.2	685.0	684.9	685.7
162.5°	694.0	693.5	693.1	692.7	692.2	691.9	691.7	691.6	691.5	691.4	692.1
165°	702.7	702.1	701.5	700.9	700.3	700.0	700.0	700.0	700.0	700.0	701.0
167.5°	709.5	709.0	708.3	707.8	707.1	706.7	706.7	706.6	706.5	706.4	707.6
170°	713.5	712.8	712.0	711.3	710.6	710.3	710.4	710.5	710.7	710.8	711.7
172.5°	716.0	715.3	714.6	713.9	713.2	712.8	713.0	713.1	713.2	713.3	714.4
175°	718.9	718.1	717.4	716.7	716.0	715.7	715.8	716.0	716.0	716.1	717.2
177.5°	720.1	719.4	718.8	718.1	717.5	717.2	717.4	717.6	717.7	717.9	718.8
180°	718.9	718.9	718.9	718.9	718.9	718.9	718.9	718.9	718.9	718.9	718.9



TEST NUMBER: P332547-830

CATALOG NUMBER: SA4XXDIP-C575D590U830-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	655.0	655.0	655.0	655.0	655.0	655.0	655.0	655.0
2.5°	652.7	653.6	654.5	654.9	654.8	654.6	654.5	654.4
5°	651.0	652.2	653.6	654.1	654.0	653.8	653.7	653.5
7.5°	647.5	648.9	650.4	651.1	650.9	650.7	650.5	650.4
10°	643.9	645.5	646.9	647.5	647.4	647.2	647.1	646.9
12.5°	639.0	640.4	641.7	642.3	642.3	642.2	642.2	642.2
15°	630.0	631.5	632.9	633.6	633.5	633.3	633.1	632.9
17.5°	619.1	620.6	622.1	622.7	622.6	622.5	622.4	622.3
20°	610.6	612.2	613.8	614.6	614.6	614.6	614.6	614.6
22.5°	600.6	602.2	603.8	604.8	605.0	605.3	605.6	605.9
25°	585.2	587.0	588.8	589.7	589.9	590.1	590.2	590.4
27.5°	568.0	569.6	571.3	572.2	572.4	572.6	572.8	573.0
30°	555.9	557.7	559.5	560.5	560.8	561.2	561.5	561.8
32.5°	543.5	545.5	547.6	548.7	549.1	549.4	549.8	550.1
35°	523.9	526.1	528.4	529.8	530.3	530.7	531.2	531.8
37.5°	503.4	505.7	508.0	509.4	509.9	510.5	511.0	511.5
40°	489.0	491.4	493.9	495.4	496.1	496.7	497.4	498.0
42.5°	474.9	477.5	480.2	481.8	482.4	482.9	483.4	483.9
45°	453.0	455.7	458.5	460.2	461.1	461.9	462.7	463.5
47.5°	429.8	432.7	435.5	437.4	438.5	439.4	440.5	441.4
50°	413.6	416.9	420.1	422.3	423.2	424.1	425.2	426.1
52.5°	397.2	400.4	403.7	405.8	406.8	407.7	408.7	409.7
55°	372.5	375.8	379.0	381.2	382.1	383.1	384.1	385.0
57.5°	346.6	350.5	354.4	356.8	357.7	358.5	359.5	360.4
60°	328.8	332.5	336.2	338.7	340.1	341.4	342.7	344.0
62.5°	311.1	314.9	318.7	321.1	322.4	323.8	325.1	326.4
65°	283.9	288.0	292.1	294.7	296.1	297.4	298.7	300.0
67.5°	257.2	261.4	265.5	268.2	269.5	270.7	272.0	273.2
70°	238.4	242.8	247.1	250.0	251.1	252.2	253.4	254.5
72.5°	220.5	224.8	229.0	231.8	233.1	234.3	235.6	236.9
75°	193.2	197.7	202.4	205.4	206.8	208.3	209.8	211.2
77.5°	167.9	172.5	177.1	180.2	181.7	183.3	184.8	186.4
80°	151.4	156.2	161.1	164.2	165.5	166.8	168.1	169.5
82.5°	135.2	140.2	145.2	148.5	149.9	151.3	152.7	154.2
85°	112.4	117.3	122.2	125.5	127.1	128.8	130.4	132.1
87.5°	95.9	100.8	105.6	108.8	110.3	111.8	113.2	114.7
90°	95.3	100.8	106.2	109.7	111.2	112.8	114.3	115.8
92.5°	91.1	96.4	101.7	105.1	106.4	107.7	109.1	110.5
95°	85.9	91.0	96.1	99.4	101.0	102.6	104.2	105.8
97.5°	82.1	86.5	90.9	93.8	95.3	96.8	98.3	99.8
100°	84.2	86.5	88.9	90.7	92.0	93.2	94.4	95.8
102.5°	131.5	113.9	96.2	88.0	89.4	90.7	91.9	93.2
105°	226.5	231.6	236.8	237.8	234.8	231.9	228.8	225.8
107.5°	262.4	266.9	271.5	274.6	276.2	277.8	279.4	281.1
110°	286.9	290.9	294.8	297.7	299.4	301.0	302.7	304.3





TEST NUMBER: P332547-830

CATALOG NUMBER: SA4XXDIP-C575D590U830-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	310.2	313.8	317.4	320.0	321.8	323.6	325.3	327.1
115°	345.3	349.2	353.0	355.5	356.7	357.8	358.9	360.1
117.5°	380.4	383.8	387.1	389.4	390.7	391.9	393.1	394.5
120°	401.9	405.4	408.9	411.1	412.3	413.3	414.3	415.5
122.5°	423.3	426.7	430.1	432.3	433.2	434.1	435.1	436.0
125°	453.3	456.8	460.1	462.4	463.5	464.7	465.7	466.8
127.5°	482.3	485.1	488.0	489.9	491.0	492.0	493.0	494.0
130°	499.9	503.0	506.1	508.1	509.1	510.0	511.0	512.0
132.5°	517.6	520.5	523.4	525.3	526.2	527.1	528.0	528.9
135°	540.8	543.7	546.5	548.6	549.8	551.0	552.1	553.4
137.5°	563.7	566.4	569.0	570.7	571.4	572.1	572.9	573.6
140°	578.0	580.4	582.9	584.6	585.5	586.4	587.4	588.3
142.5°	591.5	593.7	595.8	597.2	597.9	598.6	599.4	600.0
145°	611.3	612.5	613.5	614.5	615.4	616.3	617.2	618.1
147.5°	628.9	629.1	629.3	629.7	630.4	631.0	631.7	632.4
150°	640.8	640.8	640.8	640.9	641.0	641.2	641.3	641.4
152.5°	651.6	651.8	652.0	652.1	652.0	651.9	651.8	651.8
155°	666.0	666.5	666.9	667.0	666.7	666.3	666.0	665.6
157.5°	678.4	679.1	679.7	679.7	679.1	678.4	677.9	677.2
160°	686.4	687.1	687.9	687.9	687.1	686.4	685.7	684.9
162.5°	692.9	693.5	694.3	694.3	693.4	692.6	691.8	691.0
165°	701.9	702.9	703.9	703.8	702.7	701.6	700.6	699.5
167.5°	708.6	709.6	710.7	710.6	709.5	708.2	707.0	705.9
170°	712.7	713.6	714.6	714.4	713.3	712.1	710.9	709.7
172.5°	715.3	716.2	717.2	717.0	715.8	714.4	713.1	711.8
175°	718.3	719.3	720.5	720.3	718.9	717.4	716.0	714.5
177.5°	719.5	720.3	721.0	720.9	719.7	718.6	717.4	716.2
180°	718.9	718.9	718.9	718.9	718.9	718.9	718.9	718.9

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