

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: P331252

Luminaire Tested: **SA2XXDIP-C290D530U835-4F0-1E-UDD-D**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P331252  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-2,  
Test Lab: INNOVATION CENTER  
Issue Date: 10/7/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: SA2XXDIP-C290D530U835-4F0-1E-UDD-D  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 290 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 530 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

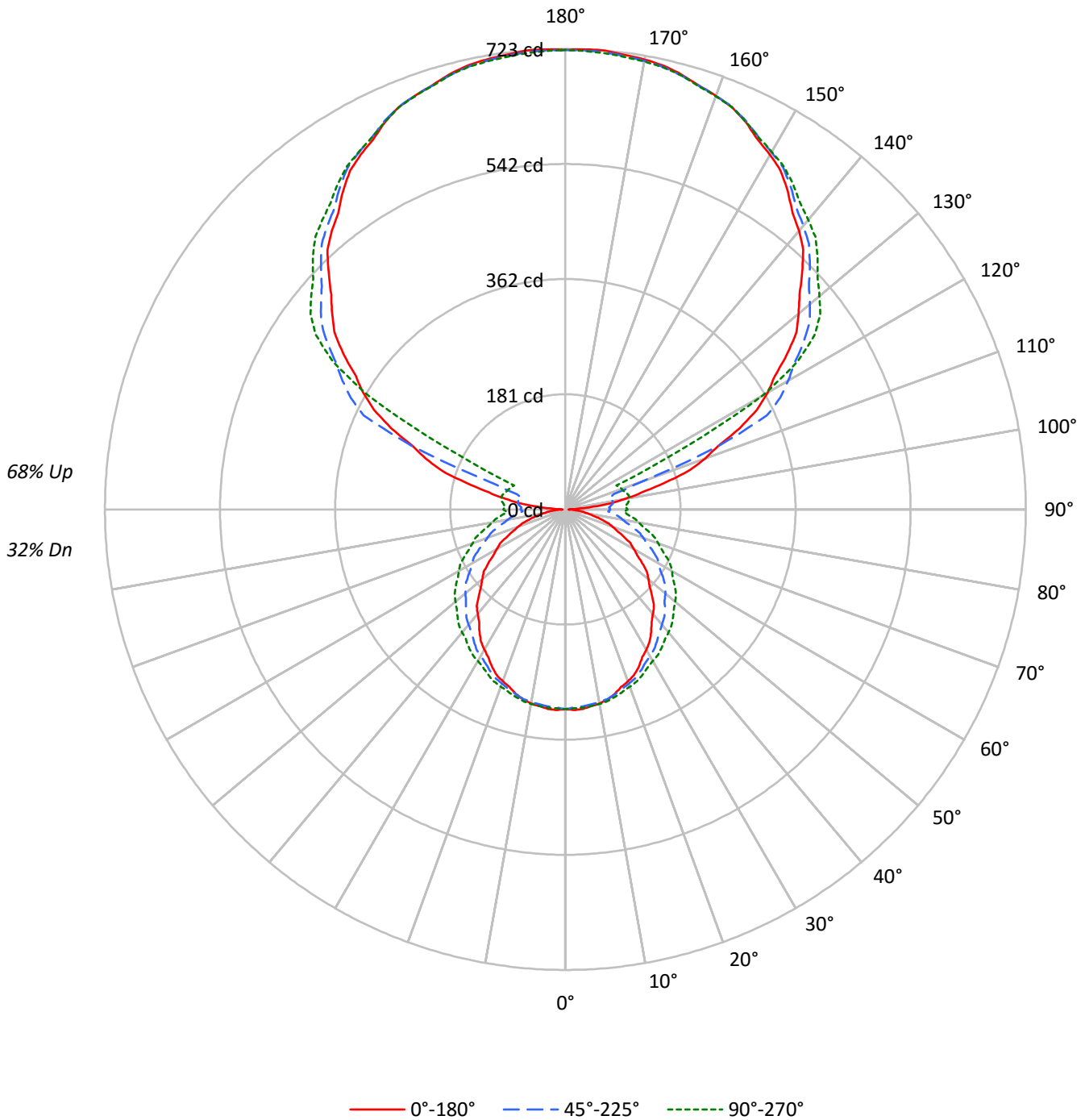
Lumens per Lamp: N/A  
Luminaire Lumens: 3311.2 lumens  
Efficiency: N/A  
Efficacy: 129.3 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.31 / 1.42  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')  
CIE Type: Semi-Indirect

Input Watts (W): 25.6  
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: P331252  
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### Luminous Intensity Polar Plot





TEST NUMBER: P331252

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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	103	103	103	103	93	93	93	93	73	73	73	56	56	56	40	40	40	32
1	93	88	84	80	83	79	76	73	63	60	58	48	46	44	34	33	32	25
2	84	76	70	65	75	69	63	59	54	51	47	41	39	36	29	27	26	20
3	76	67	59	53	68	60	54	49	48	43	39	36	33	30	25	23	22	17
4	70	59	51	45	62	53	46	41	42	37	33	32	28	26	22	20	18	14
5	64	52	44	38	57	47	40	35	37	32	28	28	25	22	20	18	16	12
6	59	47	38	33	52	42	35	30	34	28	24	26	22	19	18	16	14	10
7	54	42	34	28	48	38	31	26	30	25	21	23	19	17	16	14	12	9
8	50	38	30	25	45	34	27	23	27	22	19	21	17	15	15	13	11	8
9	46	34	27	22	42	31	25	20	25	20	17	19	16	13	14	11	10	7
10	43	31	24	19	39	28	22	18	23	18	15	18	14	12	13	10	9	7

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

	0°	45°	90°
0°	5062	5062	5062
5°	5086	4872	4853
10°	5054	4728	4675
15°	4983	4575	4487
20°	4896	4412	4306
25°	4810	4254	4140
30°	4687	4093	3976
35°	4563	3936	3860
40°	4433	3803	3743
45°	4308	3685	3644
50°	4176	3577	3546
55°	4035	3461	3447
60°	3865	3340	3342
65°	3686	3200	3215
70°	3487	3048	3081
75°	3236	2900	2956
80°	2836	2748	2829
85°	2454	2617	2731



TEST NUMBER: P331252

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	29.7	0.9
10°-20°	85.2	2.6
20°-30°	129.1	3.9
30°-40°	157.2	4.7
40°-50°	169.1	5.1
50°-60°	164.2	5.0
60°-70°	143.4	4.3
70°-80°	110.4	3.3
80°-90°	75.9	2.3
90°-100°	75.1	2.3
100°-110°	125.5	3.8
110°-120°	260.5	7.9
120°-130°	403.0	12.2
130°-140°	419.8	12.7
140°-150°	385.8	11.7
150°-160°	309.4	9.3
160°-170°	199.4	6.0
170°-180°	68.6	2.1
0°-30°	243.9	7.4
0°-40°	401.1	12.1
0°-60°	734.5	22.2
0°-90°	1064.2	32.1
90°-120°	461.0	13.9
90°-150°	1669.6	50.4
90°-180°	2247.0	67.9
0°-180°	3311.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	314	314	314	314	314	
5°	314	313	310	313	312	30
15°	300	301	301	305	304	84
25°	273	276	280	285	287	125
35°	235	243	251	261	264	147
45°	193	205	221	234	239	149
55°	148	164	188	203	210	132
65°	101	123	150	168	174	100
75°	56	82	110	129	136	59
85°	16	45	74	92	99	18
90°	5	37	70	90	98	5
95°	38	43	73	92	97	44
105°	161	182	71	92	100	172
115°	302	317	349	132	89	297
125°	425	433	456	472	478	379
135°	526	534	543	557	560	406
145°	609	609	617	623	623	381
155°	671	666	672	675	671	309
165°	707	704	705	708	705	200
175°	723	719	720	723	719	69
180°	721	721	721	721	721	



TEST NUMBER: P331252

CATALOG NUMBER: SA2XXDIP-C290D530U835-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	313.5	313.5	313.5	313.5	313.5	313.5	313.5	313.5	313.5	313.5	313.5
2.5°	315.3	315.0	314.8	314.5	314.3	313.9	313.3	312.8	312.2	311.6	312.0
5°	314.4	314.1	313.8	313.5	313.1	312.7	312.1	311.5	310.9	310.3	310.9
7.5°	311.5	311.3	311.1	310.9	310.7	310.4	309.9	309.5	309.0	308.5	309.3
10°	309.4	309.2	309.0	308.8	308.6	308.3	308.0	307.7	307.4	307.1	307.9
12.5°	305.7	305.8	305.8	305.9	305.9	305.8	305.6	305.4	305.1	304.9	305.7
15°	299.8	300.0	300.2	300.4	300.6	300.7	300.7	300.7	300.7	300.7	301.6
17.5°	292.2	292.6	293.0	293.5	293.9	294.3	294.6	294.9	295.2	295.6	296.5
20°	287.1	287.6	288.1	288.6	289.1	289.6	290.0	290.4	290.8	291.2	292.3
22.5°	281.7	282.2	282.8	283.4	284.0	284.6	285.1	285.7	286.3	286.8	287.9
25°	272.6	273.3	274.0	274.7	275.4	276.2	277.1	278.0	278.9	279.8	281.0
27.5°	261.7	262.8	264.0	265.1	266.3	267.4	268.4	269.5	270.6	271.7	273.2
30°	254.4	255.7	257.0	258.3	259.6	261.0	262.3	263.6	264.9	266.2	267.8
32.5°	246.4	247.9	249.3	250.8	252.3	253.8	255.4	256.9	258.5	260.0	261.9
35°	234.9	236.6	238.3	240.0	241.7	243.5	245.5	247.4	249.3	251.2	253.4
37.5°	222.3	224.3	226.3	228.3	230.2	232.5	235.0	237.4	239.9	242.4	244.9
40°	214.0	216.2	218.4	220.6	222.8	225.3	228.0	230.8	233.5	236.2	238.8
42.5°	206.0	208.2	210.4	212.6	214.9	217.5	220.7	223.8	226.9	230.0	232.9
45°	192.6	195.3	198.1	200.8	203.5	206.6	210.2	213.7	217.2	220.8	223.9
47.5°	179.4	182.4	185.4	188.3	191.3	194.9	199.0	203.1	207.3	211.4	214.7
50°	170.4	173.5	176.6	179.7	182.9	186.7	191.3	195.8	200.3	204.9	208.3
52.5°	161.6	164.9	168.2	171.5	174.8	178.8	183.6	188.4	193.2	198.0	201.5
55°	147.6	151.3	154.9	158.5	162.2	166.6	171.9	177.1	182.4	187.6	191.3
57.5°	133.8	137.9	142.0	146.1	150.2	154.9	160.3	165.6	171.0	176.4	180.3
60°	124.0	128.4	132.7	137.0	141.4	146.4	152.2	157.9	163.7	169.4	173.3
62.5°	115.3	119.8	124.3	128.8	133.3	138.4	144.2	149.9	155.7	161.5	165.5
65°	100.8	105.8	110.7	115.7	120.6	126.1	132.0	138.0	144.0	149.9	154.1
67.5°	87.6	92.8	97.9	103.1	108.3	113.9	120.0	126.1	132.2	138.3	142.5
70°	78.1	83.4	88.6	93.9	99.1	104.9	111.1	117.4	123.7	129.9	134.3
72.5°	69.4	74.8	80.2	85.6	91.1	96.9	103.3	109.6	116.0	122.3	126.6
75°	55.9	61.5	67.2	72.8	78.5	84.5	91.0	97.5	103.9	110.4	114.7
77.5°	42.8	48.7	54.6	60.5	66.5	72.7	79.3	85.8	92.4	98.9	103.3
80°	34.1	40.2	46.4	52.5	58.7	65.1	71.6	78.2	84.7	91.3	95.5
82.5°	26.8	32.9	39.0	45.0	51.1	57.5	64.1	70.8	77.4	84.0	88.3
85°	16.4	22.6	28.9	35.1	41.4	47.7	54.2	60.7	67.1	73.6	77.8
87.5°	9.0	15.3	21.6	27.8	34.1	40.6	47.2	53.8	60.5	67.1	71.4
90°	5.1	12.2	19.3	26.5	33.6	40.8	48.2	55.6	63.0	70.4	75.0
92.5°	14.7	20.1	25.4	30.7	36.1	42.1	48.8	55.4	62.1	68.8	73.1
95°	37.6	38.5	39.4	40.3	41.2	45.1	52.0	58.9	65.7	72.6	77.0
97.5°	70.5	63.9	57.4	50.8	44.2	44.8	52.5	60.2	67.9	75.6	79.8
100°	95.6	83.4	71.2	59.1	46.9	44.7	52.3	59.9	67.5	75.2	79.8
102.5°	122.7	122.8	122.8	122.9	122.9	117.5	106.5	95.5	84.5	73.5	78.3
105°	160.9	167.3	173.7	180.1	186.5	176.5	150.1	123.7	97.3	70.9	75.7
107.5°	205.0	210.1	215.3	220.4	225.6	211.7	178.7	145.8	112.9	79.9	82.0
110°	233.0	237.5	241.9	246.4	250.8	238.8	210.2	181.6	153.1	124.5	116.1



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	259.7	263.6	267.4	271.3	275.1	275.3	271.7	268.1	264.5	261.0	221.9
115°	301.9	305.0	308.1	311.1	314.2	319.5	326.9	334.4	341.8	349.3	298.6
117.5°	339.1	342.0	345.0	347.9	350.8	355.4	361.6	367.8	374.0	380.2	370.2
120°	366.7	368.8	371.0	373.1	375.2	379.4	385.5	391.6	397.8	403.9	408.1
122.5°	390.1	392.0	394.0	396.0	398.0	402.1	408.1	414.2	420.3	426.3	429.9
125°	425.2	426.7	428.2	429.7	431.2	434.7	440.1	445.6	451.0	456.4	460.0
127.5°	457.4	459.0	460.6	462.1	463.7	466.6	470.9	475.1	479.4	483.6	487.3
130°	477.9	479.7	481.4	483.2	484.9	487.5	490.9	494.3	497.7	501.1	504.8
132.5°	498.8	500.2	501.7	503.2	504.7	506.9	509.8	512.7	515.6	518.5	521.9
135°	525.5	527.3	529.2	531.0	532.9	534.8	536.9	538.9	541.0	543.0	546.3
137.5°	552.9	554.2	555.5	556.7	558.0	559.5	561.1	562.7	564.4	566.0	569.0
140°	570.9	571.7	572.5	573.3	574.2	575.3	576.8	578.3	579.7	581.2	583.9
142.5°	585.9	586.6	587.4	588.1	588.8	589.9	591.4	592.9	594.4	595.9	598.2
145°	609.0	608.9	608.8	608.7	608.6	609.5	611.5	613.4	615.4	617.4	618.8
147.5°	629.6	629.1	628.7	628.3	627.8	628.6	630.5	632.5	634.4	636.4	637.1
150°	642.9	642.1	641.3	640.5	639.7	640.2	642.1	643.9	645.8	647.6	648.3
152.5°	654.2	653.3	652.4	651.5	650.6	651.0	652.8	654.6	656.3	658.1	658.8
155°	670.6	669.6	668.5	667.5	666.4	666.6	668.0	669.4	670.8	672.2	672.9
157.5°	683.4	682.6	681.7	680.8	679.9	680.0	680.9	681.9	682.9	683.9	684.6
160°	691.0	690.3	689.6	688.9	688.2	688.2	688.9	689.6	690.3	691.0	691.7
162.5°	697.6	696.9	696.2	695.5	694.9	694.8	695.4	696.0	696.6	697.2	698.0
165°	706.6	705.9	705.2	704.5	703.8	703.7	704.0	704.3	704.7	705.0	705.9
167.5°	713.3	712.6	711.9	711.2	710.5	710.3	710.6	711.0	711.3	711.6	712.4
170°	717.0	716.4	715.7	715.0	714.3	714.0	714.3	714.5	714.7	715.0	715.8
172.5°	719.6	718.9	718.2	717.5	716.8	716.5	716.8	717.0	717.2	717.5	718.3
175°	722.8	722.0	721.2	720.4	719.5	719.3	719.5	719.7	719.9	720.2	721.0
177.5°	723.3	722.7	722.0	721.4	720.7	720.4	720.5	720.6	720.7	720.8	721.5
180°	721.2	721.2	721.2	721.2	721.2	721.2	721.2	721.2	721.2	721.2	721.2



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	313.5	313.5	313.5	313.5	313.5	313.5	313.5	313.5
2.5°	312.4	312.8	313.2	313.4	313.2	313.0	312.9	312.7
5°	311.5	312.1	312.7	312.9	312.8	312.7	312.6	312.5
7.5°	310.0	310.7	311.5	311.8	311.7	311.6	311.5	311.4
10°	308.7	309.5	310.3	310.7	310.6	310.5	310.4	310.3
12.5°	306.5	307.3	308.1	308.5	308.4	308.3	308.2	308.1
15°	302.5	303.5	304.4	304.8	304.7	304.6	304.5	304.4
17.5°	297.5	298.4	299.3	299.8	299.8	299.8	299.8	299.8
20°	293.4	294.5	295.6	296.2	296.2	296.2	296.2	296.2
22.5°	289.1	290.2	291.3	291.9	292.1	292.2	292.4	292.6
25°	282.3	283.5	284.7	285.4	285.7	286.0	286.3	286.6
27.5°	274.7	276.3	277.8	278.7	278.9	279.1	279.3	279.6
30°	269.4	271.1	272.7	273.6	273.9	274.2	274.5	274.8
32.5°	263.7	265.6	267.5	268.7	269.2	269.8	270.3	270.8
35°	255.7	257.9	260.1	261.6	262.3	263.0	263.7	264.4
37.5°	247.3	249.8	252.3	253.9	254.6	255.4	256.1	256.8
40°	241.5	244.1	246.7	248.5	249.4	250.3	251.2	252.1
42.5°	235.8	238.6	241.5	243.4	244.3	245.2	246.1	247.0
45°	227.0	230.2	233.3	235.4	236.4	237.4	238.4	239.4
47.5°	218.0	221.2	224.5	226.7	227.8	228.9	230.0	231.1
50°	211.7	215.2	218.6	220.9	222.0	223.1	224.2	225.3
52.5°	205.0	208.5	212.0	214.4	215.6	216.8	218.0	219.1
55°	194.9	198.5	202.2	204.6	205.9	207.3	208.6	209.9
57.5°	184.2	188.1	192.0	194.6	196.0	197.3	198.6	200.0
60°	177.1	181.0	184.8	187.4	188.8	190.2	191.7	193.1
62.5°	169.6	173.7	177.8	180.5	181.8	183.1	184.5	185.8
65°	158.2	162.3	166.5	169.2	170.5	171.8	173.1	174.4
67.5°	146.6	150.8	155.0	157.8	159.1	160.5	161.9	163.3
70°	138.6	142.9	147.3	150.1	151.3	152.5	153.7	154.9
72.5°	130.8	135.1	139.3	142.2	143.6	145.1	146.6	148.0
75°	119.1	123.4	127.8	130.6	131.9	133.2	134.5	135.8
77.5°	107.6	111.9	116.2	119.1	120.5	121.9	123.3	124.7
80°	99.8	104.0	108.3	111.1	112.5	113.9	115.3	116.7
82.5°	92.5	96.8	101.0	103.8	105.1	106.5	107.8	109.1
85°	82.1	86.3	90.6	93.4	94.8	96.2	97.6	99.0
87.5°	75.6	79.8	84.1	86.9	88.2	89.5	90.9	92.2
90°	79.6	84.3	88.9	91.9	93.3	94.8	96.2	97.7
92.5°	77.3	81.6	85.8	88.6	90.0	91.3	92.7	94.0
95°	81.4	85.8	90.3	93.0	94.1	95.2	96.3	97.4
97.5°	84.0	88.2	92.4	95.1	96.5	97.8	99.1	100.5
100°	84.5	89.2	93.8	96.8	98.2	99.5	100.9	102.2
102.5°	83.2	88.0	92.9	96.1	97.5	98.9	100.4	101.8
105°	80.5	85.3	90.1	93.3	94.9	96.5	98.1	99.6
107.5°	84.1	86.2	88.3	90.1	91.7	93.3	94.8	96.4
110°	107.8	99.4	91.0	87.6	89.2	90.8	92.3	93.9





TEST NUMBER: P331252

CATALOG NUMBER: SA2XXDIP-C290D530U835-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	182.8	143.7	104.7	85.9	87.4	88.8	90.3	91.8
115°	247.9	197.3	146.6	117.6	110.4	103.2	95.9	88.7
117.5°	360.2	350.2	340.2	322.0	295.6	269.2	242.7	216.3
120°	412.3	416.5	420.8	415.6	401.0	386.5	372.0	357.4
122.5°	433.5	437.1	440.7	441.4	439.3	437.2	435.1	433.0
125°	463.5	467.0	470.6	473.0	474.2	475.5	476.7	478.0
127.5°	491.0	494.7	498.4	500.7	501.7	502.6	503.6	504.5
130°	508.5	512.2	515.9	518.1	518.8	519.4	520.1	520.8
132.5°	525.4	528.8	532.2	534.3	535.0	535.7	536.4	537.1
135°	549.6	552.9	556.2	558.1	558.7	559.2	559.8	560.4
137.5°	572.0	575.0	578.0	579.6	579.9	580.2	580.5	580.8
140°	586.5	589.2	591.9	593.2	593.2	593.3	593.3	593.3
142.5°	600.4	602.7	604.9	606.0	606.0	605.9	605.8	605.8
145°	620.2	621.6	623.0	623.7	623.6	623.6	623.5	623.4
147.5°	637.7	638.4	639.1	639.3	639.1	638.8	638.6	638.3
150°	649.0	649.7	650.4	650.5	649.9	649.3	648.7	648.2
152.5°	659.5	660.2	660.9	660.8	660.1	659.3	658.5	657.8
155°	673.6	674.3	675.0	674.8	673.9	673.0	672.1	671.1
157.5°	685.4	686.2	687.0	687.0	686.0	685.1	684.2	683.3
160°	692.3	693.0	693.7	693.7	692.9	692.1	691.2	690.4
162.5°	698.8	699.6	700.4	700.3	699.3	698.3	697.3	696.3
165°	706.7	707.5	708.3	708.3	707.5	706.7	705.9	705.0
167.5°	713.2	714.1	714.9	714.8	713.7	712.7	711.6	710.6
170°	716.6	717.4	718.2	718.1	717.0	716.0	715.0	713.9
172.5°	719.1	719.9	720.7	720.6	719.6	718.5	717.5	716.4
175°	721.8	722.6	723.4	723.3	722.1	720.9	719.8	718.6
177.5°	722.1	722.8	723.4	723.3	722.5	721.6	720.8	720.0
180°	721.2	721.2	721.2	721.2	721.2	721.2	721.2	721.2

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