

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: P331252-830

Luminaire Tested: **SA2XXDIP-C290D530U830-4F0-1E-UDD-D**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P331252-830  
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-C290D530U830-4F0-1E-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**

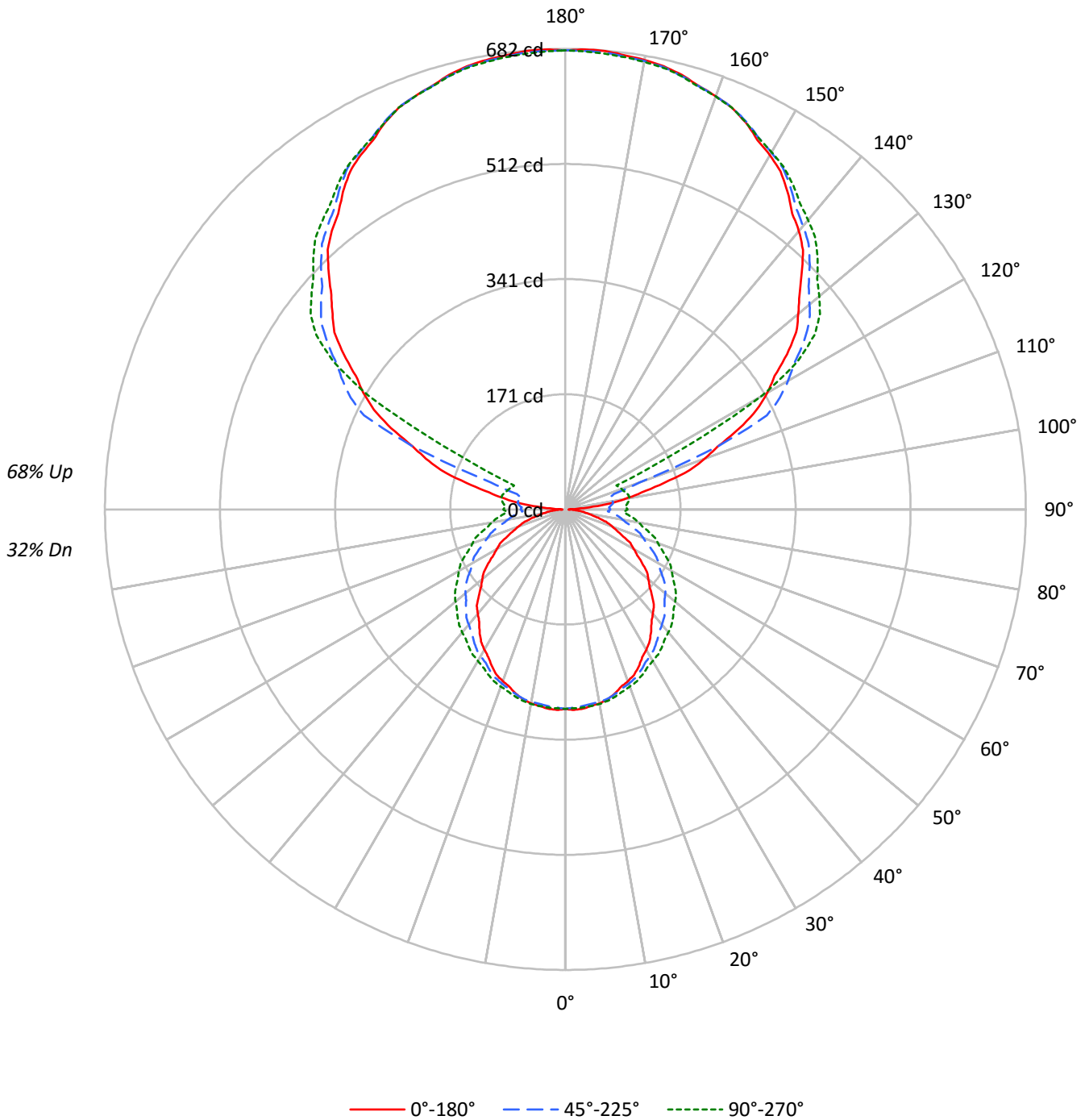
Lumens per Lamp: N/A  
Luminaire Lumens: 3120.9 lumens  
Efficiency: N/A  
Efficacy: 121.9 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.31 / 1.42  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')  
CIE Type: Semi-Indirect

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: P331252-830  
CATALOG NUMBER: SA2XXDIP-C290D530U830-4F0-1E-UDD-D

### Luminous Intensity Polar Plot





TEST NUMBER: P331252-830

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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	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°	4771	4771	4771
5°	4794	4593	4573
10°	4763	4457	4407
15°	4698	4312	4229
20°	4614	4159	4059
25°	4533	4009	3902
30°	4418	3857	3747
35°	4301	3711	3638
40°	4178	3584	3528
45°	4060	3473	3434
50°	3936	3371	3343
55°	3802	3261	3248
60°	3643	3149	3150
65°	3474	3016	3031
70°	3286	2872	2904
75°	3050	2735	2786
80°	2669	2592	2667
85°	2319	2468	2574



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	28.0	0.9
10°-20°	80.3	2.6
20°-30°	121.6	3.9
30°-40°	148.2	4.7
40°-50°	159.4	5.1
50°-60°	154.8	5.0
60°-70°	135.2	4.3
70°-80°	104.1	3.3
80°-90°	71.5	2.3
90°-100°	70.8	2.3
100°-110°	118.3	3.8
110°-120°	245.5	7.9
120°-130°	379.9	12.2
130°-140°	395.7	12.7
140°-150°	363.6	11.7
150°-160°	291.6	9.3
160°-170°	187.9	6.0
170°-180°	64.7	2.1
0°-30°	229.9	7.4
0°-40°	378.1	12.1
0°-60°	692.3	22.2
0°-90°	1003.0	32.1
90°-120°	434.6	13.9
90°-150°	1573.7	50.4
90°-180°	2118.0	67.9
0°-180°	3120.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	296	296	296	296	296	
5°	296	295	292	295	294	28
15°	283	283	283	287	287	80
25°	257	260	264	269	270	118
35°	221	229	237	246	249	138
45°	182	193	208	221	226	140
55°	139	155	177	192	198	124
65°	95	116	141	158	164	94
75°	53	77	104	122	128	56
85°	16	42	69	87	93	17
90°	5	35	66	85	92	4
95°	35	41	68	86	92	42
105°	152	171	67	86	94	162
115°	285	299	329	124	84	280
125°	401	408	430	445	450	357
135°	495	503	512	525	528	383
145°	574	574	582	588	588	359
155°	632	628	634	636	632	291
165°	666	663	664	668	664	188
175°	681	678	679	682	677	65
180°	680	680	680	680	680	



TEST NUMBER: P331252-830

CATALOG NUMBER: SA2XXDIP-C290D530U830-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	295.5	295.5	295.5	295.5	295.5	295.5	295.5	295.5	295.5	295.5	295.5
2.5°	297.2	296.9	296.7	296.4	296.2	295.9	295.3	294.8	294.3	293.7	294.1
5°	296.3	296.1	295.8	295.5	295.1	294.7	294.2	293.6	293.0	292.5	293.0
7.5°	293.6	293.4	293.2	293.0	292.8	292.6	292.1	291.7	291.2	290.8	291.5
10°	291.6	291.4	291.2	291.1	290.9	290.6	290.3	290.0	289.7	289.5	290.2
12.5°	288.1	288.2	288.2	288.3	288.3	288.2	288.0	287.9	287.6	287.4	288.1
15°	282.6	282.8	283.0	283.1	283.3	283.4	283.4	283.4	283.4	283.4	284.3
17.5°	275.4	275.8	276.2	276.6	277.0	277.4	277.7	278.0	278.2	278.6	279.5
20°	270.6	271.1	271.5	272.0	272.5	273.0	273.3	273.7	274.1	274.5	275.5
22.5°	265.5	266.0	266.6	267.1	267.7	268.2	268.7	269.3	269.8	270.3	271.4
25°	256.9	257.6	258.3	258.9	259.6	260.3	261.2	262.0	262.9	263.7	264.9
27.5°	246.7	247.7	248.8	249.9	251.0	252.0	253.0	254.0	255.1	256.1	257.5
30°	239.8	241.0	242.2	243.5	244.7	246.0	247.2	248.5	249.7	250.9	252.4
32.5°	232.2	233.7	235.0	236.4	237.8	239.2	240.7	242.1	243.6	245.1	246.9
35°	221.4	223.0	224.6	226.2	227.8	229.5	231.4	233.2	235.0	236.8	238.8
37.5°	209.5	211.4	213.3	215.2	217.0	219.1	221.5	223.8	226.1	228.5	230.8
40°	201.7	203.8	205.9	207.9	210.0	212.4	214.9	217.5	220.1	222.6	225.1
42.5°	194.2	196.2	198.3	200.4	202.6	205.0	208.0	210.9	213.9	216.8	219.5
45°	181.5	184.1	186.7	189.3	191.8	194.7	198.1	201.4	204.7	208.1	211.0
47.5°	169.1	171.9	174.7	177.5	180.3	183.7	187.6	191.4	195.4	199.3	202.4
50°	160.6	163.5	166.5	169.4	172.4	176.0	180.3	184.5	188.8	193.1	196.3
52.5°	152.3	155.4	158.5	161.6	164.8	168.5	173.1	177.6	182.1	186.6	189.9
55°	139.1	142.6	146.0	149.4	152.9	157.0	162.0	166.9	171.9	176.8	180.3
57.5°	126.1	130.0	133.8	137.7	141.6	146.0	151.1	156.1	161.2	166.3	169.9
60°	116.9	121.0	125.1	129.1	133.3	138.0	143.5	148.8	154.3	159.7	163.3
62.5°	108.7	112.9	117.2	121.4	125.6	130.4	135.9	141.3	146.8	152.2	156.0
65°	95.0	99.7	104.3	109.1	113.7	118.9	124.4	130.1	135.7	141.3	145.2
67.5°	82.6	87.5	92.3	97.2	102.1	107.4	113.1	118.9	124.6	130.4	134.3
70°	73.6	78.6	83.5	88.5	93.4	98.9	104.7	110.7	116.6	122.4	126.6
72.5°	65.4	70.5	75.6	80.7	85.9	91.3	97.4	103.3	109.3	115.3	119.3
75°	52.7	58.0	63.3	68.6	74.0	79.6	85.8	91.9	97.9	104.1	108.1
77.5°	40.3	45.9	51.5	57.0	62.7	68.5	74.7	80.9	87.1	93.2	97.4
80°	32.1	37.9	43.7	49.5	55.3	61.4	67.5	73.7	79.8	86.1	90.0
82.5°	25.3	31.0	36.8	42.4	48.2	54.2	60.4	66.7	73.0	79.2	83.2
85°	15.5	21.3	27.2	33.1	39.0	45.0	51.1	57.2	63.2	69.4	73.3
87.5°	8.5	14.4	20.4	26.2	32.1	38.3	44.5	50.7	57.0	63.2	67.3
90°	4.8	11.5	18.2	25.0	31.7	38.5	45.4	52.4	59.4	66.4	70.7
92.5°	13.9	18.9	23.9	28.9	34.0	39.7	46.0	52.2	58.5	64.8	68.9
95°	35.4	36.3	37.1	38.0	38.8	42.5	49.0	55.5	61.9	68.4	72.6
97.5°	66.4	60.2	54.1	47.9	41.7	42.2	49.5	56.7	64.0	71.3	75.2
100°	90.1	78.6	67.1	55.7	44.2	42.1	49.3	56.5	63.6	70.9	75.2
102.5°	115.6	115.7	115.7	115.8	115.8	110.7	100.4	90.0	79.6	69.3	73.8
105°	151.7	157.7	163.7	169.8	175.8	166.4	141.5	116.6	91.7	66.8	71.4
107.5°	193.2	198.0	202.9	207.7	212.6	199.5	168.4	137.4	106.4	75.3	77.3
110°	219.6	223.9	228.0	232.2	236.4	225.1	198.1	171.2	144.3	117.3	109.4



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	244.8	248.5	252.0	255.7	259.3	259.5	256.1	252.7	249.3	246.0	209.2
115°	284.6	287.5	290.4	293.2	296.1	301.1	308.1	315.2	322.2	329.2	281.4
117.5°	319.6	322.3	325.2	327.9	330.6	335.0	340.8	346.7	352.5	358.4	348.9
120°	345.6	347.6	349.7	351.7	353.6	357.6	363.4	369.1	374.9	380.7	384.7
122.5°	367.7	369.5	371.4	373.2	375.1	379.0	384.7	390.4	396.2	401.8	405.2
125°	400.8	402.2	403.6	405.0	406.4	409.7	414.8	420.0	425.1	430.2	433.6
127.5°	431.1	432.6	434.1	435.5	437.1	439.8	443.8	447.8	451.9	455.8	459.3
130°	450.4	452.1	453.7	455.4	457.0	459.5	462.7	465.9	469.1	472.3	475.8
132.5°	470.1	471.5	472.9	474.3	475.7	477.8	480.5	483.2	486.0	488.7	491.9
135°	495.3	497.0	498.8	500.5	502.3	504.1	506.1	507.9	509.9	511.8	514.9
137.5°	521.1	522.4	523.6	524.7	525.9	527.4	528.9	530.4	532.0	533.5	536.3
140°	538.1	538.9	539.6	540.4	541.2	542.2	543.7	545.1	546.4	547.8	550.4
142.5°	552.2	552.9	553.6	554.3	555.0	556.0	557.4	558.8	560.2	561.7	563.8
145°	574.0	573.9	573.8	573.7	573.6	574.5	576.4	578.2	580.0	581.9	583.2
147.5°	593.4	593.0	592.6	592.2	591.7	592.5	594.3	596.2	597.9	599.8	600.5
150°	606.0	605.2	604.5	603.7	602.9	603.4	605.2	606.9	608.7	610.4	611.1
152.5°	616.6	615.8	614.9	614.1	613.2	613.6	615.3	617.0	618.6	620.3	620.9
155°	632.1	631.1	630.1	629.1	628.1	628.3	629.6	630.9	632.3	633.6	634.2
157.5°	644.1	643.4	642.5	641.7	640.8	640.9	641.8	642.7	643.7	644.6	645.3
160°	651.3	650.6	650.0	649.3	648.7	648.7	649.3	650.0	650.6	651.3	652.0
162.5°	657.5	656.9	656.2	655.5	655.0	654.9	655.4	656.0	656.6	657.1	657.9
165°	666.0	665.3	664.7	664.0	663.4	663.3	663.5	663.8	664.2	664.5	665.3
167.5°	672.3	671.7	671.0	670.3	669.7	669.5	669.8	670.1	670.4	670.7	671.5
170°	675.8	675.2	674.6	673.9	673.3	673.0	673.3	673.4	673.6	673.9	674.7
172.5°	678.3	677.6	676.9	676.3	675.6	675.3	675.6	675.8	676.0	676.3	677.0
175°	681.3	680.5	679.8	679.0	678.2	678.0	678.2	678.3	678.5	678.8	679.6
177.5°	681.7	681.2	680.5	680.0	679.3	679.0	679.1	679.2	679.3	679.4	680.0
180°	679.8	679.8	679.8	679.8	679.8	679.8	679.8	679.8	679.8	679.8	679.8



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	295.5	295.5	295.5	295.5	295.5	295.5	295.5	295.5
2.5°	294.5	294.8	295.2	295.4	295.2	295.0	294.9	294.7
5°	293.6	294.2	294.7	294.9	294.8	294.7	294.6	294.5
7.5°	292.2	292.8	293.6	293.9	293.8	293.7	293.6	293.5
10°	291.0	291.7	292.5	292.8	292.8	292.7	292.6	292.5
12.5°	288.9	289.6	290.4	290.8	290.7	290.6	290.5	290.4
15°	285.1	286.1	286.9	287.3	287.2	287.1	287.0	286.9
17.5°	280.4	281.3	282.1	282.6	282.6	282.6	282.6	282.6
20°	276.5	277.6	278.6	279.2	279.2	279.2	279.2	279.2
22.5°	272.5	273.5	274.6	275.1	275.3	275.4	275.6	275.8
25°	266.1	267.2	268.3	269.0	269.3	269.6	269.8	270.1
27.5°	258.9	260.4	261.8	262.7	262.9	263.1	263.3	263.5
30°	253.9	255.5	257.0	257.9	258.2	258.4	258.7	259.0
32.5°	248.5	250.3	252.1	253.3	253.7	254.3	254.8	255.2
35°	241.0	243.1	245.2	246.6	247.2	247.9	248.5	249.2
37.5°	233.1	235.4	237.8	239.3	240.0	240.7	241.4	242.0
40°	227.6	230.1	232.5	234.2	235.1	235.9	236.8	237.6
42.5°	222.3	224.9	227.6	229.4	230.3	231.1	232.0	232.8
45°	214.0	217.0	219.9	221.9	222.8	223.8	224.7	225.6
47.5°	205.5	208.5	211.6	213.7	214.7	215.7	216.8	217.8
50°	199.5	202.8	206.0	208.2	209.2	210.3	211.3	212.4
52.5°	193.2	196.5	199.8	202.1	203.2	204.3	205.5	206.5
55°	183.7	187.1	190.6	192.8	194.1	195.4	196.6	197.8
57.5°	173.6	177.3	181.0	183.4	184.7	186.0	187.2	188.5
60°	166.9	170.6	174.2	176.6	178.0	179.3	180.7	182.0
62.5°	159.9	163.7	167.6	170.1	171.4	172.6	173.9	175.1
65°	149.1	153.0	156.9	159.5	160.7	161.9	163.2	164.4
67.5°	138.2	142.1	146.1	148.7	150.0	151.3	152.6	153.9
70°	130.6	134.7	138.8	141.5	142.6	143.7	144.9	146.0
72.5°	123.3	127.3	131.3	134.0	135.3	136.8	138.2	139.5
75°	112.3	116.3	120.5	123.1	124.3	125.5	126.8	128.0
77.5°	101.4	105.5	109.5	112.3	113.6	114.9	116.2	117.5
80°	94.1	98.0	102.1	104.7	106.0	107.4	108.7	110.0
82.5°	87.2	91.2	95.2	97.8	99.1	100.4	101.6	102.8
85°	77.4	81.3	85.4	88.0	89.4	90.7	92.0	93.3
87.5°	71.3	75.2	79.3	81.9	83.1	84.4	85.7	86.9
90°	75.0	79.5	83.8	86.6	87.9	89.4	90.7	92.1
92.5°	72.9	76.9	80.9	83.5	84.8	86.1	87.4	88.6
95°	76.7	80.9	85.1	87.7	88.7	89.7	90.8	91.8
97.5°	79.2	83.1	87.1	89.6	91.0	92.2	93.4	94.7
100°	79.6	84.1	88.4	91.2	92.6	93.8	95.1	96.3
102.5°	78.4	82.9	87.6	90.6	91.9	93.2	94.6	96.0
105°	75.9	80.4	84.9	87.9	89.4	91.0	92.5	93.9
107.5°	79.3	81.2	83.2	84.9	86.4	87.9	89.4	90.9
110°	101.6	93.7	85.8	82.6	84.1	85.6	87.0	88.5





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CATALOG NUMBER: SA2XXDIP-C290D530U830-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	172.3	135.4	98.7	81.0	82.4	83.7	85.1	86.5
115°	233.7	186.0	138.2	110.8	104.1	97.3	90.4	83.6
117.5°	339.5	330.1	320.7	303.5	278.6	253.7	228.8	203.9
120°	388.6	392.6	396.6	391.7	378.0	364.3	350.6	336.9
122.5°	408.6	412.0	415.4	416.0	414.1	412.1	410.1	408.1
125°	436.9	440.2	443.6	445.8	447.0	448.2	449.3	450.5
127.5°	462.8	466.3	469.8	471.9	472.9	473.7	474.7	475.5
130°	479.3	482.8	486.3	488.3	489.0	489.6	490.2	490.9
132.5°	495.2	498.4	501.6	503.6	504.3	504.9	505.6	506.2
135°	518.0	521.1	524.2	526.0	526.6	527.1	527.6	528.2
137.5°	539.1	542.0	544.8	546.3	546.6	546.9	547.1	547.4
140°	552.8	555.3	557.9	559.1	559.1	559.2	559.2	559.2
142.5°	565.9	568.1	570.1	571.2	571.2	571.1	571.0	571.0
145°	584.6	585.9	587.2	587.9	587.8	587.8	587.7	587.6
147.5°	601.1	601.7	602.4	602.6	602.4	602.1	601.9	601.6
150°	611.7	612.4	613.0	613.1	612.6	612.0	611.4	611.0
152.5°	621.6	622.3	622.9	622.8	622.2	621.4	620.7	620.0
155°	634.9	635.6	636.2	636.0	635.2	634.3	633.5	632.5
157.5°	646.0	646.8	647.5	647.5	646.6	645.7	644.9	644.0
160°	652.5	653.2	653.8	653.8	653.1	652.3	651.5	650.7
162.5°	658.6	659.4	660.2	660.1	659.1	658.2	657.2	656.3
165°	666.1	666.8	667.6	667.6	666.8	666.1	665.3	664.5
167.5°	672.2	673.1	673.8	673.7	672.7	671.8	670.7	669.8
170°	675.4	676.2	676.9	676.8	675.8	674.9	673.9	672.9
172.5°	677.8	678.5	679.3	679.2	678.3	677.2	676.3	675.2
175°	680.3	681.1	681.8	681.7	680.6	679.5	678.4	677.3
177.5°	680.6	681.3	681.8	681.7	681.0	680.1	679.4	678.6
180°	679.8	679.8	679.8	679.8	679.8	679.8	679.8	679.8

(END OF REPORT)