

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: P331301-935

Luminaire Tested: **SA2XXDIP-C485D530U935-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P331301-935  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,  
Test Lab: INNOVATION CENTER  
Issue Date: 10/7/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: SA2XXDIP-C485D530U935-4F0-1E-UDD-F1  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
UPLIGHT 530 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

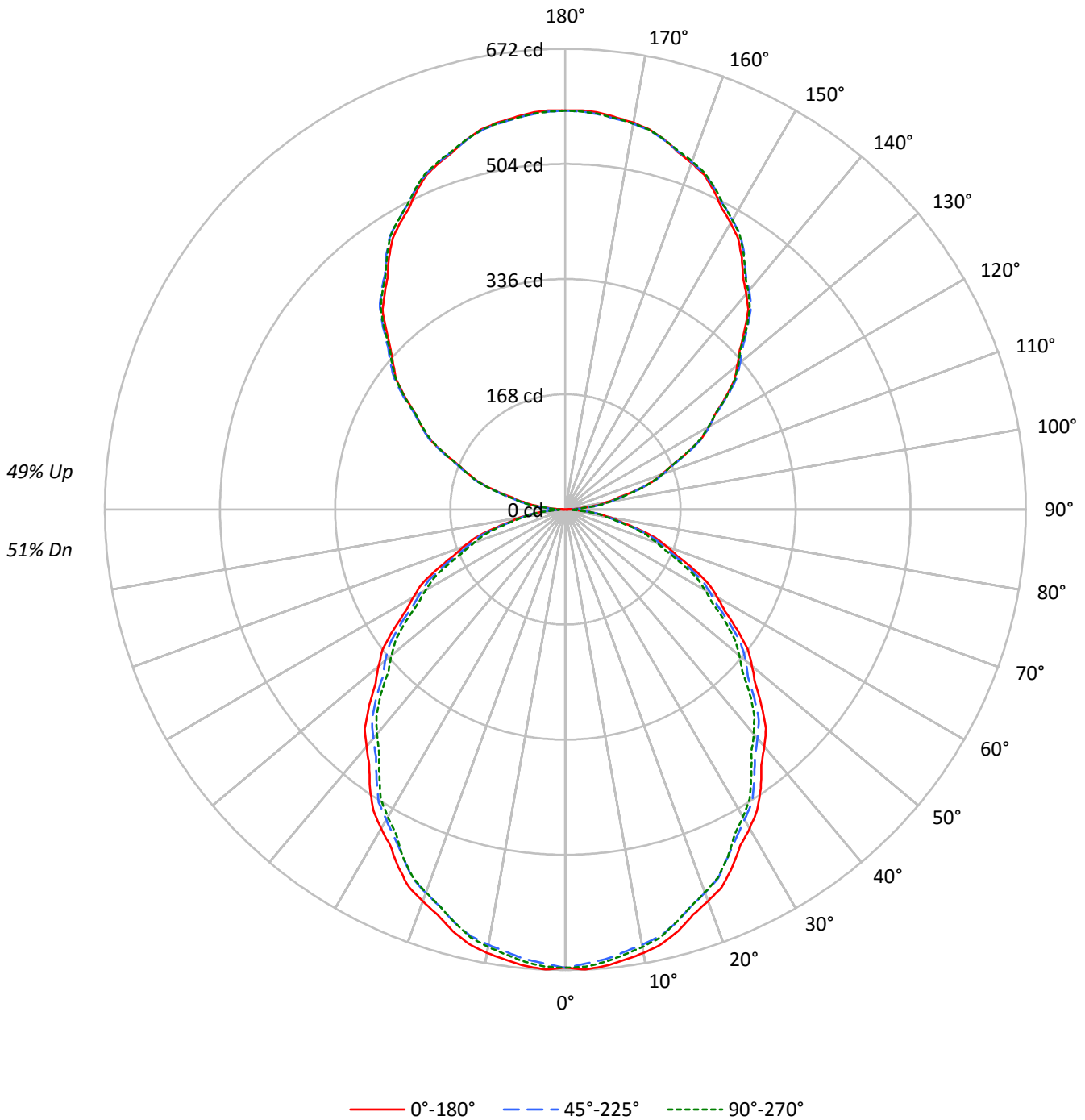
Lumens per Lamp: N/A  
Luminaire Lumens: 3330.6 lumens  
Efficiency: N/A  
Efficacy: 101.5 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: General Diffuse

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



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20									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	50	30	10	50	30	10	50	30	10	0																
RCR	0	107	107	107	107	99	99	99	99	84	84	84	70	70	70	57	57	57	51	49	48	43	36	31	26	23	20	18	16	14	13															
	1	98	94	90	86	90	87	83	80	74	71	69	62	60	58	51	49	48	43	36	31	26	23	20	18	16	14	13																		
	2	89	82	76	70	82	76	70	66	65	61	57	54	51	49	44	42	41	36	31	26	23	20	18	16	14	13																			
	3	81	72	65	59	75	67	60	55	57	52	48	48	44	41	39	37	35	31	26	23	20	18	16	14	13																				
	4	75	64	56	50	69	59	52	47	51	45	41	43	39	35	35	32	30	26	23	20	18	16	14	13																					
	5	68	57	49	43	63	53	46	40	45	40	35	38	34	31	32	29	26	23	20	18	16	14	13																						
	6	63	51	43	37	58	47	40	35	41	35	31	35	30	27	29	25	23	20	18	16	14	13																							
	7	58	46	38	32	54	43	36	31	37	31	27	31	27	24	26	23	20	18	16	14	13																								
	8	54	42	34	29	50	39	32	27	34	28	24	29	24	21	24	21	18	16	14	13																									
	9	50	38	31	26	47	36	29	24	31	25	22	27	22	19	22	19	16	14	13																										
	10	47	35	28	23	44	33	26	22	29	23	19	24	20	17	21	17	15	13																											

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

	0°	45°	90°
0°	10797	10797	10797
5°	10838	10682	10746
10°	10775	10575	10627
15°	10641	10437	10425
20°	10452	10232	10220
25°	10265	9978	9978
30°	10023	9747	9661
35°	9798	9469	9329
40°	9514	9190	9012
45°	9236	8912	8690
50°	8932	8626	8317
55°	8617	8290	7983
60°	8263	7892	7598
65°	7885	7492	7148
70°	7407	7010	6680
75°	6744	6457	6301
80°	5979	5793	5504
85°	4872	4650	4168



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	62.9	1.9
10°-20°	176.9	5.3
20°-30°	260.1	7.8
30°-40°	302.1	9.1
40°-50°	301.8	9.1
50°-60°	263.2	7.9
60°-70°	194.6	5.8
70°-80°	110.2	3.3
80°-90°	32.0	1.0
90°-100°	36.9	1.1
100°-110°	114.5	3.4
110°-120°	195.7	5.9
120°-130°	257.4	7.7
130°-140°	288.9	8.7
140°-150°	283.3	8.5
150°-160°	237.6	7.1
160°-170°	157.6	4.7
170°-180°	55.1	1.7
0°-30°	499.9	15.0
0°-40°	802.0	24.1
0°-60°	1366.9	41.0
0°-90°	1703.7	51.2
90°-120°	347.1	10.4
90°-150°	1176.6	35.3
90°-180°	1627.0	48.9
0°-180°	3330.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	669	669	669	669	669	
5°	669	666	659	664	663	63
15°	637	632	624	627	624	179
25°	576	571	560	561	560	265
35°	497	490	480	476	473	310
45°	404	400	390	384	381	312
55°	306	302	294	287	284	274
65°	206	202	196	190	187	204
75°	108	107	104	100	101	115
85°	26	26	25	23	22	30
90°	0	7	17	16	17	3
95°	26	30	31	31	30	29
105°	106	107	108	109	109	112
115°	196	199	198	198	196	194
125°	286	290	289	287	287	255
135°	370	375	376	376	374	285
145°	449	452	455	456	454	280
155°	513	515	516	518	517	236
165°	558	558	558	561	559	157
175°	581	579	578	581	579	55
180°	582	582	582	582	582	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	668.7	668.7	668.7	668.7	668.7	668.7	668.7	668.7	668.7	668.7	668.7
2.5°	671.8	671.2	670.7	670.1	669.5	668.7	667.4	666.2	664.9	663.6	664.8
5°	668.7	668.1	667.6	667.0	666.5	665.4	663.8	662.3	660.6	659.1	660.2
7.5°	662.8	661.9	661.1	660.1	659.3	658.1	656.4	654.9	653.2	651.6	652.8
10°	657.2	656.2	655.1	654.2	653.2	651.8	650.1	648.4	646.7	645.0	646.1
12.5°	649.5	648.6	647.6	646.8	645.9	644.6	642.9	641.2	639.5	637.7	638.5
15°	636.6	635.8	634.9	634.0	633.2	631.8	629.9	628.1	626.2	624.4	624.9
17.5°	620.1	619.3	618.5	617.6	616.7	615.4	613.5	611.6	609.7	607.8	608.5
20°	608.3	607.4	606.6	605.7	604.9	603.5	601.4	599.4	597.4	595.5	595.9
22.5°	596.5	595.3	594.1	592.9	591.7	590.1	588.2	586.3	584.4	582.6	582.6
25°	576.2	575.0	573.9	572.7	571.6	569.8	567.4	564.9	562.5	560.1	560.3
27.5°	553.0	552.0	551.0	549.9	548.9	547.4	545.5	543.5	541.7	539.8	539.3
30°	537.6	536.4	535.3	534.2	533.0	531.3	529.2	527.1	525.0	522.8	522.4
32.5°	521.1	520.2	519.3	518.3	517.5	515.8	513.6	511.3	509.1	506.9	506.1
35°	497.1	495.6	494.2	492.8	491.4	489.5	487.2	484.9	482.6	480.4	479.5
37.5°	469.9	468.6	467.4	466.1	464.9	463.1	460.8	458.6	456.2	454.0	452.9
40°	451.4	450.2	449.1	448.0	446.9	445.1	442.8	440.6	438.2	436.0	434.7
42.5°	433.4	432.2	431.1	430.0	428.9	427.1	424.8	422.6	420.3	417.9	416.6
45°	404.5	403.5	402.4	401.5	400.5	398.9	396.7	394.6	392.4	390.3	388.7
47.5°	375.7	374.7	373.8	372.8	371.9	370.3	368.1	365.8	363.6	361.4	359.7
50°	355.6	354.9	354.1	353.4	352.8	351.4	349.4	347.4	345.3	343.4	341.4
52.5°	336.0	335.1	334.2	333.2	332.3	330.9	329.0	327.1	325.2	323.3	321.7
55°	306.1	305.2	304.4	303.5	302.6	301.4	299.6	297.9	296.2	294.5	292.8
57.5°	276.0	275.3	274.6	274.0	273.3	272.0	270.1	268.2	266.3	264.4	262.7
60°	255.9	255.4	254.8	254.2	253.7	252.4	250.4	248.3	246.3	244.4	242.8
62.5°	236.3	235.5	234.5	233.6	232.7	231.5	230.0	228.4	226.9	225.3	223.9
65°	206.4	205.5	204.7	203.8	203.0	201.8	200.4	199.0	197.5	196.1	194.8
67.5°	175.9	175.2	174.5	173.8	173.1	172.2	170.9	169.6	168.3	167.0	166.1
70°	156.9	156.4	155.8	155.2	154.6	153.7	152.4	151.1	149.8	148.5	147.6
72.5°	137.3	136.8	136.2	135.6	135.1	134.4	133.5	132.7	131.9	131.0	130.0
75°	108.1	107.7	107.5	107.2	106.9	106.4	105.6	105.0	104.3	103.5	102.6
77.5°	81.8	81.3	80.8	80.3	79.8	79.5	79.2	78.9	78.6	78.4	77.9
80°	64.3	64.1	64.1	63.9	63.7	63.5	63.2	62.9	62.7	62.3	61.9
82.5°	47.9	47.8	47.8	47.8	47.7	47.6	47.4	47.3	47.1	46.9	46.4
85°	26.3	26.3	26.1	25.9	25.8	25.7	25.5	25.4	25.2	25.1	24.6
87.5°	9.4	9.4	9.4	9.5	9.5	9.6	9.9	10.2	10.4	10.7	10.2
90°	0.5	1.8	3.1	4.4	5.8	7.6	10.0	12.4	14.8	17.2	17.0
92.5°	8.8	9.7	10.7	11.6	12.6	13.3	13.9	14.5	15.1	15.6	15.7
95°	25.6	26.6	27.7	28.8	29.9	30.6	30.7	31.0	31.2	31.4	31.4
97.5°	46.7	47.6	48.6	49.5	50.5	51.1	51.6	52.0	52.4	52.9	52.9
100°	62.3	63.2	64.1	65.0	65.9	66.5	66.8	67.1	67.4	67.8	67.8
102.5°	78.9	79.6	80.2	80.9	81.6	82.2	82.7	83.0	83.4	83.9	83.9
105°	105.6	105.9	106.2	106.5	106.9	107.1	107.4	107.5	107.8	108.1	108.2
107.5°	132.5	132.9	133.5	133.9	134.4	134.7	134.7	134.7	134.7	134.7	134.7
110°	149.7	150.4	151.0	151.7	152.4	152.7	152.7	152.7	152.7	152.7	152.7



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	168.6	169.3	169.9	170.6	171.3	171.5	171.4	171.3	171.3	171.2	170.9
115°	196.4	197.1	197.7	198.4	199.0	199.2	199.0	198.8	198.5	198.4	198.3
117.5°	224.1	225.0	225.8	226.7	227.6	227.7	227.1	226.4	225.8	225.2	225.0
120°	242.5	243.4	244.3	245.1	246.1	246.1	245.1	244.3	243.4	242.5	242.5
122.5°	259.4	260.5	261.6	262.6	263.6	263.8	263.2	262.6	262.0	261.4	261.1
125°	285.8	286.7	287.7	288.7	289.6	290.0	289.6	289.4	289.0	288.7	288.3
127.5°	311.3	312.6	313.8	315.1	316.3	316.8	316.4	316.0	315.6	315.2	314.8
130°	327.5	328.9	330.3	331.7	333.1	333.7	333.6	333.3	333.1	332.9	332.7
132.5°	345.5	346.7	347.8	349.0	350.2	350.8	350.9	350.9	350.9	350.9	350.5
135°	369.7	370.9	372.1	373.3	374.5	375.2	375.4	375.7	375.9	376.1	376.0
137.5°	395.1	396.1	397.1	398.1	399.1	399.7	400.0	400.3	400.5	400.8	400.7
140°	410.4	411.5	412.4	413.4	414.4	415.2	415.7	416.2	416.8	417.3	417.3
142.5°	426.2	427.1	428.2	429.1	430.1	430.8	431.2	431.5	431.9	432.2	432.3
145°	448.8	449.5	450.3	451.1	451.9	452.5	453.1	453.8	454.5	455.1	455.2
147.5°	468.9	469.8	470.7	471.7	472.5	473.2	473.6	474.1	474.5	475.0	475.2
150°	482.7	483.3	484.0	484.6	485.3	485.8	486.2	486.6	487.1	487.6	487.8
152.5°	494.8	495.5	496.1	496.8	497.4	498.0	498.5	499.0	499.6	500.2	500.5
155°	513.1	513.4	513.8	514.0	514.4	514.7	515.1	515.4	515.7	516.0	516.6
157.5°	528.7	528.9	529.1	529.3	529.6	529.8	529.9	530.2	530.4	530.5	531.3
160°	538.1	538.3	538.6	538.7	539.0	539.2	539.2	539.3	539.5	539.6	540.3
162.5°	546.7	546.8	546.8	546.9	546.9	547.0	547.1	547.3	547.3	547.4	548.2
165°	558.3	558.1	558.0	557.9	557.8	557.8	557.8	557.8	557.8	557.8	558.5
167.5°	567.8	567.6	567.2	566.9	566.5	566.4	566.4	566.4	566.3	566.3	567.1
170°	573.0	572.7	572.3	572.0	571.7	571.4	571.4	571.2	571.1	571.0	571.8
172.5°	576.5	576.2	575.8	575.5	575.2	575.0	574.9	574.8	574.6	574.5	575.3
175°	580.8	580.5	580.1	579.9	579.5	579.3	579.0	578.9	578.6	578.3	579.1
177.5°	582.6	582.3	582.0	581.8	581.5	581.3	581.2	581.0	580.8	580.7	581.2
180°	581.8	581.8	581.8	581.8	581.8	581.8	581.8	581.8	581.8	581.8	581.8



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	668.7	668.7	668.7	668.7	668.7	668.7	668.7	668.7
2.5°	665.9	667.0	668.1	668.7	668.4	668.1	668.0	667.7
5°	661.4	662.5	663.7	664.1	663.8	663.5	663.2	663.0
7.5°	653.9	655.0	656.3	656.6	656.3	656.0	655.7	655.4
10°	647.2	648.4	649.5	649.9	649.5	649.0	648.6	648.2
12.5°	639.4	640.2	640.9	641.2	640.8	640.6	640.2	639.9
15°	625.5	626.1	626.6	626.5	625.9	625.2	624.5	623.7
17.5°	609.1	609.8	610.4	610.4	609.7	609.1	608.4	607.7
20°	596.3	596.8	597.2	597.1	596.5	595.9	595.4	594.8
22.5°	582.7	582.8	582.9	582.8	582.5	582.1	581.8	581.4
25°	560.7	560.9	561.2	561.2	560.9	560.7	560.3	560.1
27.5°	538.9	538.5	538.0	537.5	536.8	536.1	535.5	534.8
30°	521.9	521.5	521.1	520.6	520.0	519.4	518.8	518.2
32.5°	505.3	504.5	503.8	503.1	502.5	502.0	501.4	500.8
35°	478.6	477.8	476.9	476.1	475.4	474.7	474.0	473.3
37.5°	451.9	450.8	449.8	448.8	448.2	447.5	446.8	446.2
40°	433.4	432.1	430.8	429.9	429.3	428.8	428.2	427.6
42.5°	415.2	413.8	412.3	411.3	410.4	409.7	408.9	408.0
45°	387.2	385.6	384.0	383.0	382.4	381.9	381.3	380.6
47.5°	358.1	356.4	354.7	353.5	352.7	351.9	351.0	350.2
50°	339.4	337.3	335.4	334.0	333.3	332.6	331.8	331.1
52.5°	320.0	318.3	316.7	315.4	314.4	313.5	312.5	311.6
55°	291.1	289.4	287.7	286.5	285.7	285.0	284.3	283.6
57.5°	261.1	259.3	257.7	256.6	256.0	255.5	254.9	254.3
60°	241.2	239.6	238.1	237.0	236.6	236.2	235.7	235.3
62.5°	222.4	220.9	219.5	218.5	217.9	217.4	216.9	216.3
65°	193.6	192.3	191.0	189.9	189.2	188.6	187.9	187.1
67.5°	165.1	164.0	163.1	162.3	161.7	161.1	160.6	160.0
70°	146.5	145.5	144.6	143.8	143.2	142.6	142.1	141.5
72.5°	129.1	128.0	127.1	126.3	125.9	125.4	124.9	124.5
75°	101.8	101.0	100.1	99.8	100.1	100.4	100.7	101.0
77.5°	77.5	77.1	76.6	76.2	75.8	75.4	75.0	74.6
80°	61.5	61.0	60.7	60.3	60.0	59.8	59.4	59.2
82.5°	45.9	45.3	44.8	44.4	44.4	44.3	44.3	44.3
85°	24.2	23.8	23.3	23.1	22.9	22.8	22.6	22.5
87.5°	9.9	9.5	9.1	8.9	8.8	8.7	8.6	8.5
90°	16.8	16.5	16.3	16.3	16.4	16.4	16.6	16.7
92.5°	15.7	15.8	15.8	15.8	15.8	15.8	15.9	15.9
95°	31.4	31.4	31.4	31.3	31.1	30.9	30.7	30.5
97.5°	52.9	52.9	52.9	52.8	52.8	52.8	52.8	52.7
100°	67.8	67.8	67.8	67.7	67.6	67.5	67.4	67.2
102.5°	84.0	84.1	84.2	84.2	84.1	83.9	83.9	83.8
105°	108.5	108.7	108.9	109.0	109.0	109.0	109.0	109.0
107.5°	134.8	134.9	135.0	134.7	134.2	133.8	133.3	132.8
110°	152.7	152.7	152.7	152.6	152.2	151.9	151.5	151.2





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CATALOG NUMBER: SA2XXDIP-C485D530U935-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	170.7	170.4	170.1	169.9	169.6	169.4	169.1	168.9
115°	198.1	198.0	197.9	197.7	197.3	197.1	196.7	196.4
117.5°	224.7	224.5	224.2	223.9	223.6	223.3	222.9	222.6
120°	242.5	242.5	242.5	242.4	242.0	241.8	241.4	241.1
122.5°	260.9	260.6	260.4	260.1	259.8	259.6	259.4	259.2
125°	288.0	287.7	287.4	287.1	287.1	287.0	286.8	286.7
127.5°	314.4	314.0	313.7	313.2	312.9	312.5	312.2	311.9
130°	332.4	332.3	332.0	331.7	331.2	330.8	330.4	329.9
132.5°	350.0	349.5	349.0	348.6	348.3	347.9	347.6	347.2
135°	375.9	375.7	375.7	375.4	375.1	374.8	374.4	374.1
137.5°	400.6	400.5	400.5	400.2	399.8	399.3	398.9	398.5
140°	417.3	417.3	417.3	417.2	416.6	416.2	415.8	415.3
142.5°	432.4	432.5	432.6	432.4	432.0	431.5	431.1	430.7
145°	455.4	455.5	455.6	455.4	455.0	454.5	454.1	453.7
147.5°	475.4	475.7	476.0	475.9	475.4	475.0	474.6	474.2
150°	488.2	488.5	488.9	488.9	488.5	488.2	487.8	487.6
152.5°	500.9	501.4	501.8	501.8	501.4	500.9	500.5	500.2
155°	517.1	517.6	518.2	518.3	518.0	517.6	517.3	517.0
157.5°	532.0	532.8	533.6	533.6	533.1	532.6	532.1	531.5
160°	540.9	541.6	542.2	542.3	541.9	541.5	541.0	540.5
162.5°	548.9	549.7	550.4	550.5	550.0	549.5	549.0	548.5
165°	559.3	560.1	560.8	560.9	560.3	559.8	559.3	558.7
167.5°	567.8	568.6	569.4	569.5	568.9	568.3	567.7	567.1
170°	572.6	573.3	574.0	574.1	573.4	572.8	572.1	571.5
172.5°	576.1	576.9	577.6	577.6	577.0	576.4	575.7	575.1
175°	579.9	580.7	581.4	581.5	580.8	580.1	579.5	578.9
177.5°	581.7	582.2	582.7	582.7	582.2	581.7	581.2	580.7
180°	581.8	581.8	581.8	581.8	581.8	581.8	581.8	581.8

(END OF REPORT)