

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: P331274-930

Luminaire Tested: **SA2XXDIP-C290D925U930-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P331274-930  
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-C290D925U930-4F0-1E-UDD-F1  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 290 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
UPLIGHT 925 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

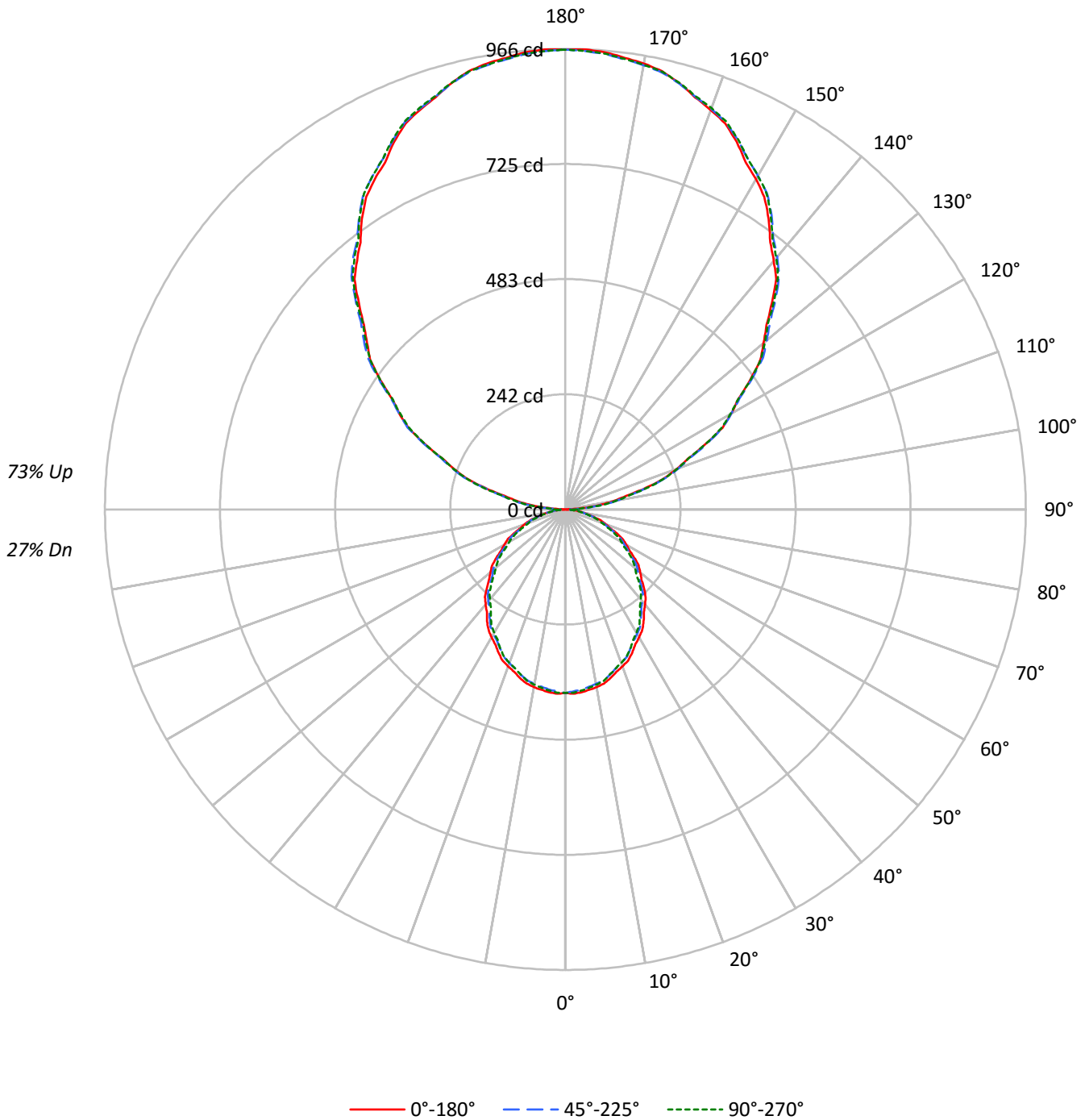
Lumens per Lamp: N/A  
Luminaire Lumens: 3679.8 lumens  
Efficiency: N/A  
Efficacy: 98.7 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: Semi-Indirect

Input Watts (W): 37.3  
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	
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	102	102	102	102	91	91	91	91	70	70	70	52	52	52	35	35	35	27				27
1	93	88	85	81	82	79	76	73	62	59	58	45	44	43	31	30	29	22				22
2	84	77	71	66	75	69	64	60	54	50	48	40	38	36	27	26	25	19				19
3	77	68	61	55	68	61	55	50	47	43	40	35	33	30	24	22	21	16				16
4	70	60	52	46	62	54	47	42	42	38	34	31	28	26	21	19	18	14				14
5	64	53	45	40	57	48	41	36	38	33	29	28	25	22	19	17	16	12				12
6	59	47	40	34	53	43	36	31	34	29	25	25	22	19	17	15	14	10				10
7	55	43	35	30	49	38	32	27	30	26	22	23	20	17	16	14	12	9				9
8	50	39	31	26	45	35	28	24	28	23	19	21	18	15	15	12	11	8				8
9	47	35	28	23	42	32	25	21	25	21	17	19	16	14	13	11	10	7				7
10	44	32	25	21	39	29	23	19	23	19	15	18	14	12	12	10	9	7				7

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

	0°	45°	90°
0°	6218	6218	6218
5°	6242	6152	6190
10°	6205	6091	6120
15°	6128	6011	6006
20°	6019	5893	5887
25°	5911	5747	5747
30°	5774	5614	5565
35°	5643	5452	5373
40°	5480	5292	5191
45°	5318	5133	5005
50°	5144	4968	4793
55°	4963	4777	4597
60°	4760	4543	4379
65°	4542	4317	4118
70°	4263	4036	3843
75°	3880	3718	3624
80°	3440	3347	3171
85°	2816	2668	2408



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	36.2	1.0
10°-20°	101.9	2.8
20°-30°	149.8	4.1
30°-40°	174.0	4.7
40°-50°	173.8	4.7
50°-60°	151.6	4.1
60°-70°	112.1	3.0
70°-80°	63.5	1.7
80°-90°	20.9	0.6
90°-100°	61.1	1.7
100°-110°	189.8	5.2
110°-120°	324.3	8.8
120°-130°	426.5	11.6
130°-140°	478.7	13.0
140°-150°	469.4	12.8
150°-160°	393.7	10.7
160°-170°	261.1	7.1
170°-180°	91.3	2.5
0°-30°	287.9	7.8
0°-40°	461.9	12.6
0°-60°	787.3	21.4
0°-90°	983.8	26.7
90°-120°	575.2	15.6
90°-150°	1949.8	53.0
90°-180°	2696.0	73.3
0°-180°	3679.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	385	385	385	385	385	
5°	385	384	380	382	382	37
15°	367	364	360	361	359	103
25°	332	329	323	323	323	153
35°	286	282	277	274	273	179
45°	233	230	225	221	219	180
55°	176	174	170	165	163	158
65°	119	117	113	110	108	118
75°	62	61	60	58	58	66
85°	15	15	14	13	13	17
90°	1	11	28	27	28	3
95°	42	50	52	52	50	49
105°	175	177	179	180	181	185
115°	326	330	329	328	326	322
125°	474	480	478	476	475	423
135°	613	621	623	622	620	473
145°	744	749	754	755	752	464
155°	850	853	855	859	857	391
165°	925	924	924	929	926	261
175°	962	960	958	964	959	91
180°	964	964	964	964	964	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	385.1	385.1	385.1	385.1	385.1	385.1	385.1	385.1	385.1	385.1	385.1
2.5°	386.9	386.6	386.3	386.0	385.6	385.1	384.4	383.7	382.9	382.2	382.9
5°	385.1	384.8	384.5	384.2	383.8	383.3	382.4	381.5	380.5	379.6	380.3
7.5°	381.8	381.2	380.7	380.3	379.8	379.0	378.1	377.2	376.3	375.4	376.0
10°	378.5	378.0	377.4	376.8	376.2	375.4	374.5	373.5	372.5	371.5	372.1
12.5°	374.1	373.6	373.1	372.5	372.0	371.3	370.3	369.3	368.4	367.4	367.8
15°	366.6	366.2	365.7	365.2	364.7	363.9	362.8	361.7	360.7	359.6	360.0
17.5°	357.2	356.7	356.2	355.7	355.2	354.4	353.4	352.2	351.1	350.1	350.4
20°	350.3	349.8	349.4	348.9	348.4	347.6	346.4	345.3	344.1	343.0	343.2
22.5°	343.6	342.8	342.2	341.4	340.8	339.9	338.8	337.7	336.6	335.6	335.6
25°	331.8	331.2	330.5	329.9	329.2	328.2	326.8	325.4	324.0	322.6	322.8
27.5°	318.5	318.0	317.3	316.7	316.2	315.3	314.2	313.1	312.0	310.9	310.6
30°	309.7	309.0	308.3	307.7	307.0	306.1	304.8	303.6	302.3	301.1	300.8
32.5°	300.1	299.6	299.1	298.6	298.1	297.1	295.8	294.6	293.3	292.0	291.5
35°	286.3	285.4	284.6	283.8	283.0	281.9	280.6	279.3	278.0	276.6	276.1
37.5°	270.7	269.9	269.2	268.5	267.7	266.8	265.5	264.2	262.8	261.5	260.9
40°	260.0	259.3	258.7	258.0	257.4	256.4	255.0	253.7	252.4	251.1	250.4
42.5°	249.6	249.0	248.3	247.7	247.0	246.0	244.7	243.4	242.1	240.8	239.9
45°	232.9	232.4	231.8	231.2	230.6	229.8	228.5	227.3	226.1	224.8	223.9
47.5°	216.4	215.8	215.3	214.7	214.2	213.3	212.0	210.8	209.5	208.1	207.2
50°	204.8	204.4	204.0	203.6	203.2	202.4	201.2	200.1	198.9	197.8	196.7
52.5°	193.6	193.0	192.5	191.9	191.4	190.5	189.5	188.4	187.3	186.2	185.2
55°	176.3	175.8	175.3	174.8	174.3	173.6	172.6	171.6	170.6	169.7	168.6
57.5°	159.0	158.6	158.2	157.8	157.4	156.6	155.6	154.5	153.4	152.3	151.3
60°	147.4	147.1	146.8	146.4	146.1	145.4	144.2	143.1	141.9	140.7	139.8
62.5°	136.2	135.6	135.1	134.6	134.0	133.3	132.4	131.6	130.7	129.8	128.9
65°	118.9	118.4	117.9	117.4	116.9	116.3	115.4	114.6	113.8	113.0	112.2
67.5°	101.3	100.9	100.5	100.1	99.8	99.2	98.4	97.7	96.9	96.2	95.6
70°	90.3	90.0	89.7	89.4	89.0	88.5	87.8	87.1	86.3	85.5	85.0
72.5°	79.1	78.8	78.4	78.1	77.8	77.4	76.9	76.5	76.0	75.5	74.9
75°	62.2	62.0	61.9	61.7	61.6	61.3	60.9	60.4	60.0	59.6	59.1
77.5°	47.1	46.8	46.6	46.3	46.0	45.7	45.6	45.4	45.2	45.1	44.8
80°	37.0	36.9	36.9	36.8	36.7	36.6	36.4	36.3	36.1	36.0	35.7
82.5°	27.6	27.6	27.6	27.5	27.5	27.4	27.3	27.2	27.1	27.1	26.7
85°	15.2	15.1	15.0	14.9	14.8	14.8	14.7	14.6	14.5	14.4	14.2
87.5°	5.5	5.8	6.1	6.4	6.7	7.2	7.8	8.5	9.2	9.9	9.5
90°	0.8	3.0	5.1	7.3	9.5	12.6	16.6	20.5	24.5	28.5	28.1
92.5°	14.5	16.1	17.7	19.2	20.9	22.1	23.1	24.0	24.9	25.8	25.9
95°	42.3	44.1	45.9	47.7	49.6	50.6	51.0	51.4	51.7	52.1	52.1
97.5°	77.3	78.9	80.5	82.1	83.6	84.8	85.5	86.2	86.8	87.6	87.6
100°	103.3	104.8	106.2	107.7	109.1	110.1	110.6	111.2	111.8	112.3	112.3
102.5°	130.7	131.8	133.0	134.1	135.3	136.2	136.9	137.6	138.3	139.0	139.1
105°	175.0	175.5	176.0	176.6	177.1	177.6	177.9	178.3	178.6	179.0	179.4
107.5°	219.5	220.3	221.1	221.9	222.7	223.1	223.1	223.1	223.1	223.1	223.2
110°	248.2	249.2	250.3	251.4	252.5	253.1	253.1	253.1	253.1	253.1	253.1



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	279.4	280.5	281.6	282.7	283.7	284.2	284.1	283.9	283.8	283.6	283.2
115°	325.5	326.5	327.6	328.7	329.8	330.1	329.8	329.5	329.1	328.7	328.6
117.5°	371.4	372.8	374.2	375.7	377.2	377.3	376.3	375.3	374.3	373.3	372.8
120°	401.9	403.4	404.8	406.3	407.7	407.7	406.3	404.8	403.4	401.9	401.9
122.5°	429.9	431.6	433.4	435.1	436.8	437.2	436.2	435.2	434.2	433.2	432.8
125°	473.5	475.2	476.8	478.4	480.0	480.6	480.0	479.5	479.0	478.4	477.8
127.5°	516.0	518.0	520.2	522.2	524.2	525.0	524.3	523.7	523.0	522.4	521.7
130°	542.7	545.0	547.4	549.8	552.1	553.1	552.7	552.4	552.0	551.6	551.3
132.5°	572.7	574.5	576.5	578.4	580.3	581.3	581.4	581.5	581.5	581.6	580.8
135°	612.7	614.7	616.6	618.6	620.6	621.8	622.2	622.5	622.9	623.2	623.1
137.5°	654.8	656.4	658.0	659.7	661.3	662.3	662.8	663.3	663.8	664.2	664.1
140°	680.2	681.8	683.5	685.1	686.7	687.9	688.8	689.7	690.7	691.6	691.6
142.5°	706.2	707.8	709.5	711.1	712.7	713.9	714.4	715.1	715.7	716.3	716.5
145°	743.6	744.9	746.2	747.5	748.7	749.9	751.0	752.0	753.2	754.2	754.4
147.5°	777.0	778.5	780.1	781.5	783.1	784.2	785.0	785.6	786.4	787.1	787.5
150°	799.8	800.9	801.9	803.1	804.1	805.0	805.8	806.5	807.2	808.0	808.5
152.5°	819.9	821.1	822.1	823.2	824.3	825.3	826.1	827.0	827.9	828.8	829.5
155°	850.3	850.8	851.3	851.9	852.4	853.0	853.5	854.0	854.6	855.1	856.1
157.5°	876.1	876.4	876.9	877.2	877.6	877.9	878.2	878.6	878.9	879.2	880.4
160°	891.8	892.1	892.4	892.8	893.2	893.5	893.6	893.8	894.0	894.1	895.3
162.5°	906.0	906.1	906.2	906.3	906.4	906.4	906.7	906.9	907.0	907.2	908.4
165°	925.1	925.0	924.7	924.5	924.4	924.3	924.3	924.3	924.3	924.3	925.5
167.5°	941.0	940.5	940.0	939.4	938.9	938.6	938.6	938.5	938.5	938.4	939.7
170°	949.5	948.9	948.4	947.9	947.3	947.0	946.8	946.6	946.4	946.2	947.5
172.5°	955.4	954.8	954.3	953.7	953.2	952.8	952.7	952.4	952.3	952.1	953.4
175°	962.5	962.0	961.4	960.9	960.3	959.9	959.5	959.2	958.8	958.5	959.7
177.5°	965.5	965.0	964.6	964.2	963.7	963.4	963.0	962.8	962.5	962.2	963.0
180°	964.2	964.2	964.2	964.2	964.2	964.2	964.2	964.2	964.2	964.2	964.2



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	385.1	385.1	385.1	385.1	385.1	385.1	385.1	385.1
2.5°	383.5	384.2	384.8	385.1	385.0	384.8	384.7	384.6
5°	381.0	381.6	382.3	382.5	382.4	382.2	382.0	381.9
7.5°	376.7	377.3	378.0	378.2	378.1	377.8	377.6	377.5
10°	372.8	373.5	374.1	374.3	374.1	373.8	373.6	373.3
12.5°	368.3	368.7	369.2	369.3	369.2	368.9	368.8	368.6
15°	360.3	360.6	360.9	360.9	360.5	360.1	359.7	359.3
17.5°	350.8	351.2	351.6	351.6	351.1	350.8	350.4	350.0
20°	343.5	343.7	344.0	343.9	343.6	343.2	342.9	342.6
22.5°	335.7	335.7	335.7	335.7	335.5	335.3	335.1	334.9
25°	322.9	323.1	323.3	323.3	323.1	322.9	322.8	322.6
27.5°	310.4	310.1	309.9	309.6	309.2	308.8	308.4	308.0
30°	300.6	300.4	300.1	299.9	299.5	299.2	298.9	298.5
32.5°	291.1	290.6	290.2	289.8	289.4	289.1	288.8	288.5
35°	275.7	275.2	274.7	274.3	273.9	273.5	273.0	272.6
37.5°	260.2	259.7	259.0	258.5	258.1	257.7	257.4	257.0
40°	249.6	248.9	248.2	247.6	247.3	247.0	246.6	246.3
42.5°	239.1	238.3	237.5	236.8	236.4	235.9	235.5	235.1
45°	223.0	222.1	221.2	220.5	220.2	219.9	219.6	219.2
47.5°	206.3	205.3	204.3	203.6	203.2	202.7	202.2	201.7
50°	195.5	194.3	193.1	192.4	192.0	191.6	191.2	190.8
52.5°	184.3	183.4	182.4	181.6	181.1	180.6	180.0	179.4
55°	167.6	166.6	165.7	165.0	164.6	164.1	163.7	163.3
57.5°	150.3	149.4	148.4	147.7	147.5	147.2	146.8	146.5
60°	138.9	138.0	137.1	136.6	136.3	136.1	135.8	135.6
62.5°	128.1	127.3	126.5	125.9	125.6	125.2	124.9	124.6
65°	111.5	110.7	110.0	109.4	109.0	108.6	108.2	107.8
67.5°	95.1	94.5	93.9	93.4	93.1	92.8	92.5	92.1
70°	84.4	83.8	83.2	82.8	82.5	82.1	81.8	81.4
72.5°	74.4	73.8	73.2	72.7	72.5	72.2	72.0	71.7
75°	58.6	58.1	57.6	57.5	57.6	57.8	58.0	58.1
77.5°	44.6	44.4	44.1	43.9	43.6	43.5	43.2	43.0
80°	35.5	35.2	35.0	34.7	34.6	34.4	34.2	34.1
82.5°	26.4	26.1	25.8	25.6	25.6	25.5	25.5	25.5
85°	13.9	13.7	13.5	13.3	13.2	13.1	13.0	13.0
87.5°	9.3	9.0	8.7	8.6	8.6	8.6	8.6	8.5
90°	27.7	27.4	27.1	26.9	27.1	27.3	27.5	27.6
92.5°	26.0	26.1	26.2	26.3	26.3	26.3	26.3	26.3
95°	52.1	52.1	52.1	51.9	51.5	51.2	50.8	50.5
97.5°	87.6	87.6	87.6	87.6	87.5	87.5	87.4	87.4
100°	112.3	112.3	112.3	112.2	112.0	111.9	111.6	111.5
102.5°	139.3	139.4	139.6	139.5	139.3	139.2	139.0	138.8
105°	179.7	180.1	180.4	180.6	180.6	180.6	180.6	180.6
107.5°	223.4	223.6	223.6	223.3	222.5	221.7	220.9	220.0
110°	253.1	253.1	253.1	252.7	252.3	251.7	251.1	250.6





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CATALOG NUMBER: SA2XXDIP-C290D925U930-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	282.7	282.3	281.9	281.4	281.1	280.7	280.3	279.9
115°	328.3	328.2	328.0	327.6	327.1	326.5	326.0	325.5
117.5°	372.4	372.0	371.5	371.0	370.6	370.0	369.4	368.9
120°	401.9	401.9	401.9	401.7	401.1	400.6	400.1	399.5
122.5°	432.3	431.9	431.5	431.0	430.6	430.2	429.8	429.4
125°	477.4	476.8	476.2	475.9	475.7	475.5	475.3	475.2
127.5°	521.1	520.4	519.8	519.1	518.5	518.0	517.4	516.8
130°	550.9	550.6	550.2	549.7	548.9	548.2	547.5	546.7
132.5°	580.0	579.2	578.4	577.7	577.2	576.6	576.0	575.4
135°	622.9	622.7	622.5	622.2	621.6	621.1	620.5	620.0
137.5°	664.0	663.8	663.7	663.2	662.5	661.8	661.0	660.3
140°	691.6	691.6	691.6	691.2	690.5	689.7	689.1	688.4
142.5°	716.6	716.7	716.9	716.6	715.9	715.2	714.4	713.7
145°	754.6	754.8	755.0	754.7	754.0	753.3	752.5	751.8
147.5°	787.9	788.3	788.7	788.6	787.9	787.2	786.5	785.8
150°	809.0	809.6	810.1	810.1	809.6	809.0	808.5	808.0
152.5°	830.1	830.8	831.5	831.5	830.8	830.1	829.5	828.8
155°	857.0	857.9	858.8	858.9	858.3	857.9	857.3	856.7
157.5°	881.7	882.9	884.1	884.3	883.5	882.6	881.7	880.8
160°	896.3	897.4	898.5	898.7	898.0	897.2	896.5	895.8
162.5°	909.6	910.9	912.1	912.3	911.4	910.5	909.7	908.8
165°	926.8	928.1	929.4	929.5	928.6	927.7	926.8	925.9
167.5°	940.9	942.2	943.5	943.6	942.7	941.8	940.9	939.9
170°	948.8	950.1	951.3	951.4	950.3	949.3	948.1	947.1
172.5°	954.6	955.9	957.2	957.2	956.2	955.1	954.0	952.9
175°	961.0	962.2	963.5	963.6	962.5	961.4	960.3	959.3
177.5°	963.9	964.8	965.6	965.6	964.8	963.9	963.0	962.2
180°	964.2	964.2	964.2	964.2	964.2	964.2	964.2	964.2

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