

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: P331301-927

Luminaire Tested: **SA2XXDIP-C485D530U927-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331301-927
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-C485D530U927-4F0-1E-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: 3064.4 lumens
Efficiency: N/A
Efficacy: 93.4 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

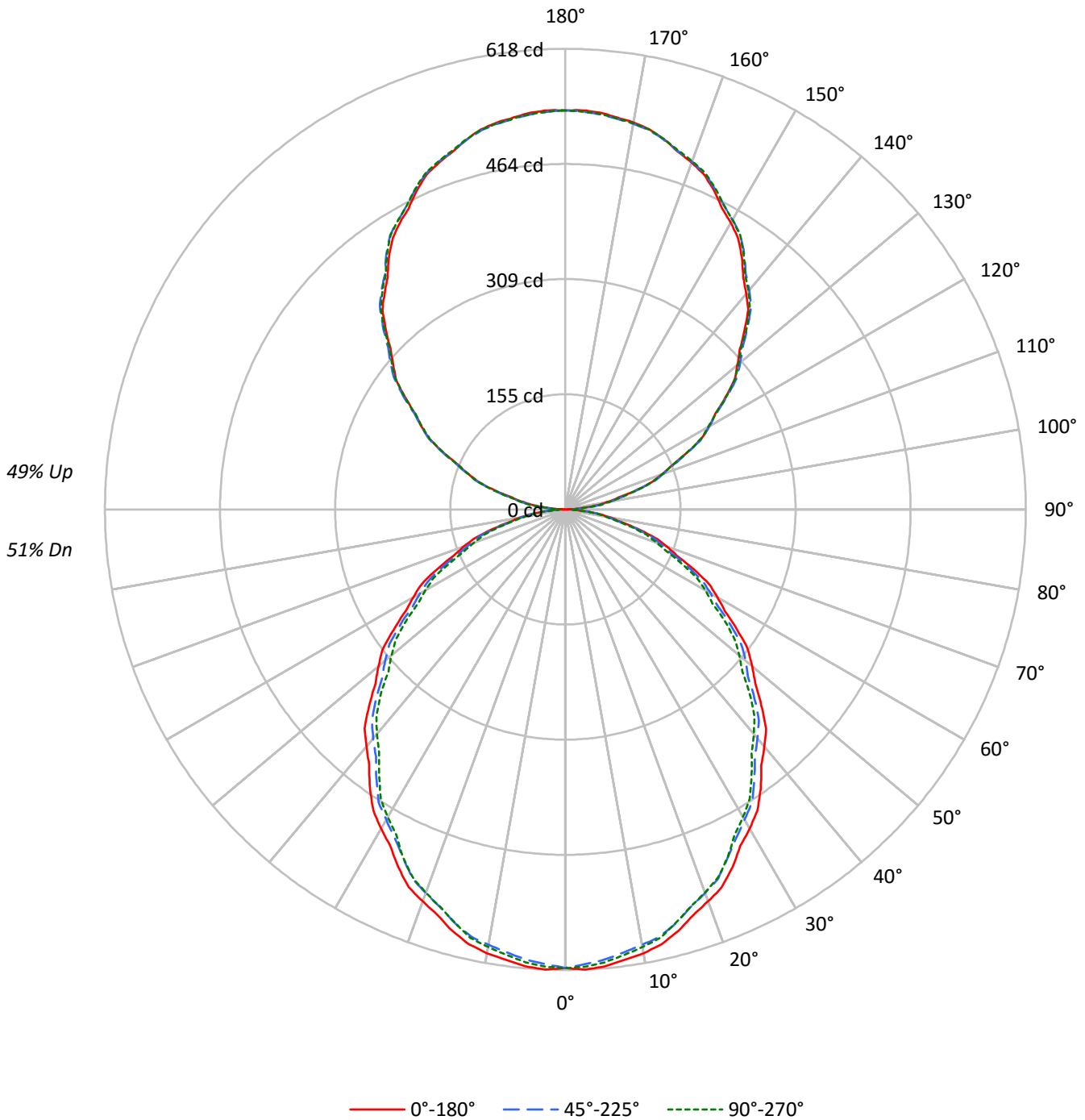
Input Watts (W): 32.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331301-927

CATALOG NUMBER: SA2XXDIP-C485D530U927-4F0-1E-UDD-F1

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9935	9935	9935
5°	9972	9828	9887
10°	9914	9729	9778
15°	9790	9603	9593
20°	9617	9414	9402
25°	9444	9180	9180
30°	9221	8968	8889
35°	9014	8712	8584
40°	8753	8456	8292
45°	8499	8200	7996
50°	8219	7935	7654
55°	7927	7626	7344
60°	7601	7259	6991
65°	7255	6896	6575
70°	6812	6453	6146
75°	6201	5939	5795
80°	5504	5337	5058
85°	4483	4279	3835



TEST NUMBER: P331301-927

CATALOG NUMBER: SA2XXDIP-C485D530U927-4F0-1E-UDD-F1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	57.9	1.9
10°-20°	162.8	5.3
20°-30°	239.3	7.8
30°-40°	278.0	9.1
40°-50°	277.7	9.1
50°-60°	242.1	7.9
60°-70°	179.0	5.8
70°-80°	101.4	3.3
80°-90°	29.4	1.0
90°-100°	33.9	1.1
100°-110°	105.4	3.4
110°-120°	180.1	5.9
120°-130°	236.8	7.7
130°-140°	265.8	8.7
140°-150°	260.6	8.5
150°-160°	218.6	7.1
160°-170°	145.0	4.7
170°-180°	50.7	1.7
0°-30°	459.9	15.0
0°-40°	737.9	24.1
0°-60°	1257.7	41.0
0°-90°	1567.5	51.2
90°-120°	319.4	10.4
90°-150°	1082.6	35.3
90°-180°	1497.0	48.9
0°-180°	3064.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	615	615	615	615	615	
5°	615	613	606	611	610	58
15°	586	582	574	577	574	165
25°	530	525	515	516	515	244
35°	457	451	442	438	436	285
45°	372	368	359	353	350	287
55°	282	278	271	264	261	252
65°	190	186	180	175	172	188
75°	99	98	95	92	93	106
85°	24	24	23	21	21	28
90°	0	6	16	15	15	2
95°	24	28	29	29	28	27
105°	97	98	99	100	100	103
115°	181	183	182	182	181	179
125°	263	267	266	264	264	235
135°	340	345	346	346	344	263
145°	413	416	419	419	417	258
155°	472	473	475	477	476	217
165°	514	513	513	516	514	145
175°	534	533	532	535	533	51
180°	535	535	535	535	535	



TEST NUMBER: P331301-927

CATALOG NUMBER: SA2XXDIP-C485D530U927-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	615.3	615.3	615.3	615.3	615.3	615.3	615.3	615.3	615.3	615.3	615.3
2.5°	618.1	617.6	617.1	616.6	616.0	615.2	614.0	612.9	611.7	610.5	611.6
5°	615.3	614.7	614.3	613.7	613.2	612.2	610.8	609.3	607.8	606.4	607.4
7.5°	609.8	609.0	608.2	607.4	606.6	605.5	604.0	602.5	601.0	599.5	600.6
10°	604.7	603.7	602.8	601.9	600.9	599.7	598.1	596.6	595.0	593.4	594.5
12.5°	597.5	596.8	595.9	595.1	594.3	593.1	591.5	589.9	588.4	586.8	587.5
15°	585.7	584.9	584.2	583.4	582.6	581.3	579.6	577.9	576.2	574.5	575.0
17.5°	570.5	569.8	569.0	568.2	567.4	566.2	564.4	562.7	560.9	559.2	559.8
20°	559.7	558.9	558.1	557.3	556.5	555.2	553.3	551.5	549.7	547.9	548.3
22.5°	548.8	547.7	546.6	545.5	544.4	543.0	541.2	539.5	537.7	536.0	536.1
25°	530.1	529.0	528.0	527.0	525.9	524.3	522.0	519.8	517.5	515.3	515.6
27.5°	508.8	507.9	506.9	506.0	505.0	503.7	501.9	500.1	498.4	496.6	496.2
30°	494.6	493.5	492.5	491.5	490.4	488.9	486.9	485.0	483.0	481.0	480.6
32.5°	479.4	478.6	477.8	476.9	476.1	474.6	472.5	470.5	468.4	466.4	465.6
35°	457.3	456.0	454.7	453.4	452.1	450.4	448.3	446.2	444.0	442.0	441.2
37.5°	432.4	431.2	430.1	428.9	427.7	426.1	424.0	421.9	419.8	417.7	416.7
40°	415.3	414.2	413.2	412.2	411.1	409.6	407.4	405.4	403.2	401.2	400.0
42.5°	398.8	397.7	396.6	395.6	394.6	393.0	390.9	388.8	386.7	384.5	383.3
45°	372.2	371.2	370.3	369.4	368.4	367.0	365.0	363.1	361.1	359.1	357.7
47.5°	345.6	344.8	343.9	343.0	342.1	340.7	338.7	336.6	334.5	332.5	331.0
50°	327.2	326.5	325.8	325.2	324.6	323.3	321.5	319.6	317.7	315.9	314.1
52.5°	309.2	308.3	307.4	306.6	305.7	304.4	302.7	301.0	299.2	297.5	296.0
55°	281.6	280.8	280.0	279.2	278.5	277.3	275.7	274.1	272.5	270.9	269.4
57.5°	253.9	253.3	252.6	252.1	251.4	250.3	248.5	246.8	245.0	243.3	241.7
60°	235.4	235.0	234.4	233.9	233.4	232.2	230.4	228.5	226.6	224.8	223.4
62.5°	217.5	216.7	215.8	214.9	214.1	213.0	211.6	210.2	208.7	207.3	206.0
65°	189.9	189.1	188.3	187.5	186.8	185.7	184.4	183.1	181.7	180.5	179.3
67.5°	161.8	161.2	160.6	159.9	159.3	158.4	157.2	156.1	154.9	153.7	152.8
70°	144.3	143.9	143.3	142.8	142.3	141.4	140.2	139.0	137.8	136.7	135.8
72.5°	126.4	125.9	125.3	124.8	124.3	123.7	122.9	122.1	121.4	120.6	119.6
75°	99.4	99.1	98.9	98.6	98.3	97.9	97.2	96.6	95.9	95.2	94.4
77.5°	75.3	74.8	74.4	73.9	73.4	73.1	72.9	72.6	72.3	72.1	71.7
80°	59.2	59.0	58.9	58.8	58.6	58.5	58.1	57.9	57.7	57.4	57.0
82.5°	44.0	44.0	44.0	44.0	43.9	43.8	43.6	43.5	43.3	43.2	42.7
85°	24.2	24.2	24.0	23.8	23.8	23.6	23.4	23.4	23.2	23.1	22.7
87.5°	8.6	8.6	8.6	8.7	8.7	8.9	9.1	9.3	9.6	9.8	9.4
90°	0.5	1.7	2.9	4.0	5.3	7.0	9.2	11.4	13.6	15.8	15.6
92.5°	8.1	9.0	9.8	10.7	11.6	12.3	12.8	13.3	13.9	14.3	14.4
95°	23.5	24.5	25.5	26.5	27.5	28.1	28.3	28.5	28.7	28.9	28.9
97.5°	42.9	43.8	44.7	45.6	46.4	47.1	47.5	47.8	48.2	48.6	48.6
100°	57.4	58.1	58.9	59.8	60.6	61.2	61.5	61.7	62.0	62.3	62.3
102.5°	72.6	73.2	73.8	74.5	75.1	75.7	76.0	76.4	76.8	77.2	77.2
105°	97.1	97.4	97.8	98.0	98.3	98.5	98.8	98.9	99.2	99.4	99.6
107.5°	121.9	122.3	122.8	123.2	123.7	123.9	123.9	123.9	123.9	123.9	124.0
110°	137.8	138.4	138.9	139.6	140.2	140.5	140.5	140.5	140.5	140.5	140.5



TEST NUMBER: P331301-927

CATALOG NUMBER: SA2XXDIP-C485D530U927-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	155.1	155.7	156.3	156.9	157.6	157.8	157.7	157.6	157.6	157.5	157.2
115°	180.7	181.3	181.9	182.5	183.1	183.3	183.1	182.9	182.7	182.5	182.4
117.5°	206.2	207.0	207.8	208.6	209.4	209.5	209.0	208.3	207.8	207.2	207.0
120°	223.2	223.9	224.7	225.5	226.4	226.4	225.5	224.7	223.9	223.2	223.2
122.5°	238.7	239.6	240.7	241.6	242.6	242.7	242.2	241.6	241.1	240.5	240.3
125°	262.9	263.8	264.7	265.6	266.5	266.8	266.5	266.3	265.9	265.6	265.3
127.5°	286.5	287.6	288.8	289.9	291.0	291.4	291.1	290.7	290.4	290.0	289.6
130°	301.3	302.6	303.9	305.2	306.5	307.0	306.9	306.7	306.5	306.3	306.1
132.5°	317.9	319.0	320.0	321.2	322.2	322.7	322.8	322.8	322.9	322.9	322.5
135°	340.2	341.3	342.4	343.5	344.6	345.2	345.4	345.6	345.9	346.0	345.9
137.5°	363.5	364.5	365.4	366.3	367.2	367.7	368.0	368.3	368.5	368.8	368.7
140°	377.6	378.6	379.5	380.3	381.3	382.0	382.5	382.9	383.5	384.0	384.0
142.5°	392.1	393.0	394.0	394.8	395.7	396.3	396.7	397.0	397.4	397.7	397.8
145°	412.9	413.6	414.3	415.0	415.7	416.4	416.9	417.6	418.2	418.7	418.8
147.5°	431.4	432.2	433.1	434.0	434.7	435.4	435.8	436.2	436.6	437.0	437.2
150°	444.1	444.7	445.3	445.8	446.5	446.9	447.3	447.7	448.1	448.6	448.9
152.5°	455.3	455.9	456.5	457.1	457.6	458.2	458.7	459.1	459.6	460.2	460.5
155°	472.1	472.4	472.7	472.9	473.2	473.6	473.9	474.2	474.4	474.8	475.3
157.5°	486.4	486.6	486.8	487.0	487.3	487.4	487.6	487.8	488.0	488.1	488.9
160°	495.1	495.3	495.5	495.7	495.9	496.1	496.1	496.2	496.4	496.5	497.1
162.5°	503.0	503.1	503.1	503.2	503.2	503.3	503.4	503.5	503.6	503.7	504.4
165°	513.7	513.5	513.4	513.3	513.3	513.2	513.2	513.2	513.2	513.2	513.9
167.5°	522.4	522.2	521.9	521.6	521.3	521.1	521.1	521.1	521.0	521.0	521.7
170°	527.2	526.9	526.6	526.2	526.0	525.8	525.7	525.5	525.5	525.4	526.1
172.5°	530.4	530.1	529.8	529.5	529.3	529.0	528.9	528.9	528.7	528.6	529.3
175°	534.4	534.1	533.8	533.5	533.2	533.0	532.7	532.6	532.3	532.1	532.8
177.5°	536.1	535.8	535.5	535.3	535.0	534.9	534.7	534.6	534.4	534.2	534.7
180°	535.3	535.3	535.3	535.3	535.3	535.3	535.3	535.3	535.3	535.3	535.3



TEST NUMBER: P331301-927

CATALOG NUMBER: SA2XXDIP-C485D530U927-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	615.3	615.3	615.3	615.3	615.3	615.3	615.3	615.3
2.5°	612.7	613.7	614.7	615.2	615.0	614.7	614.6	614.3
5°	608.6	609.6	610.6	611.0	610.8	610.5	610.2	610.0
7.5°	601.7	602.7	603.8	604.1	603.9	603.6	603.2	603.0
10°	595.5	596.6	597.6	597.9	597.5	597.1	596.8	596.4
12.5°	588.3	589.0	589.7	589.9	589.6	589.4	589.1	588.7
15°	575.5	576.1	576.6	576.5	575.8	575.2	574.6	573.9
17.5°	560.4	561.0	561.7	561.6	560.9	560.4	559.8	559.1
20°	548.7	549.1	549.5	549.4	548.8	548.3	547.8	547.2
22.5°	536.1	536.2	536.3	536.2	535.9	535.6	535.3	535.0
25°	515.9	516.1	516.3	516.3	516.1	515.9	515.6	515.3
27.5°	495.8	495.4	495.0	494.6	493.9	493.3	492.7	492.0
30°	480.2	479.8	479.4	479.0	478.4	477.9	477.4	476.8
32.5°	464.9	464.2	463.5	462.9	462.3	461.8	461.3	460.7
35°	440.4	439.6	438.8	438.1	437.4	436.7	436.1	435.5
37.5°	415.7	414.8	413.8	413.0	412.3	411.7	411.1	410.5
40°	398.8	397.6	396.4	395.5	395.0	394.5	394.0	393.4
42.5°	382.0	380.7	379.4	378.4	377.6	376.9	376.2	375.4
45°	356.2	354.8	353.3	352.4	351.8	351.3	350.8	350.2
47.5°	329.5	327.9	326.4	325.3	324.5	323.8	323.0	322.2
50°	312.3	310.4	308.6	307.3	306.7	306.0	305.3	304.7
52.5°	294.5	292.9	291.4	290.2	289.3	288.4	287.6	286.7
55°	267.8	266.3	264.7	263.6	262.8	262.2	261.6	260.9
57.5°	240.2	238.6	237.1	236.1	235.5	235.0	234.6	234.0
60°	221.9	220.5	219.0	218.1	217.7	217.3	216.9	216.5
62.5°	204.6	203.3	201.9	201.1	200.5	200.0	199.6	199.0
65°	178.1	176.9	175.7	174.8	174.1	173.5	172.9	172.1
67.5°	151.9	150.9	150.0	149.3	148.8	148.2	147.7	147.2
70°	134.8	133.9	133.0	132.3	131.7	131.2	130.7	130.2
72.5°	118.7	117.8	116.9	116.2	115.8	115.3	114.9	114.5
75°	93.6	92.9	92.1	91.8	92.1	92.4	92.6	92.9
77.5°	71.3	70.9	70.5	70.1	69.7	69.4	69.0	68.6
80°	56.6	56.2	55.8	55.5	55.2	55.0	54.7	54.4
82.5°	42.2	41.7	41.2	40.9	40.9	40.8	40.7	40.7
85°	22.3	21.9	21.5	21.2	21.1	21.0	20.8	20.7
87.5°	9.1	8.7	8.4	8.2	8.1	8.0	7.9	7.8
90°	15.4	15.2	15.0	15.0	15.1	15.1	15.3	15.4
92.5°	14.4	14.5	14.5	14.6	14.6	14.6	14.7	14.7
95°	28.9	28.9	28.9	28.8	28.6	28.4	28.2	28.0
97.5°	48.6	48.6	48.6	48.6	48.6	48.6	48.6	48.5
100°	62.3	62.3	62.3	62.3	62.2	62.1	62.0	61.9
102.5°	77.3	77.4	77.5	77.5	77.4	77.2	77.2	77.1
105°	99.8	100.0	100.2	100.3	100.3	100.3	100.3	100.3
107.5°	124.1	124.1	124.2	124.0	123.5	123.1	122.6	122.2
110°	140.5	140.5	140.5	140.4	140.1	139.7	139.4	139.1



TEST NUMBER: P331301-927

CATALOG NUMBER: SA2XXDIP-C485D530U927-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	157.0	156.8	156.5	156.3	156.1	155.8	155.6	155.4
115°	182.3	182.2	182.1	181.9	181.6	181.3	181.0	180.7
117.5°	206.8	206.5	206.3	206.0	205.7	205.4	205.1	204.8
120°	223.2	223.2	223.2	223.0	222.7	222.4	222.1	221.8
122.5°	240.0	239.8	239.6	239.3	239.1	238.8	238.7	238.4
125°	265.0	264.7	264.4	264.2	264.1	264.0	263.9	263.8
127.5°	289.3	288.9	288.6	288.2	287.9	287.6	287.2	286.9
130°	305.9	305.7	305.5	305.1	304.8	304.4	304.0	303.6
132.5°	322.0	321.5	321.2	320.8	320.4	320.1	319.8	319.5
135°	345.9	345.7	345.6	345.4	345.2	344.8	344.5	344.2
137.5°	368.6	368.5	368.4	368.2	367.8	367.4	367.0	366.6
140°	384.0	384.0	384.0	383.8	383.3	382.9	382.5	382.1
142.5°	397.8	397.9	398.0	397.8	397.4	397.0	396.6	396.2
145°	419.0	419.1	419.1	419.0	418.6	418.2	417.8	417.4
147.5°	437.4	437.7	437.9	437.8	437.4	437.0	436.7	436.3
150°	449.2	449.5	449.8	449.8	449.5	449.2	448.9	448.6
152.5°	460.9	461.3	461.7	461.7	461.3	460.9	460.5	460.2
155°	475.8	476.3	476.8	476.9	476.6	476.3	475.9	475.7
157.5°	489.5	490.2	490.9	491.0	490.5	490.0	489.6	489.0
160°	497.6	498.3	498.8	499.0	498.6	498.2	497.7	497.3
162.5°	505.0	505.7	506.4	506.5	506.0	505.6	505.1	504.6
165°	514.6	515.3	515.9	516.1	515.6	515.1	514.6	514.0
167.5°	522.4	523.2	523.9	523.9	523.4	522.9	522.4	521.8
170°	526.8	527.5	528.1	528.2	527.6	527.0	526.4	525.9
172.5°	530.0	530.8	531.4	531.5	530.9	530.3	529.7	529.1
175°	533.5	534.2	535.0	535.0	534.4	533.8	533.2	532.6
177.5°	535.2	535.7	536.1	536.1	535.7	535.2	534.7	534.2
180°	535.3	535.3	535.3	535.3	535.3	535.3	535.3	535.3

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