

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: P331301-840

Luminaire Tested: **SA2XXDIP-C485D530U840-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

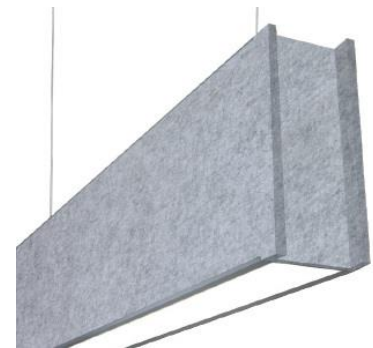
Test Information

Test Method: LM-79-08
Report Number: P331301-840
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-C485D530U840-4F0-1E-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: 3906.4 lumens
Efficiency: N/A
Efficacy: 119.1 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

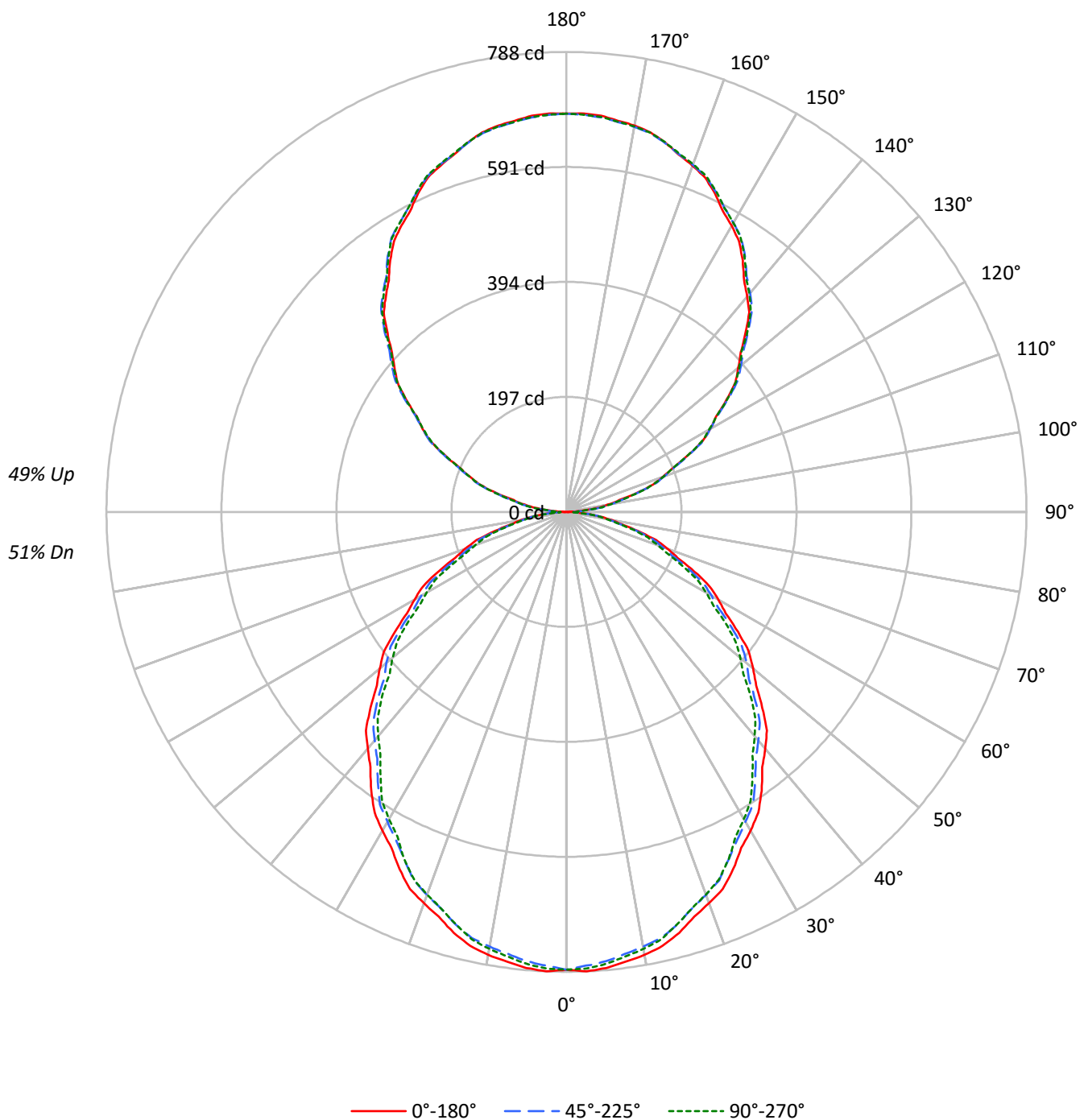
Input Watts (W): 32.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331301-840

CATALOG NUMBER: SA2XXDIP-C485D530U840-4F0-1E-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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	107	107	107	107	99	99	99	99	84	84	84	70	70	70	57	57	57
1	98	94	90	86	90	87	83	80	74	71	69	62	60	58	51	49	48
2	89	82	76	70	82	76	70	66	65	61	57	54	51	49	44	42	41
3	81	72	65	59	75	67	60	55	57	52	48	48	44	41	39	37	35
4	75	64	56	50	69	59	52	47	51	45	41	43	39	35	35	32	30
5	68	57	49	43	63	53	46	40	45	40	35	38	34	31	32	29	26
6	63	51	43	37	58	47	40	35	41	35	31	35	30	27	29	25	23
7	58	46	38	32	54	43	36	31	37	31	27	31	27	24	26	23	20
8	54	42	34	29	50	39	32	27	34	28	24	29	24	21	24	21	18
9	50	38	31	26	47	36	29	24	31	25	22	27	22	19	22	19	16
10	47	35	28	23	44	33	26	22	29	23	19	24	20	17	21	17	15

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12665	12665	12665
5°	12713	12530	12603
10°	12637	12403	12463
15°	12481	12242	12227
20°	12259	12000	11986
25°	12039	11703	11703
30°	11757	11432	11332
35°	11491	11105	10941
40°	11160	10779	10570
45°	10832	10453	10195
50°	10477	10115	9756
55°	10106	9723	9362
60°	9691	9255	8913
65°	9249	8787	8382
70°	8686	8224	7832
75°	7904	7573	7392
80°	7011	6797	6453
85°	5724	5446	4891

TEST NUMBER: P331301-840

CATALOG NUMBER: SA2XXDIP-C485D530U840-4F0-1E-UDD-F1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	73.8	1.9
10°-20°	207.5	5.3
20°-30°	305.0	7.8
30°-40°	354.3	9.1
40°-50°	354.0	9.1
50°-60°	308.7	7.9
60°-70°	228.2	5.8
70°-80°	129.3	3.3
80°-90°	37.5	1.0
90°-100°	43.3	1.1
100°-110°	134.3	3.4
110°-120°	229.6	5.9
120°-130°	301.9	7.7
130°-140°	338.8	8.7
140°-150°	332.2	8.5
150°-160°	278.7	7.1
160°-170°	184.8	4.7
170°-180°	64.6	1.7
0°-30°	586.3	15.0
0°-40°	940.7	24.1
0°-60°	1603.3	41.0
0°-90°	1998.3	51.2
90°-120°	407.1	10.4
90°-150°	1380.1	35.3
90°-180°	1908.0	48.8
0°-180°	3906.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	784	784	784	784	784	
5°	784	781	773	779	778	74
15°	747	742	732	735	732	210
25°	676	669	657	658	657	311
35°	583	575	563	559	555	364
45°	474	469	458	450	446	366
55°	359	354	345	337	333	321
65°	242	237	230	223	219	239
75°	127	125	121	117	118	135
85°	31	30	29	27	26	35
90°	1	8	20	19	20	3
95°	30	35	37	37	36	34
105°	124	125	127	128	128	131
115°	230	234	233	232	230	228
125°	335	340	339	337	336	299
135°	434	440	441	440	439	335
145°	526	530	534	534	532	329
155°	602	604	605	608	606	277
165°	655	654	654	658	655	185
175°	681	680	678	682	679	65
180°	682	682	682	682	682	

TEST NUMBER: P331301-840

CATALOG NUMBER: SA2XXDIP-C485D530U840-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	784.4	784.4	784.4	784.4	784.4	784.4	784.4	784.4	784.4	784.4	784.4
2.5°	788.0	787.3	786.7	786.0	785.3	784.3	782.7	781.3	779.8	778.3	779.7
5°	784.4	783.7	783.0	782.3	781.7	780.4	778.6	776.8	774.9	773.1	774.4
7.5°	777.4	776.4	775.4	774.3	773.3	771.8	769.9	768.1	766.2	764.3	765.7
10°	770.8	769.6	768.4	767.3	766.1	764.5	762.4	760.5	758.5	756.5	757.8
12.5°	761.7	760.7	759.6	758.6	757.6	756.1	754.1	752.0	750.0	748.0	748.9
15°	746.7	745.7	744.7	743.7	742.7	741.0	738.8	736.7	734.5	732.4	733.0
17.5°	727.3	726.4	725.4	724.4	723.4	721.8	719.5	717.3	715.1	712.9	713.7
20°	713.5	712.5	711.4	710.4	709.4	707.8	705.4	703.1	700.7	698.4	698.9
22.5°	699.6	698.2	696.8	695.4	694.0	692.2	689.9	687.7	685.5	683.3	683.4
25°	675.8	674.4	673.1	671.8	670.4	668.3	665.5	662.6	659.7	656.9	657.2
27.5°	648.6	647.4	646.2	645.0	643.8	642.1	639.9	637.5	635.3	633.1	632.6
30°	630.6	629.1	627.8	626.5	625.1	623.2	620.7	618.2	615.7	613.2	612.7
32.5°	611.2	610.2	609.0	607.9	606.9	605.0	602.4	599.8	597.1	594.5	593.6
35°	583.0	581.3	579.7	577.9	576.3	574.1	571.5	568.8	566.0	563.4	562.4
37.5°	551.2	549.7	548.3	546.7	545.2	543.2	540.5	537.9	535.1	532.5	531.2
40°	529.5	528.1	526.7	525.4	524.1	522.1	519.4	516.7	514.0	511.4	509.9
42.5°	508.4	507.0	505.6	504.3	503.0	501.0	498.3	495.6	492.9	490.2	488.6
45°	474.4	473.2	472.0	470.9	469.7	467.9	465.3	462.8	460.3	457.8	456.0
47.5°	440.6	439.5	438.4	437.3	436.2	434.3	431.7	429.1	426.5	423.8	421.9
50°	417.1	416.3	415.4	414.5	413.7	412.1	409.8	407.5	405.1	402.7	400.4
52.5°	394.2	393.0	391.9	390.8	389.7	388.1	385.9	383.6	381.4	379.2	377.3
55°	359.0	358.0	357.0	356.0	355.0	353.5	351.4	349.4	347.4	345.4	343.5
57.5°	323.7	322.9	322.0	321.3	320.5	319.0	316.8	314.6	312.4	310.1	308.1
60°	300.1	299.5	298.8	298.1	297.5	296.0	293.7	291.2	288.9	286.6	284.8
62.5°	277.2	276.2	275.1	274.0	273.0	271.6	269.7	267.9	266.1	264.3	262.6
65°	242.1	241.1	240.0	239.0	238.1	236.7	235.1	233.4	231.7	230.0	228.5
67.5°	206.3	205.5	204.7	203.9	203.1	202.0	200.5	198.9	197.4	195.9	194.8
70°	184.0	183.4	182.7	182.0	181.4	180.3	178.7	177.2	175.7	174.2	173.1
72.5°	161.1	160.5	159.8	159.1	158.4	157.6	156.6	155.6	154.7	153.7	152.5
75°	126.7	126.3	126.0	125.7	125.3	124.8	123.9	123.1	122.3	121.4	120.4
77.5°	95.9	95.3	94.8	94.2	93.6	93.2	92.9	92.5	92.2	91.9	91.4
80°	75.4	75.2	75.1	74.9	74.7	74.5	74.1	73.8	73.5	73.1	72.6
82.5°	56.1	56.0	56.0	56.0	55.9	55.8	55.6	55.4	55.2	55.0	54.4
85°	30.9	30.8	30.6	30.4	30.3	30.1	29.9	29.8	29.6	29.4	28.9
87.5°	11.0	11.0	11.0	11.1	11.1	11.3	11.6	11.9	12.2	12.5	12.0
90°	0.6	2.1	3.6	5.2	6.8	8.9	11.7	14.5	17.4	20.2	19.9
92.5°	10.3	11.4	12.5	13.6	14.7	15.7	16.4	17.0	17.7	18.3	18.4
95°	30.0	31.2	32.5	33.8	35.0	35.9	36.1	36.4	36.6	36.9	36.9
97.5°	54.7	55.8	57.0	58.1	59.2	60.0	60.5	61.0	61.5	62.0	62.0
100°	73.1	74.1	75.1	76.2	77.3	78.0	78.4	78.7	79.1	79.5	79.5
102.5°	92.5	93.3	94.1	94.9	95.7	96.4	96.9	97.4	97.9	98.4	98.5
105°	123.8	124.2	124.6	124.9	125.3	125.6	125.9	126.1	126.4	126.7	126.9
107.5°	155.4	155.9	156.5	157.0	157.6	157.9	157.9	157.9	157.9	157.9	158.0
110°	175.6	176.4	177.1	177.9	178.7	179.0	179.0	179.0	179.0	179.0	179.0

TEST NUMBER: P331301-840

CATALOG NUMBER: SA2XXDIP-C485D530U840-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	197.7	198.5	199.2	200.1	200.9	201.2	201.1	201.0	200.9	200.8	200.5
115°	230.4	231.2	231.9	232.7	233.4	233.7	233.4	233.2	232.9	232.7	232.6
117.5°	262.9	263.9	264.9	265.9	266.9	267.1	266.4	265.6	264.9	264.2	263.9
120°	284.5	285.5	286.5	287.5	288.6	288.6	287.5	286.5	285.5	284.5	284.5
122.5°	304.3	305.5	306.8	308.0	309.2	309.4	308.7	308.0	307.3	306.6	306.3
125°	335.2	336.3	337.5	338.6	339.7	340.1	339.7	339.4	339.0	338.6	338.2
127.5°	365.2	366.7	368.1	369.6	371.0	371.5	371.1	370.6	370.2	369.7	369.2
130°	384.2	385.8	387.4	389.1	390.7	391.4	391.2	390.9	390.7	390.4	390.2
132.5°	405.3	406.7	408.0	409.4	410.7	411.4	411.5	411.5	411.6	411.6	411.1
135°	433.6	435.0	436.5	437.9	439.3	440.1	440.3	440.6	440.9	441.1	441.0
137.5°	463.4	464.6	465.7	467.0	468.1	468.8	469.2	469.5	469.8	470.1	470.0
140°	481.4	482.6	483.7	484.8	486.0	487.0	487.6	488.2	488.9	489.5	489.5
142.5°	499.9	501.0	502.2	503.3	504.4	505.2	505.7	506.1	506.5	507.0	507.1
145°	526.3	527.3	528.2	529.1	530.0	530.8	531.5	532.3	533.1	533.8	533.9
147.5°	550.0	551.0	552.1	553.2	554.2	555.0	555.5	556.0	556.5	557.1	557.3
150°	566.1	566.8	567.6	568.4	569.2	569.8	570.3	570.8	571.3	571.9	572.2
152.5°	580.4	581.2	581.9	582.7	583.4	584.1	584.7	585.3	585.9	586.6	587.0
155°	601.8	602.2	602.6	602.9	603.3	603.7	604.1	604.5	604.8	605.2	605.9
157.5°	620.1	620.4	620.6	620.9	621.2	621.4	621.6	621.9	622.1	622.3	623.2
160°	631.2	631.4	631.7	631.9	632.2	632.4	632.5	632.6	632.8	632.9	633.7
162.5°	641.3	641.4	641.4	641.5	641.5	641.6	641.7	641.9	642.0	642.1	643.0
165°	654.8	654.6	654.5	654.4	654.3	654.2	654.2	654.2	654.2	654.2	655.1
167.5°	666.0	665.7	665.3	664.9	664.5	664.3	664.3	664.3	664.2	664.2	665.1
170°	672.1	671.7	671.3	670.9	670.6	670.2	670.1	669.9	669.8	669.7	670.7
172.5°	676.2	675.8	675.4	675.0	674.7	674.4	674.3	674.2	674.0	673.9	674.8
175°	681.3	680.9	680.4	680.1	679.7	679.4	679.1	678.9	678.6	678.3	679.2
177.5°	683.4	683.0	682.7	682.4	682.1	681.9	681.7	681.5	681.3	681.1	681.7
180°	682.4	682.4	682.4	682.4	682.4	682.4	682.4	682.4	682.4	682.4	682.4

TEST NUMBER: P331301-840

CATALOG NUMBER: SA2XXDIP-C485D530U840-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	784.4	784.4	784.4	784.4	784.4	784.4	784.4	784.4
2.5°	781.0	782.3	783.7	784.3	784.0	783.7	783.5	783.2
5°	775.8	777.1	778.4	778.9	778.6	778.2	777.9	777.6
7.5°	767.0	768.3	769.7	770.1	769.8	769.4	769.0	768.7
10°	759.1	760.5	761.8	762.2	761.7	761.2	760.7	760.2
12.5°	749.9	750.8	751.7	752.0	751.6	751.3	750.9	750.5
15°	733.7	734.4	735.0	734.9	734.1	733.3	732.5	731.5
17.5°	714.4	715.2	716.0	715.9	715.1	714.4	713.6	712.8
20°	699.4	699.9	700.4	700.3	699.6	698.9	698.3	697.6
22.5°	683.5	683.6	683.7	683.6	683.2	682.8	682.4	682.0
25°	657.6	657.9	658.2	658.2	657.9	657.6	657.2	656.9
27.5°	632.1	631.6	631.1	630.5	629.7	628.8	628.0	627.2
30°	612.2	611.7	611.2	610.6	609.9	609.3	608.5	607.8
32.5°	592.7	591.8	590.9	590.1	589.4	588.8	588.0	587.3
35°	561.4	560.4	559.4	558.5	557.6	556.7	555.9	555.1
37.5°	530.0	528.8	527.6	526.4	525.6	524.8	524.0	523.3
40°	508.4	506.9	505.3	504.2	503.5	502.9	502.2	501.5
42.5°	487.0	485.3	483.6	482.4	481.4	480.5	479.6	478.6
45°	454.1	452.3	450.4	449.2	448.5	447.9	447.2	446.5
47.5°	420.0	418.0	416.1	414.7	413.6	412.7	411.7	410.7
50°	398.1	395.7	393.3	391.7	390.9	390.1	389.2	388.4
52.5°	375.4	373.3	371.4	369.9	368.8	367.7	366.6	365.5
55°	341.4	339.4	337.4	336.0	335.1	334.3	333.5	332.6
57.5°	306.2	304.2	302.3	300.9	300.2	299.6	299.0	298.3
60°	282.9	281.0	279.2	278.0	277.5	277.0	276.5	276.0
62.5°	260.8	259.1	257.4	256.3	255.6	255.0	254.4	253.7
65°	227.0	225.5	224.0	222.8	222.0	221.2	220.4	219.4
67.5°	193.6	192.4	191.3	190.4	189.7	188.9	188.3	187.6
70°	171.9	170.7	169.6	168.6	167.9	167.2	166.6	165.9
72.5°	151.4	150.2	149.1	148.1	147.6	147.0	146.5	146.0
75°	119.4	118.5	117.4	117.0	117.4	117.8	118.1	118.5
77.5°	90.9	90.4	89.9	89.4	88.9	88.5	88.0	87.5
80°	72.1	71.6	71.2	70.7	70.4	70.1	69.7	69.4
82.5°	53.8	53.1	52.5	52.1	52.1	52.0	51.9	51.9
85°	28.4	27.9	27.4	27.1	26.9	26.8	26.6	26.4
87.5°	11.6	11.1	10.7	10.4	10.3	10.2	10.1	10.0
90°	19.7	19.4	19.1	19.1	19.2	19.3	19.5	19.6
92.5°	18.4	18.5	18.5	18.6	18.6	18.6	18.7	18.7
95°	36.9	36.9	36.9	36.8	36.5	36.3	36.0	35.7
97.5°	62.0	62.0	62.0	61.9	61.9	61.9	61.9	61.8
100°	79.5	79.5	79.5	79.4	79.3	79.2	79.1	78.9
102.5°	98.6	98.7	98.8	98.8	98.7	98.5	98.4	98.3
105°	127.2	127.4	127.7	127.8	127.8	127.8	127.8	127.8
107.5°	158.1	158.2	158.3	158.0	157.4	156.9	156.3	155.7
110°	179.0	179.0	179.0	178.9	178.5	178.1	177.7	177.3

TEST NUMBER: P331301-840

CATALOG NUMBER: SA2XXDIP-C485D530U840-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	200.2	199.9	199.5	199.2	198.9	198.6	198.3	198.1
115°	232.4	232.3	232.2	231.9	231.5	231.2	230.8	230.4
117.5°	263.6	263.3	263.0	262.7	262.3	261.9	261.5	261.1
120°	284.5	284.5	284.5	284.3	283.9	283.6	283.2	282.8
122.5°	306.0	305.7	305.4	305.1	304.8	304.5	304.3	304.0
125°	337.8	337.5	337.1	336.8	336.7	336.6	336.4	336.3
127.5°	368.8	368.3	367.9	367.4	367.0	366.6	366.2	365.8
130°	389.9	389.7	389.4	389.0	388.5	388.0	387.5	387.0
132.5°	410.5	409.9	409.4	408.9	408.5	408.1	407.7	407.3
135°	440.9	440.7	440.6	440.3	440.0	439.6	439.2	438.8
137.5°	469.9	469.8	469.7	469.4	468.9	468.4	467.9	467.4
140°	489.5	489.5	489.5	489.3	488.7	488.2	487.7	487.2
142.5°	507.2	507.3	507.4	507.2	506.6	506.1	505.6	505.1
145°	534.1	534.2	534.3	534.1	533.6	533.1	532.6	532.1
147.5°	557.6	558.0	558.3	558.2	557.6	557.1	556.6	556.1
150°	572.6	573.0	573.4	573.4	573.0	572.6	572.2	571.9
152.5°	587.5	588.0	588.5	588.5	588.0	587.5	587.0	586.6
155°	606.5	607.1	607.8	607.9	607.5	607.1	606.7	606.4
157.5°	624.0	624.9	625.8	625.9	625.3	624.7	624.1	623.4
160°	634.4	635.2	635.9	636.1	635.6	635.1	634.5	634.0
162.5°	643.8	644.7	645.6	645.7	645.1	644.5	643.9	643.3
165°	656.0	656.9	657.7	657.9	657.2	656.6	656.0	655.3
167.5°	666.0	666.9	667.8	667.9	667.2	666.6	665.9	665.2
170°	671.6	672.5	673.3	673.4	672.6	671.9	671.1	670.3
172.5°	675.7	676.6	677.4	677.5	676.8	676.0	675.2	674.5
175°	680.1	681.1	682.0	682.1	681.3	680.4	679.7	678.9
177.5°	682.3	682.9	683.5	683.5	682.9	682.3	681.7	681.1
180°	682.4	682.4	682.4	682.4	682.4	682.4	682.4	682.4

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