

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: P331301-940

Luminaire Tested: **SA2XXDIP-C485D530U940-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P331301-940  
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-C485D530U940-4F0-1E-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**

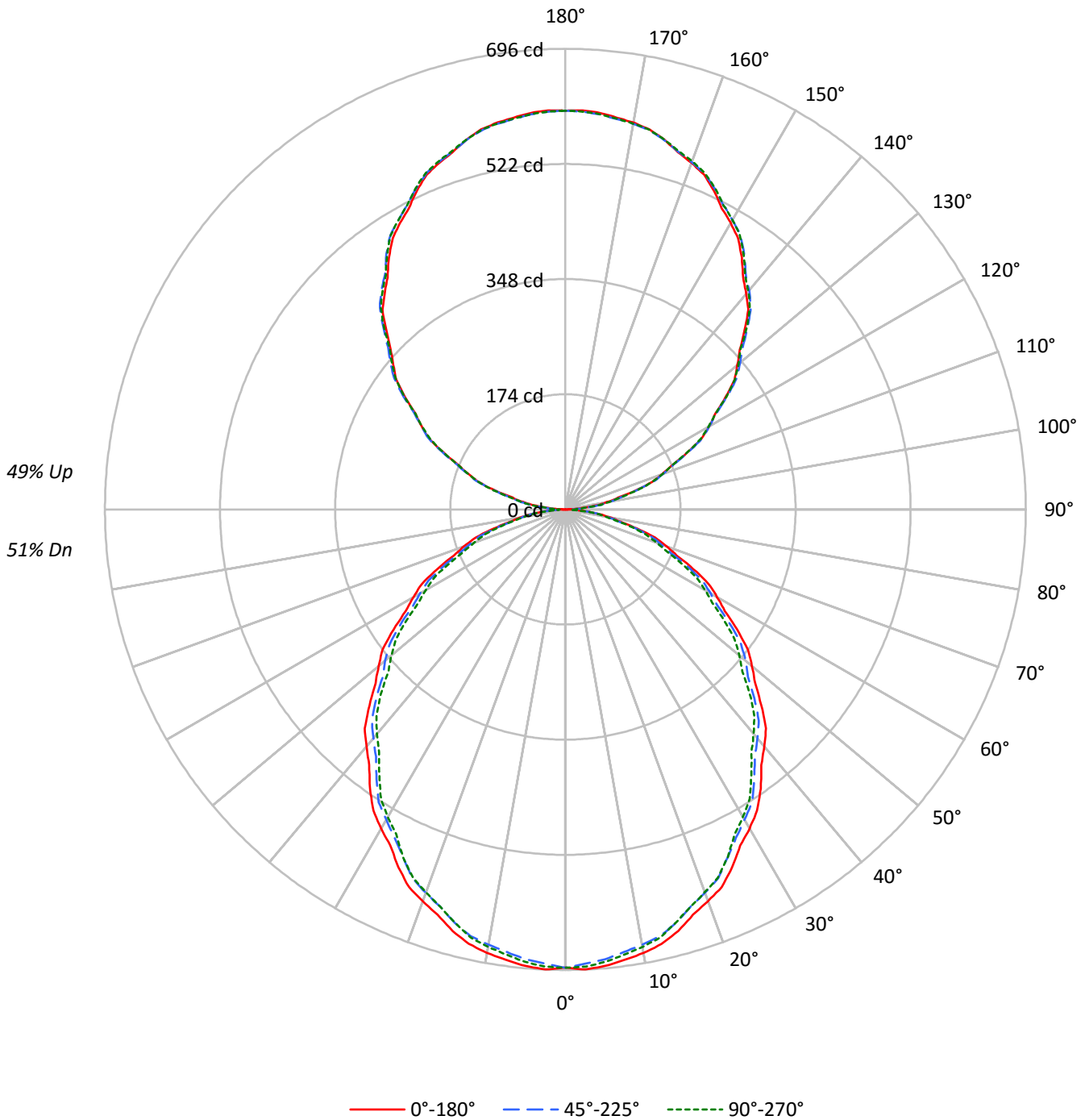
Lumens per Lamp: N/A  
Luminaire Lumens: 3449.4 lumens  
Efficiency: N/A  
Efficacy: 105.2 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: General Diffuse

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	
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°	11183	11183	11183
5°	11225	11063	11128
10°	11158	10952	11006
15°	11020	10810	10798
20°	10825	10596	10584
25°	10630	10334	10334
30°	10381	10094	10006
35°	10147	9806	9662
40°	9853	9518	9333
45°	9565	9229	9001
50°	9251	8932	8616
55°	8923	8586	8267
60°	8557	8173	7869
65°	8164	7759	7404
70°	7671	7260	6916
75°	6981	6687	6525
80°	6192	6007	5700
85°	5057	4798	4316



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	65.1	1.9
10°-20°	183.3	5.3
20°-30°	269.4	7.8
30°-40°	312.9	9.1
40°-50°	312.5	9.1
50°-60°	272.6	7.9
60°-70°	201.5	5.8
70°-80°	114.1	3.3
80°-90°	33.1	1.0
90°-100°	38.2	1.1
100°-110°	118.6	3.4
110°-120°	202.7	5.9
120°-130°	266.6	7.7
130°-140°	299.2	8.7
140°-150°	293.4	8.5
150°-160°	246.1	7.1
160°-170°	163.2	4.7
170°-180°	57.0	1.7
0°-30°	517.7	15.0
0°-40°	830.6	24.1
0°-60°	1415.7	41.0
0°-90°	1764.5	51.2
90°-120°	359.5	10.4
90°-150°	1218.6	35.3
90°-180°	1685.0	48.8
0°-180°	3449.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	693	693	693	693	693	
5°	693	690	683	688	687	66
15°	659	655	647	649	646	186
25°	597	591	580	581	580	274
35°	515	508	498	494	490	321
45°	419	414	404	397	394	323
55°	317	313	305	297	294	283
65°	214	210	203	197	194	211
75°	112	110	107	104	105	120
85°	27	27	26	24	23	31
90°	0	7	18	17	17	3
95°	26	31	32	32	32	30
105°	109	111	112	113	113	115
115°	203	206	206	205	203	201
125°	296	300	299	298	297	264
135°	383	388	390	389	387	296
145°	465	468	471	472	470	290
155°	531	533	534	537	536	244
165°	578	578	578	581	579	163
175°	602	600	599	602	600	57
180°	602	602	602	602	602	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	692.6	692.6	692.6	692.6	692.6	692.6	692.6	692.6	692.6	692.6	692.6
2.5°	695.8	695.2	694.6	694.0	693.4	692.5	691.2	689.9	688.6	687.2	688.5
5°	692.6	692.0	691.4	690.8	690.3	689.1	687.5	685.9	684.2	682.6	683.8
7.5°	686.4	685.5	684.7	683.7	682.8	681.5	679.8	678.2	676.5	674.8	676.1
10°	680.6	679.6	678.5	677.5	676.5	675.0	673.2	671.5	669.8	668.0	669.1
12.5°	672.6	671.7	670.7	669.9	669.0	667.6	665.8	664.1	662.3	660.5	661.3
15°	659.3	658.4	657.5	656.7	655.8	654.3	652.4	650.5	648.5	646.7	647.2
17.5°	642.2	641.4	640.5	639.6	638.7	637.3	635.3	633.4	631.4	629.5	630.2
20°	630.0	629.1	628.2	627.3	626.4	625.0	622.9	620.8	618.8	616.7	617.2
22.5°	617.8	616.5	615.3	614.0	612.8	611.2	609.2	607.3	605.3	603.3	603.4
25°	596.7	595.5	594.3	593.2	592.0	590.1	587.6	585.1	582.6	580.1	580.3
27.5°	572.7	571.7	570.6	569.5	568.5	566.9	565.0	562.9	561.0	559.0	558.6
30°	556.8	555.5	554.4	553.2	552.0	550.3	548.0	545.9	543.7	541.4	541.0
32.5°	539.7	538.8	537.8	536.8	535.9	534.2	531.9	529.6	527.3	525.0	524.1
35°	514.8	513.3	511.8	510.3	508.9	506.9	504.6	502.2	499.8	497.5	496.6
37.5°	486.7	485.4	484.1	482.8	481.4	479.7	477.2	474.9	472.5	470.2	469.0
40°	467.5	466.3	465.1	464.0	462.8	461.0	458.6	456.3	453.9	451.6	450.2
42.5°	448.9	447.6	446.5	445.3	444.2	442.4	440.0	437.7	435.2	432.8	431.4
45°	418.9	417.9	416.8	415.8	414.7	413.1	410.9	408.7	406.4	404.2	402.6
47.5°	389.1	388.1	387.1	386.1	385.1	383.5	381.2	378.9	376.6	374.3	372.6
50°	368.3	367.6	366.8	366.0	365.3	363.9	361.9	359.8	357.7	355.6	353.6
52.5°	348.0	347.1	346.1	345.1	344.1	342.7	340.7	338.8	336.8	334.8	333.1
55°	317.0	316.1	315.2	314.3	313.4	312.1	310.3	308.5	306.7	305.0	303.3
57.5°	285.8	285.1	284.4	283.7	283.0	281.7	279.7	277.8	275.8	273.8	272.1
60°	265.0	264.5	263.9	263.2	262.7	261.4	259.3	257.2	255.1	253.1	251.5
62.5°	244.8	243.9	242.9	241.9	241.0	239.8	238.2	236.6	235.0	233.4	231.8
65°	213.7	212.9	212.0	211.1	210.3	209.0	207.6	206.1	204.6	203.1	201.8
67.5°	182.2	181.5	180.7	180.0	179.3	178.3	177.0	175.7	174.3	173.0	172.0
70°	162.5	161.9	161.3	160.7	160.2	159.2	157.8	156.5	155.2	153.8	152.8
72.5°	142.2	141.7	141.1	140.4	139.9	139.2	138.3	137.4	136.6	135.7	134.6
75°	111.9	111.6	111.3	111.0	110.7	110.2	109.4	108.7	108.0	107.2	106.3
77.5°	84.7	84.2	83.7	83.2	82.7	82.3	82.0	81.7	81.4	81.1	80.7
80°	66.6	66.4	66.3	66.2	66.0	65.8	65.5	65.2	64.9	64.6	64.1
82.5°	49.6	49.5	49.5	49.5	49.4	49.3	49.1	49.0	48.8	48.6	48.1
85°	27.3	27.2	27.0	26.8	26.8	26.6	26.4	26.3	26.1	25.9	25.5
87.5°	9.7	9.7	9.7	9.8	9.8	10.0	10.3	10.5	10.8	11.1	10.6
90°	0.5	1.9	3.2	4.5	6.0	7.8	10.3	12.8	15.3	17.8	17.6
92.5°	9.1	10.1	11.1	12.0	13.0	13.8	14.4	15.0	15.6	16.1	16.2
95°	26.5	27.6	28.7	29.9	30.9	31.7	31.8	32.1	32.3	32.5	32.5
97.5°	48.3	49.3	50.3	51.3	52.3	53.0	53.4	53.9	54.3	54.8	54.8
100°	64.6	65.5	66.3	67.3	68.2	68.8	69.2	69.5	69.8	70.2	70.2
102.5°	81.7	82.4	83.1	83.8	84.5	85.2	85.6	86.0	86.4	86.9	86.9
105°	109.3	109.7	110.0	110.3	110.7	110.9	111.2	111.4	111.6	111.9	112.1
107.5°	137.2	137.7	138.2	138.7	139.2	139.5	139.5	139.5	139.5	139.5	139.6
110°	155.1	155.8	156.4	157.1	157.8	158.1	158.1	158.1	158.1	158.1	158.1



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	174.6	175.3	175.9	176.6	177.4	177.6	177.5	177.5	177.4	177.3	177.0
115°	203.4	204.1	204.7	205.5	206.1	206.3	206.1	205.9	205.6	205.5	205.4
117.5°	232.1	233.0	233.9	234.8	235.7	235.9	235.2	234.5	233.9	233.3	233.0
120°	251.2	252.1	253.0	253.9	254.9	254.9	253.9	253.0	252.1	251.2	251.2
122.5°	268.7	269.7	270.9	272.0	273.0	273.2	272.6	272.0	271.3	270.7	270.5
125°	296.0	296.9	298.0	299.0	300.0	300.3	300.0	299.7	299.3	299.0	298.6
127.5°	322.4	323.8	325.0	326.4	327.6	328.1	327.7	327.3	326.9	326.5	326.0
130°	339.2	340.6	342.1	343.6	345.0	345.6	345.4	345.2	345.0	344.7	344.6
132.5°	357.8	359.1	360.3	361.5	362.7	363.3	363.4	363.4	363.5	363.5	363.0
135°	382.9	384.1	385.4	386.6	387.9	388.6	388.8	389.1	389.3	389.5	389.4
137.5°	409.2	410.3	411.3	412.3	413.3	413.9	414.3	414.6	414.8	415.1	415.0
140°	425.1	426.1	427.1	428.1	429.2	430.0	430.5	431.1	431.7	432.2	432.2
142.5°	441.4	442.4	443.4	444.4	445.4	446.1	446.6	446.9	447.3	447.6	447.7
145°	464.8	465.6	466.4	467.2	468.0	468.7	469.3	470.0	470.7	471.4	471.4
147.5°	485.6	486.5	487.5	488.5	489.4	490.1	490.5	491.0	491.4	492.0	492.1
150°	499.9	500.5	501.2	501.9	502.6	503.1	503.5	504.0	504.4	505.0	505.2
152.5°	512.5	513.2	513.8	514.5	515.1	515.8	516.3	516.8	517.4	518.0	518.4
155°	531.4	531.7	532.1	532.4	532.7	533.1	533.4	533.8	534.0	534.4	535.0
157.5°	547.5	547.8	548.0	548.2	548.5	548.7	548.8	549.1	549.3	549.5	550.3
160°	557.3	557.5	557.8	557.9	558.2	558.4	558.5	558.6	558.7	558.8	559.5
162.5°	566.2	566.3	566.3	566.4	566.4	566.5	566.6	566.8	566.9	566.9	567.8
165°	578.2	578.0	577.9	577.8	577.7	577.7	577.7	577.7	577.7	577.7	578.5
167.5°	588.1	587.8	587.5	587.1	586.7	586.6	586.6	586.6	586.5	586.5	587.3
170°	593.4	593.1	592.7	592.4	592.1	591.8	591.7	591.6	591.5	591.4	592.2
172.5°	597.1	596.7	596.4	596.0	595.8	595.5	595.4	595.3	595.1	595.0	595.8
175°	601.5	601.2	600.8	600.6	600.2	599.9	599.7	599.5	599.2	599.0	599.8
177.5°	603.4	603.1	602.8	602.5	602.3	602.1	601.9	601.7	601.5	601.4	601.9
180°	602.5	602.5	602.5	602.5	602.5	602.5	602.5	602.5	602.5	602.5	602.5



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	692.6	692.6	692.6	692.6	692.6	692.6	692.6	692.6
2.5°	689.6	690.8	692.0	692.5	692.2	692.0	691.8	691.5
5°	685.0	686.2	687.3	687.8	687.5	687.2	686.9	686.6
7.5°	677.3	678.4	679.7	680.0	679.8	679.4	679.0	678.8
10°	670.3	671.5	672.7	673.1	672.6	672.2	671.7	671.3
12.5°	662.2	663.0	663.8	664.1	663.7	663.4	663.1	662.7
15°	647.8	648.5	649.0	648.9	648.2	647.5	646.8	646.0
17.5°	630.8	631.5	632.2	632.1	631.4	630.8	630.1	629.4
20°	617.6	618.0	618.5	618.4	617.8	617.2	616.6	616.0
22.5°	603.5	603.6	603.7	603.6	603.2	602.9	602.5	602.2
25°	580.7	580.9	581.2	581.2	580.9	580.7	580.3	580.1
27.5°	558.1	557.7	557.2	556.7	556.0	555.3	554.6	553.8
30°	540.6	540.1	539.7	539.1	538.5	538.0	537.3	536.7
32.5°	523.3	522.5	521.7	521.0	520.4	519.9	519.2	518.6
35°	495.7	494.8	493.9	493.1	492.4	491.6	490.9	490.2
37.5°	468.0	466.9	465.8	464.8	464.1	463.4	462.7	462.1
40°	448.9	447.5	446.2	445.2	444.6	444.1	443.4	442.8
42.5°	430.0	428.6	427.0	426.0	425.1	424.3	423.5	422.6
45°	401.0	399.4	397.7	396.6	396.0	395.5	394.8	394.2
47.5°	370.9	369.1	367.4	366.1	365.2	364.4	363.6	362.7
50°	351.5	349.4	347.3	345.9	345.2	344.5	343.7	343.0
52.5°	331.4	329.7	328.0	326.6	325.7	324.7	323.7	322.7
55°	301.5	299.7	297.9	296.7	295.9	295.2	294.4	293.7
57.5°	270.4	268.6	266.9	265.7	265.1	264.6	264.0	263.4
60°	249.8	248.2	246.6	245.5	245.0	244.6	244.2	243.7
62.5°	230.3	228.8	227.3	226.3	225.7	225.2	224.6	224.0
65°	200.5	199.1	197.8	196.7	196.0	195.3	194.6	193.8
67.5°	170.9	169.9	168.9	168.1	167.5	166.8	166.3	165.7
70°	151.8	150.7	149.7	148.9	148.3	147.7	147.1	146.5
72.5°	133.7	132.6	131.6	130.8	130.4	129.8	129.4	128.9
75°	105.4	104.6	103.7	103.3	103.7	104.0	104.2	104.6
77.5°	80.3	79.8	79.4	78.9	78.5	78.1	77.7	77.2
80°	63.7	63.2	62.9	62.4	62.2	61.9	61.5	61.3
82.5°	47.5	46.9	46.4	46.0	46.0	45.9	45.8	45.8
85°	25.1	24.6	24.2	23.9	23.7	23.6	23.5	23.3
87.5°	10.3	9.8	9.5	9.2	9.1	9.0	8.9	8.8
90°	17.4	17.1	16.9	16.9	16.9	17.0	17.2	17.3
92.5°	16.2	16.3	16.3	16.4	16.4	16.4	16.5	16.5
95°	32.5	32.5	32.5	32.5	32.2	32.0	31.7	31.6
97.5°	54.8	54.8	54.8	54.7	54.7	54.7	54.7	54.6
100°	70.2	70.2	70.2	70.1	70.0	69.9	69.8	69.6
102.5°	87.0	87.1	87.2	87.2	87.1	86.9	86.9	86.8
105°	112.4	112.5	112.8	112.9	112.9	112.9	112.9	112.9
107.5°	139.6	139.7	139.8	139.6	139.0	138.6	138.0	137.5
110°	158.1	158.1	158.1	158.0	157.7	157.3	156.9	156.6





TEST NUMBER: P331301-940

CATALOG NUMBER: SA2XXDIP-C485D530U940-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	176.7	176.5	176.2	175.9	175.7	175.4	175.1	175.0
115°	205.2	205.1	205.0	204.7	204.4	204.1	203.8	203.4
117.5°	232.7	232.5	232.2	231.9	231.6	231.2	230.9	230.5
120°	251.2	251.2	251.2	251.0	250.7	250.4	250.0	249.7
122.5°	270.2	269.9	269.7	269.4	269.1	268.9	268.7	268.4
125°	298.3	298.0	297.7	297.4	297.3	297.2	297.0	296.9
127.5°	325.7	325.2	324.9	324.4	324.0	323.7	323.3	323.0
130°	344.3	344.1	343.8	343.5	343.0	342.6	342.1	341.7
132.5°	362.5	361.9	361.5	361.1	360.7	360.3	360.0	359.6
135°	389.3	389.1	389.1	388.8	388.5	388.2	387.8	387.4
137.5°	414.9	414.8	414.7	414.5	414.0	413.6	413.1	412.7
140°	432.2	432.2	432.2	432.0	431.5	431.1	430.6	430.2
142.5°	447.8	447.9	448.0	447.8	447.4	446.9	446.5	446.0
145°	471.6	471.7	471.8	471.6	471.2	470.7	470.3	469.8
147.5°	492.4	492.7	492.9	492.8	492.4	492.0	491.5	491.1
150°	505.6	506.0	506.3	506.3	506.0	505.6	505.2	505.0
152.5°	518.8	519.2	519.7	519.7	519.2	518.8	518.4	518.0
155°	535.6	536.1	536.7	536.8	536.5	536.1	535.7	535.5
157.5°	551.0	551.8	552.6	552.7	552.1	551.6	551.1	550.5
160°	560.2	560.9	561.5	561.7	561.2	560.8	560.3	559.8
162.5°	568.5	569.3	570.1	570.2	569.6	569.1	568.6	568.0
165°	579.3	580.1	580.8	580.9	580.3	579.8	579.3	578.6
167.5°	588.1	588.9	589.7	589.8	589.2	588.6	588.0	587.4
170°	593.0	593.8	594.5	594.6	593.9	593.3	592.5	591.9
172.5°	596.6	597.4	598.2	598.2	597.6	596.9	596.2	595.6
175°	600.6	601.4	602.2	602.3	601.5	600.8	600.2	599.5
177.5°	602.4	603.0	603.5	603.5	603.0	602.4	601.9	601.4
180°	602.5	602.5	602.5	602.5	602.5	602.5	602.5	602.5

(END OF REPORT)