

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: P331293-930

Luminaire Tested: **SA2XXDIP-C485D330U930-4F0-1E-UDD-F4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331293-930
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-16,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXDIP-C485D330U930-4F0-1E-UDD-F4
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 330 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

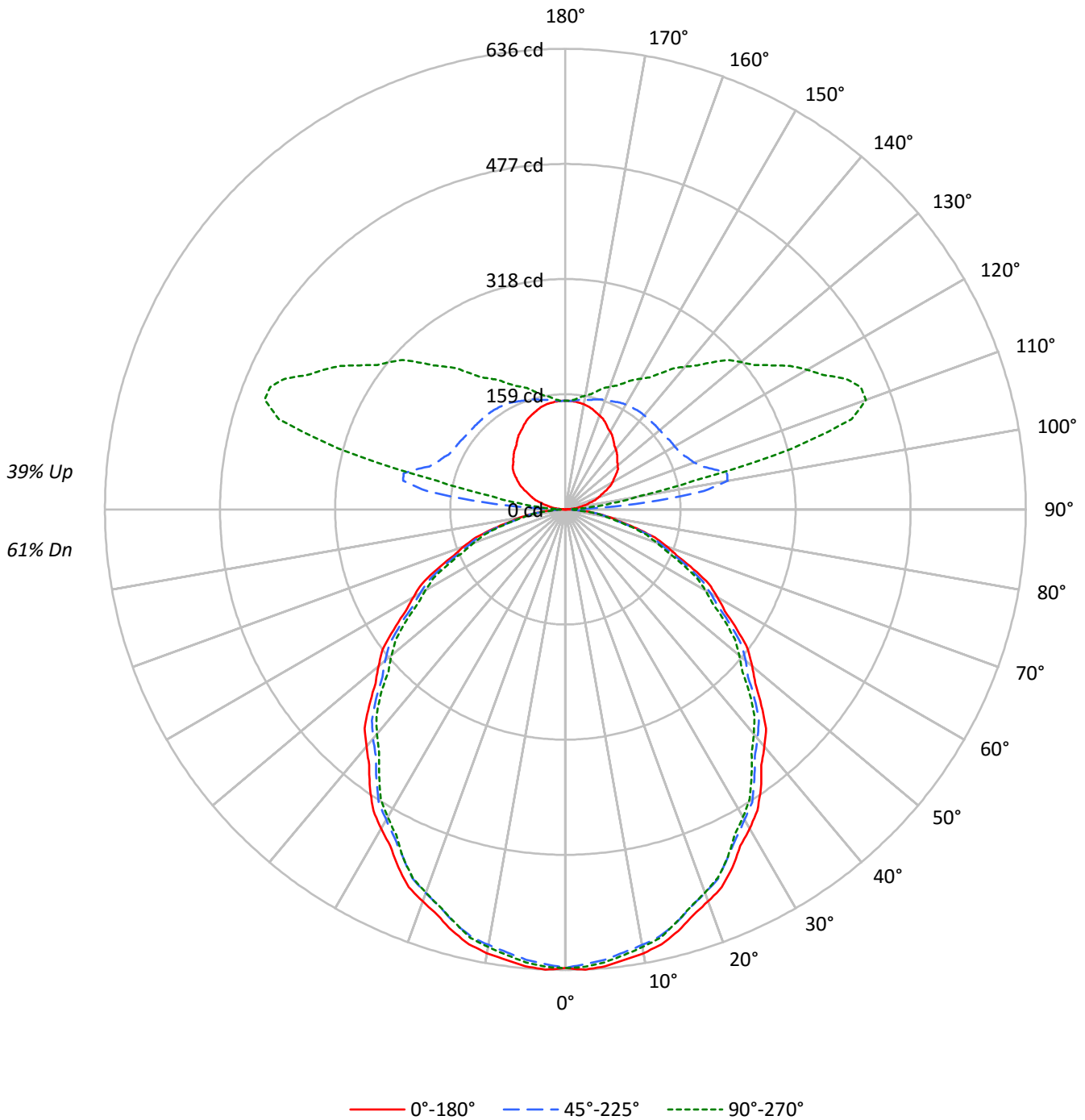
Lumens per Lamp: N/A
Luminaire Lumens: 2654.8 lumens
Efficiency: N/A
Efficacy: 96.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 27.5
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: P331293-930
CATALOG NUMBER: SA2XXDIP-C485D330U930-4F0-1E-UDD-F4

Luminous Intensity Polar Plot





TEST NUMBER: P331293-930

CATALOG NUMBER: SA2XXDIP-C485D330U930-4F0-1E-UDD-F4

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
RC	80									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	110	110	110	110	103	103	103	103	89	89	89	77	77	77	66	66	66	66	66	66	61																
1	100	96	92	88	94	90	86	83	78	76	73	68	66	64	58	57	56	56	56	56	51																
2	91	84	77	72	85	78	73	68	69	64	61	60	57	54	51	49	47	47	47	47	43																
3	83	74	66	60	78	69	62	57	61	55	51	53	49	45	46	43	40	40	40	40	36																
4	76	65	57	51	71	61	54	48	54	48	44	47	43	39	41	37	34	34	34	34	31																
5	70	58	50	44	65	55	47	42	48	42	38	42	38	34	37	33	30	30	30	30	27																
6	65	52	44	38	60	49	42	36	44	38	33	38	33	30	33	29	26	26	26	26	24																
7	60	47	39	33	56	45	37	32	40	34	29	35	30	26	30	27	24	24	24	24	21																
8	55	43	35	30	52	41	33	28	36	30	26	32	27	24	28	24	21	21	21	21	19																
9	52	39	32	26	48	37	30	25	33	27	23	29	25	21	26	22	19	19	19	19	17																
10	48	36	29	24	45	34	27	23	31	25	21	27	23	19	24	20	17	17	17	17	15																

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10224	10224	10224
5°	10263	10115	10175
10°	10203	10012	10063
15°	10076	9884	9872
20°	9897	9689	9677
25°	9720	9449	9449
30°	9491	9229	9148
35°	9278	8966	8834
40°	9010	8703	8534
45°	8745	8439	8229
50°	8457	8166	7877
55°	8158	7848	7561
60°	7824	7472	7195
65°	7465	7095	6770
70°	7010	6637	6326
75°	6382	6114	5964
80°	5662	5486	5207
85°	4613	4390	3946



TEST NUMBER: P331293-930

CATALOG NUMBER: SA2XXDIP-C485D330U930-4F0-1E-UDD-F4

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	59.5	2.2
10°-20°	167.6	6.3
20°-30°	246.3	9.3
30°-40°	286.1	10.8
40°-50°	285.8	10.8
50°-60°	249.2	9.4
60°-70°	184.3	6.9
70°-80°	104.4	3.9
80°-90°	29.4	1.1
90°-100°	59.9	2.3
100°-110°	203.2	7.7
110°-120°	215.9	8.1
120°-130°	177.7	6.7
130°-140°	142.7	5.4
140°-150°	107.9	4.1
150°-160°	75.8	2.9
160°-170°	44.6	1.7
170°-180°	14.5	0.5
0°-30°	473.4	17.8
0°-40°	759.4	28.6
0°-60°	1294.4	48.8
0°-90°	1612.4	60.7
90°-120°	479.1	18.0
90°-150°	907.4	34.2
90°-180°	1042.0	39.2
0°-180°	2654.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	633	633	633	633	633	
5°	633	631	624	629	628	60
15°	603	599	591	593	591	170
25°	546	540	530	531	530	251
35°	471	464	455	451	448	294
45°	383	378	370	363	360	295
55°	290	286	279	272	269	259
65°	195	192	186	180	177	193
75°	102	101	98	95	96	109
85°	25	24	24	22	21	29
90°	0	4	10	9	10	2
95°	10	25	113	43	33	11
105°	35	53	213	382	325	37
115°	62	78	179	369	427	61
125°	86	102	172	299	347	77
135°	101	121	170	251	287	78
145°	116	133	169	210	229	73
155°	132	142	164	185	193	61
165°	144	148	157	166	169	40
175°	150	150	151	153	152	14
180°	150	150	150	150	150	



TEST NUMBER: P331293-930

CATALOG NUMBER: SA2XXDIP-C485D330U930-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	633.2	633.2	633.2	633.2	633.2	633.2	633.2	633.2	633.2	633.2	633.2
2.5°	636.2	635.6	635.1	634.5	634.0	633.2	631.9	630.8	629.6	628.4	629.5
5°	633.2	632.7	632.2	631.6	631.1	630.1	628.6	627.1	625.6	624.1	625.2
7.5°	627.6	626.8	626.0	625.1	624.3	623.1	621.6	620.1	618.6	617.0	618.2
10°	622.3	621.3	620.4	619.5	618.5	617.2	615.6	614.0	612.4	610.7	611.8
12.5°	615.0	614.2	613.3	612.5	611.6	610.4	608.8	607.2	605.5	603.9	604.6
15°	602.8	602.0	601.2	600.4	599.6	598.3	596.5	594.8	593.0	591.3	591.7
17.5°	587.2	586.4	585.6	584.8	584.0	582.7	580.9	579.1	577.3	575.5	576.2
20°	576.0	575.2	574.4	573.6	572.7	571.4	569.5	567.6	565.7	563.9	564.3
22.5°	564.8	563.7	562.6	561.4	560.3	558.8	557.0	555.2	553.4	551.6	551.7
25°	545.6	544.5	543.4	542.3	541.3	539.6	537.3	534.9	532.6	530.4	530.6
27.5°	523.7	522.7	521.7	520.7	519.8	518.4	516.6	514.7	512.9	511.1	510.7
30°	509.1	507.9	506.9	505.8	504.7	503.1	501.1	499.1	497.1	495.0	494.6
32.5°	493.4	492.6	491.7	490.8	490.0	488.4	486.3	484.2	482.1	480.0	479.2
35°	470.7	469.3	468.0	466.6	465.3	463.5	461.4	459.2	457.0	454.9	454.0
37.5°	445.0	443.8	442.6	441.4	440.2	438.5	436.3	434.2	432.0	429.9	428.8
40°	427.5	426.3	425.3	424.2	423.1	421.5	419.3	417.2	415.0	412.9	411.6
42.5°	410.4	409.3	408.2	407.2	406.1	404.5	402.3	400.1	397.9	395.7	394.4
45°	383.0	382.0	381.1	380.2	379.2	377.7	375.7	373.7	371.6	369.6	368.1
47.5°	355.7	354.8	353.9	353.0	352.1	350.7	348.5	346.4	344.3	342.2	340.6
50°	336.7	336.1	335.3	334.7	334.0	332.7	330.8	329.0	327.0	325.1	323.3
52.5°	318.2	317.3	316.4	315.5	314.6	313.3	311.5	309.7	307.9	306.1	304.6
55°	289.8	289.0	288.2	287.4	286.6	285.4	283.7	282.1	280.5	278.8	277.3
57.5°	261.3	260.7	260.0	259.4	258.8	257.6	255.8	254.0	252.2	250.4	248.7
60°	242.3	241.8	241.2	240.7	240.2	239.0	237.1	235.1	233.3	231.4	229.9
62.5°	223.8	223.0	222.1	221.2	220.4	219.2	217.8	216.3	214.8	213.4	212.0
65°	195.4	194.6	193.8	193.0	192.2	191.1	189.8	188.4	187.0	185.7	184.5
67.5°	166.6	165.9	165.3	164.6	164.0	163.1	161.8	160.6	159.4	158.2	157.3
70°	148.5	148.1	147.5	146.9	146.4	145.5	144.3	143.1	141.9	140.6	139.7
72.5°	130.0	129.6	129.0	128.4	127.9	127.3	126.5	125.6	124.9	124.1	123.1
75°	102.3	102.0	101.7	101.5	101.2	100.8	100.0	99.4	98.7	98.0	97.2
77.5°	77.5	77.0	76.6	76.1	75.6	75.3	75.0	74.7	74.4	74.2	73.8
80°	60.9	60.7	60.7	60.5	60.3	60.2	59.8	59.6	59.4	59.0	58.6
82.5°	45.3	45.2	45.2	45.2	45.2	45.1	44.9	44.8	44.6	44.4	43.9
85°	24.9	24.9	24.7	24.5	24.5	24.3	24.1	24.1	23.9	23.7	23.3
87.5°	8.8	8.8	8.8	8.7	8.6	8.6	8.6	8.8	9.0	8.8	8.4
90°	0.3	1.1	2.3	2.9	3.4	4.3	5.8	7.7	9.5	9.8	9.5
92.5°	3.5	5.1	7.2	8.4	10.4	13.0	19.6	28.8	36.9	37.4	31.6
95°	10.1	11.3	14.1	16.7	21.3	28.2	41.5	66.5	100.0	112.9	98.8
97.5°	16.4	17.9	21.0	24.9	30.2	38.1	54.7	89.7	145.2	192.7	202.2
100°	22.2	23.1	25.6	30.2	36.0	44.1	59.4	94.5	156.7	227.6	269.0
102.5°	27.5	28.1	30.7	35.3	41.3	49.4	63.5	94.7	152.3	228.7	293.9
105°	35.1	36.3	38.3	42.6	49.0	57.1	70.6	96.2	143.7	213.4	290.1
107.5°	43.5	44.4	46.3	50.3	56.6	64.7	77.9	100.2	139.5	197.1	264.8
110°	49.0	50.1	51.9	55.6	61.6	70.0	82.7	103.4	138.6	189.2	248.9



TEST NUMBER: P331293-930

CATALOG NUMBER: SA2XXDIP-C485D330U930-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	54.1	55.2	57.2	60.7	66.4	75.1	87.3	106.9	138.8	184.2	237.8
115°	62.0	63.3	65.1	68.6	74.4	82.1	94.5	112.0	140.0	178.6	224.1
117.5°	70.1	71.3	73.0	76.1	81.6	89.7	101.1	117.6	142.1	175.9	215.5
120°	75.2	76.3	78.1	80.6	86.4	94.5	105.7	121.3	143.5	174.3	210.8
122.5°	80.1	81.0	82.7	85.5	91.2	99.5	110.1	124.5	145.0	173.3	206.9
125°	86.4	87.3	89.0	92.5	98.2	106.3	116.7	129.6	147.5	171.7	201.4
127.5°	91.5	92.6	95.1	98.9	104.4	112.7	122.8	134.4	149.9	170.7	196.2
130°	94.5	95.6	98.5	102.6	108.4	116.3	126.5	137.4	151.8	170.2	192.7
132.5°	97.3	98.7	101.7	106.0	112.0	120.1	129.7	140.4	153.7	170.0	190.0
135°	101.4	102.6	106.0	110.3	117.0	125.0	134.3	144.3	155.9	169.7	186.1
137.5°	105.3	106.7	110.1	114.8	121.3	128.8	137.9	147.3	157.8	169.6	183.4
140°	108.4	109.5	112.9	117.6	123.8	131.3	140.0	149.0	158.7	169.4	181.7
142.5°	111.3	112.3	115.4	120.1	126.2	133.2	141.6	150.3	159.4	169.4	180.2
145°	115.8	117.0	119.8	124.2	130.0	136.2	144.1	152.1	160.1	168.8	178.1
147.5°	120.7	121.5	124.3	128.2	133.1	138.7	146.0	153.1	160.4	167.8	175.9
150°	123.8	124.7	127.0	130.8	135.1	140.3	146.9	153.5	160.1	167.1	174.0
152.5°	127.1	127.5	129.8	133.1	137.2	141.9	147.8	153.8	159.7	165.9	172.4
155°	131.7	131.9	133.6	136.8	140.0	144.3	149.2	154.1	159.0	163.9	169.4
157.5°	135.4	135.7	137.1	139.9	142.4	146.0	150.2	154.1	157.7	161.8	166.6
160°	137.9	138.3	139.4	141.7	144.1	147.2	150.7	154.1	157.0	160.5	164.4
162.5°	140.6	140.3	141.5	143.3	145.4	147.9	150.9	153.8	156.3	159.3	162.7
165°	143.5	143.2	143.7	145.4	146.9	148.6	151.2	153.3	155.0	157.0	159.6
167.5°	145.9	145.5	146.0	147.2	148.2	149.3	151.2	152.9	153.7	155.0	156.6
170°	147.5	146.9	147.2	148.1	148.6	149.5	150.9	152.4	153.0	153.8	155.0
172.5°	148.4	148.1	147.9	148.8	149.1	149.8	150.7	151.7	152.1	152.5	153.4
175°	149.5	149.2	149.0	149.5	149.5	149.8	150.3	150.9	150.7	150.9	151.2
177.5°	150.0	149.5	149.4	149.8	149.8	149.8	150.0	150.5	150.0	149.8	150.0
180°	149.8	149.8	149.8	149.8	149.8	149.8	149.8	149.8	149.8	149.8	149.8



TEST NUMBER: P331293-930

CATALOG NUMBER: SA2XXDIP-C485D330U930-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	633.2	633.2	633.2	633.2	633.2	633.2	633.2	633.2
2.5°	630.6	631.6	632.7	633.2	632.9	632.7	632.5	632.3
5°	626.3	627.4	628.4	628.8	628.6	628.3	628.0	627.8
7.5°	619.2	620.3	621.4	621.7	621.5	621.2	620.9	620.6
10°	612.9	614.0	615.1	615.4	615.0	614.6	614.2	613.8
12.5°	605.4	606.2	606.9	607.2	606.8	606.6	606.3	605.9
15°	592.3	592.9	593.4	593.3	592.6	592.0	591.3	590.6
17.5°	576.7	577.4	578.0	578.0	577.3	576.7	576.1	575.4
20°	564.7	565.1	565.5	565.4	564.8	564.3	563.8	563.2
22.5°	551.8	551.9	552.0	551.9	551.5	551.2	550.9	550.6
25°	530.9	531.2	531.4	531.4	531.2	530.9	530.6	530.4
27.5°	510.3	509.9	509.5	509.0	508.3	507.7	507.0	506.4
30°	494.2	493.8	493.4	492.9	492.4	491.9	491.3	490.7
32.5°	478.5	477.8	477.0	476.4	475.8	475.3	474.7	474.2
35°	453.2	452.4	451.6	450.9	450.2	449.5	448.8	448.2
37.5°	427.9	426.9	425.9	425.0	424.4	423.7	423.1	422.5
40°	410.4	409.2	408.0	407.1	406.5	406.0	405.4	404.9
42.5°	393.1	391.8	390.4	389.5	388.7	387.9	387.2	386.4
45°	366.6	365.2	363.6	362.6	362.1	361.6	361.0	360.4
47.5°	339.1	337.5	335.9	334.8	333.9	333.2	332.4	331.6
50°	321.4	319.4	317.6	316.3	315.6	315.0	314.2	313.6
52.5°	303.0	301.4	299.9	298.6	297.7	296.9	296.0	295.1
55°	275.7	274.0	272.4	271.3	270.5	269.9	269.2	268.6
57.5°	247.2	245.6	244.0	243.0	242.4	241.9	241.4	240.8
60°	228.4	226.9	225.4	224.5	224.0	223.6	223.2	222.8
62.5°	210.6	209.2	207.8	206.9	206.4	205.9	205.4	204.8
65°	183.3	182.1	180.8	179.9	179.2	178.6	177.9	177.2
67.5°	156.3	155.3	154.4	153.7	153.1	152.5	152.1	151.5
70°	138.8	137.8	136.9	136.2	135.6	135.0	134.5	134.0
72.5°	122.2	121.2	120.3	119.6	119.2	118.7	118.3	117.9
75°	96.4	95.6	94.8	94.5	94.8	95.1	95.3	95.6
77.5°	73.4	73.0	72.6	72.2	71.7	71.4	71.0	70.6
80°	58.2	57.8	57.5	57.1	56.8	56.6	56.3	56.0
82.5°	43.5	42.9	42.4	42.1	42.1	42.0	41.9	41.9
85°	22.9	22.5	22.1	21.9	21.7	21.6	21.4	21.3
87.5°	8.0	7.6	7.3	7.2	7.1	7.0	6.8	6.8
90°	9.2	8.6	9.2	9.5	9.5	9.5	9.5	9.5
92.5°	25.1	21.5	19.2	17.4	17.1	16.2	16.4	16.0
95°	75.5	57.9	45.8	39.5	35.7	33.4	32.5	32.9
97.5°	176.1	144.1	112.9	92.1	78.4	71.3	67.1	64.7
100°	263.0	227.3	187.8	153.0	129.1	116.7	108.4	103.1
102.5°	319.9	311.9	283.0	246.1	220.0	198.9	188.5	181.5
105°	350.0	382.5	386.3	376.8	358.9	341.0	328.6	324.7
107.5°	328.3	377.4	407.3	421.3	423.5	422.6	420.0	414.7
110°	309.7	361.3	398.1	421.8	434.1	439.6	442.2	441.9



TEST NUMBER: P331293-930

CATALOG NUMBER: SA2XXDIP-C485D330U930-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	292.6	342.1	381.5	408.6	425.8	435.0	439.9	441.4
115°	271.7	316.0	353.8	383.4	403.9	417.1	424.6	427.2
117.5°	255.8	294.8	329.1	356.9	377.7	391.8	399.6	401.8
120°	248.0	283.7	314.3	340.5	360.7	374.2	382.5	385.5
122.5°	241.8	274.5	303.5	327.1	345.2	358.6	366.0	368.4
125°	232.8	262.4	287.8	309.4	326.1	337.0	344.2	346.6
127.5°	223.8	250.7	274.6	294.5	309.1	319.4	325.5	327.4
130°	218.1	242.9	265.6	284.6	298.7	308.5	314.3	316.6
132.5°	212.5	235.5	256.4	274.3	288.1	297.9	303.2	305.3
135°	204.8	223.8	242.9	258.9	271.3	280.9	286.1	287.2
137.5°	198.7	214.6	229.7	243.7	255.0	263.2	267.7	269.5
140°	194.7	208.6	221.8	234.5	243.7	251.2	255.5	257.2
142.5°	191.5	203.3	214.7	225.3	234.0	240.8	244.7	245.0
145°	186.9	196.5	205.4	213.8	220.6	225.6	228.4	229.3
147.5°	183.4	190.9	197.9	204.0	209.7	213.6	215.6	216.1
150°	180.9	187.3	193.3	198.4	202.8	206.3	208.0	208.3
152.5°	178.4	184.3	189.4	193.9	197.3	200.2	201.5	201.6
155°	174.9	179.4	183.8	186.9	190.1	192.2	193.3	192.7
157.5°	170.8	174.6	178.2	180.8	183.0	184.7	185.2	185.2
160°	168.2	171.4	174.6	176.6	178.6	180.0	180.3	180.3
162.5°	165.7	168.4	171.1	172.7	174.7	175.7	175.9	175.7
165°	161.9	163.9	165.9	167.1	168.2	169.4	169.4	169.1
167.5°	158.2	159.8	161.2	162.2	162.7	163.4	163.3	163.0
170°	156.5	157.3	158.4	159.0	159.3	160.1	159.9	159.3
172.5°	154.3	155.0	155.9	156.2	156.5	156.9	156.6	156.3
175°	152.1	152.4	152.7	153.0	153.0	153.3	153.0	152.4
177.5°	150.5	150.5	150.7	150.7	150.7	150.7	150.5	150.0
180°	149.8	149.8	149.8	149.8	149.8	149.8	149.8	149.8

(END OF REPORT)