

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: P331649-830

Luminaire Tested: **SA2XXRDIP-C485D330U830-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331649-830
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: SA2XXRDIP-C485D330U830-4F0-1E-UDD-F1
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 330 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

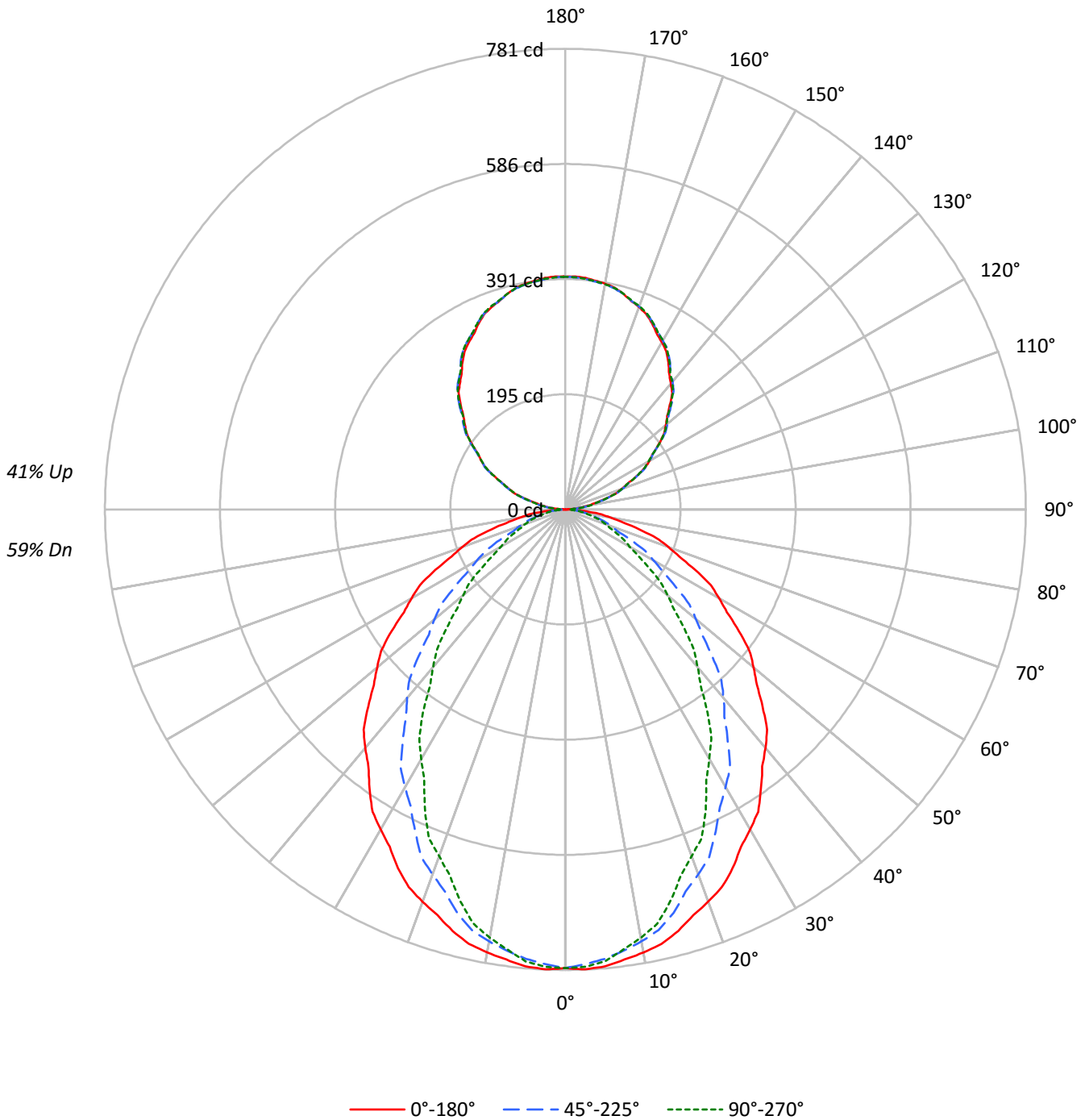
Lumens per Lamp: N/A
Luminaire Lumens: 2704.8 lumens
Efficiency: N/A
Efficacy: 98.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

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: P331649-830
CATALOG NUMBER: SA2XXRDIP-C485D330U830-4F0-1E-UDD-F1

Luminous Intensity Polar Plot





TEST NUMBER: P331649-830

CATALOG NUMBER: SA2XXRDIP-C485D330U830-4F0-1E-UDD-F1

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	0
RCR																		
0	109	109	109	109	102	102	102	102	88	88	88	76	76	76	65	65	65	59
1	100	96	92	89	94	90	87	84	78	76	74	68	66	64	58	57	56	51
2	92	85	79	74	86	79	74	70	69	65	62	60	57	55	52	50	48	44
3	84	75	68	62	78	70	64	59	62	57	53	54	50	47	46	44	41	38
4	77	67	59	53	72	63	56	51	55	50	46	48	44	41	42	39	36	33
5	71	60	52	46	66	56	49	44	50	44	40	44	39	36	38	35	32	29
6	66	54	46	40	61	51	44	39	45	39	35	40	35	32	35	31	28	26
7	61	49	41	36	57	46	39	34	41	35	31	36	32	28	32	28	25	23
8	57	45	37	32	53	42	35	30	38	32	28	33	29	25	29	26	23	21
9	53	41	34	29	50	39	32	27	35	29	25	31	26	23	27	24	21	19
10	50	38	31	26	47	36	29	25	32	27	23	29	24	21	25	22	19	17

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12558	12558	12558
5°	12606	12402	12470
10°	12511	12198	12095
15°	12366	11836	11497
20°	12167	11320	10753
25°	11965	10735	10033
30°	11680	10133	9107
35°	11404	9477	8296
40°	11126	8800	7358
45°	10803	8035	6510
50°	10467	7267	5674
55°	10125	6441	4873
60°	9726	5570	4046
65°	9280	4676	3683
70°	8738	3852	3389
75°	8079	3512	3163
80°	7132	3133	2882
85°	5613	2482	2482



TEST NUMBER: P331649-830

CATALOG NUMBER: SA2XXRDIP-C485D330U830-4F0-1E-UDD-F1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.8	2.7
10°-20°	199.9	7.4
20°-30°	280.7	10.4
30°-40°	306.1	11.3
40°-50°	281.5	10.4
50°-60°	221.1	8.2
60°-70°	144.1	5.3
70°-80°	74.3	2.7
80°-90°	20.9	0.8
90°-100°	25.0	0.9
100°-110°	77.7	2.9
110°-120°	132.8	4.9
120°-130°	174.6	6.5
130°-140°	195.9	7.2
140°-150°	192.1	7.1
150°-160°	161.1	6.0
160°-170°	106.9	4.0
170°-180°	37.4	1.4
0°-30°	553.4	20.5
0°-40°	859.6	31.8
0°-60°	1362.1	50.4
0°-90°	1601.4	59.2
90°-120°	235.4	8.7
90°-150°	798.0	29.5
90°-180°	1103.0	40.8
0°-180°	2704.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	778	778	778	778	778	
5°	778	774	765	771	769	74
15°	740	731	708	695	688	208
25°	672	648	603	575	563	309
35°	579	541	481	438	421	362
45°	473	424	352	304	285	365
55°	360	304	229	188	173	321
65°	243	186	122	100	96	241
75°	130	82	56	52	51	137
85°	30	16	13	13	13	36
90°	0	5	12	11	11	2
95°	17	20	21	21	21	20
105°	72	73	73	74	74	76
115°	133	135	134	134	133	132
125°	194	197	196	195	194	173
135°	251	254	255	255	254	194
145°	304	307	309	309	308	190
155°	348	349	350	352	351	160
165°	379	378	378	380	379	107
175°	394	393	392	394	393	37
180°	395	395	395	395	395	



TEST NUMBER: P331649-830

CATALOG NUMBER: SA2XXRDIP-C485D330U830-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	777.8	777.8	777.8	777.8	777.8	777.8	777.8	777.8	777.8	777.8	777.8
2.5°	780.6	780.0	779.4	778.7	778.2	777.1	775.8	774.4	773.0	771.7	772.9
5°	777.8	777.0	776.3	775.5	774.7	773.3	771.3	769.2	767.2	765.2	766.6
7.5°	769.8	768.8	767.9	766.9	765.9	764.2	761.9	759.5	757.1	754.8	755.2
10°	763.1	762.0	760.8	759.8	758.7	756.6	753.5	750.3	747.2	744.0	743.6
12.5°	754.6	753.3	751.9	750.5	749.2	746.6	742.5	738.6	734.5	730.6	729.7
15°	739.8	738.1	736.4	734.6	732.9	729.4	724.1	718.8	713.5	708.1	705.2
17.5°	721.7	719.1	716.4	713.8	711.1	706.4	699.6	692.8	686.0	679.1	675.6
20°	708.1	705.0	701.9	698.8	695.6	690.1	682.3	674.5	666.7	658.8	655.0
22.5°	693.5	690.0	686.5	683.0	679.5	673.4	664.5	655.6	646.9	638.0	633.0
25°	671.6	666.6	661.6	656.5	651.5	643.9	633.5	623.2	612.8	602.6	596.2
27.5°	645.1	639.6	634.1	628.8	623.3	614.7	603.1	591.4	579.9	568.2	560.7
30°	626.5	620.6	614.6	608.7	602.8	593.5	581.0	568.4	555.9	543.5	535.5
32.5°	608.5	601.5	594.6	587.7	580.7	570.8	558.1	545.3	532.5	519.8	510.7
35°	578.6	570.6	562.7	554.7	546.7	535.8	522.1	508.3	494.6	480.8	470.9
37.5°	548.7	540.0	531.2	522.5	513.8	502.0	487.4	472.7	458.0	443.4	432.4
40°	527.9	518.6	509.2	499.8	490.4	478.2	463.0	447.8	432.6	417.5	406.3
42.5°	506.5	496.6	486.7	476.9	467.0	454.2	438.6	422.8	407.2	391.5	380.0
45°	473.1	462.6	452.0	441.6	431.1	417.6	401.2	384.8	368.3	351.9	340.8
47.5°	440.4	429.2	418.2	407.1	396.0	381.9	365.0	348.0	331.0	314.1	303.0
50°	416.7	405.6	394.5	383.4	372.3	358.2	340.9	323.8	306.5	289.3	278.5
52.5°	393.6	382.0	370.4	358.8	347.2	333.0	316.1	299.4	282.5	265.7	255.2
55°	359.7	347.5	335.3	323.1	310.9	296.3	279.5	262.6	245.6	228.8	219.4
57.5°	324.9	312.5	299.9	287.4	274.8	260.5	244.3	228.0	211.8	195.6	186.9
60°	301.2	288.8	276.3	263.7	251.2	237.0	220.8	204.7	188.6	172.5	164.5
62.5°	278.1	265.7	253.2	240.6	228.1	214.2	198.9	183.5	168.1	152.8	145.2
65°	242.9	230.2	217.5	204.8	192.2	178.8	164.8	150.6	136.6	122.4	117.2
67.5°	208.8	196.2	183.6	171.1	158.4	145.8	133.2	120.6	107.8	95.2	92.7
70°	185.1	173.0	160.7	148.5	136.3	124.8	114.0	103.2	92.5	81.6	80.1
72.5°	162.6	150.9	139.2	127.5	115.8	105.7	97.0	88.3	79.6	71.0	69.7
75°	129.5	118.6	107.6	96.7	85.7	77.6	72.3	66.9	61.6	56.3	55.2
77.5°	97.0	87.4	77.8	68.1	58.6	52.5	50.0	47.4	44.8	42.2	41.6
80°	76.7	68.7	60.8	52.8	44.8	40.1	38.5	36.9	35.3	33.7	33.2
82.5°	58.2	51.9	45.7	39.5	33.3	29.6	28.6	27.4	26.4	25.4	25.0
85°	30.3	27.0	23.7	20.5	17.2	15.3	14.8	14.3	13.9	13.4	13.4
87.5°	9.0	8.3	7.4	6.6	5.7	5.6	5.8	6.2	6.5	6.9	6.7
90°	0.4	1.2	2.1	3.0	3.9	5.2	6.8	8.4	10.0	11.7	11.5
92.5°	5.9	6.6	7.3	7.9	8.6	9.0	9.4	9.8	10.2	10.6	10.7
95°	17.3	18.1	18.8	19.5	20.3	20.7	20.8	21.0	21.2	21.3	21.3
97.5°	31.7	32.3	32.9	33.6	34.2	34.7	35.0	35.3	35.5	35.8	35.8
100°	42.3	42.9	43.5	44.1	44.7	45.1	45.2	45.5	45.7	46.0	46.0
102.5°	53.4	53.9	54.4	54.9	55.3	55.8	56.0	56.3	56.6	56.8	56.9
105°	71.6	71.8	72.0	72.3	72.5	72.7	72.9	73.0	73.1	73.2	73.4
107.5°	89.8	90.2	90.5	90.9	91.1	91.3	91.3	91.3	91.3	91.3	91.3
110°	101.6	102.0	102.5	102.9	103.3	103.6	103.6	103.6	103.6	103.6	103.6



TEST NUMBER: P331649-830

CATALOG NUMBER: SA2XXRDIP-C485D330U830-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	114.3	114.8	115.3	115.6	116.1	116.3	116.2	116.2	116.1	116.1	115.9
115°	133.2	133.7	134.1	134.5	135.0	135.2	135.0	134.8	134.7	134.5	134.5
117.5°	151.9	152.6	153.2	153.7	154.4	154.5	154.0	153.6	153.2	152.8	152.6
120°	164.5	165.1	165.7	166.3	166.8	166.8	166.3	165.7	165.1	164.5	164.5
122.5°	176.0	176.6	177.4	178.0	178.8	179.0	178.5	178.1	177.7	177.3	177.1
125°	193.8	194.4	195.1	195.8	196.4	196.7	196.4	196.2	196.0	195.8	195.6
127.5°	211.2	212.1	212.9	213.7	214.5	214.8	214.6	214.3	214.1	213.8	213.5
130°	222.2	223.1	224.0	225.0	225.9	226.4	226.2	226.1	225.9	225.7	225.6
132.5°	234.4	235.2	235.9	236.7	237.5	237.9	237.9	238.0	238.0	238.0	237.7
135°	250.7	251.6	252.4	253.2	254.0	254.5	254.7	254.8	255.0	255.1	255.0
137.5°	268.0	268.6	269.3	270.0	270.7	271.1	271.3	271.5	271.6	271.8	271.8
140°	278.4	279.1	279.7	280.4	281.1	281.5	281.9	282.3	282.7	283.0	283.0
142.5°	289.1	289.7	290.4	291.1	291.7	292.2	292.4	292.7	292.9	293.1	293.2
145°	304.3	304.9	305.4	305.9	306.4	306.9	307.4	307.8	308.2	308.7	308.8
147.5°	318.0	318.7	319.2	319.9	320.5	320.9	321.2	321.6	321.9	322.2	322.3
150°	327.3	327.8	328.2	328.7	329.1	329.5	329.8	330.1	330.4	330.6	330.9
152.5°	335.6	336.0	336.5	337.0	337.3	337.8	338.1	338.5	338.8	339.2	339.5
155°	348.0	348.2	348.5	348.6	348.8	349.1	349.3	349.5	349.8	350.0	350.3
157.5°	358.5	358.7	358.8	359.0	359.2	359.3	359.5	359.6	359.7	359.9	360.3
160°	365.0	365.1	365.2	365.4	365.5	365.7	365.7	365.8	365.9	366.0	366.4
162.5°	370.8	370.9	370.9	370.9	371.0	371.0	371.1	371.2	371.3	371.3	371.8
165°	378.6	378.5	378.4	378.4	378.3	378.2	378.2	378.2	378.2	378.2	378.8
167.5°	385.1	384.9	384.7	384.5	384.3	384.2	384.1	384.1	384.1	384.1	384.6
170°	388.6	388.4	388.1	388.0	387.8	387.6	387.5	387.4	387.4	387.3	387.8
172.5°	391.0	390.8	390.6	390.3	390.1	389.9	389.9	389.8	389.7	389.6	390.2
175°	394.0	393.7	393.5	393.2	393.0	392.9	392.8	392.6	392.4	392.3	392.8
177.5°	395.1	394.9	394.7	394.6	394.5	394.3	394.2	394.1	393.9	393.8	394.2
180°	394.6	394.6	394.6	394.6	394.6	394.6	394.6	394.6	394.6	394.6	394.6



TEST NUMBER: P331649-830
 CATALOG NUMBER: SA2XXRDIP-C485D330U830-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	777.8	777.8	777.8	777.8	777.8	777.8	777.8	777.8
2.5°	774.1	775.4	776.7	777.1	776.9	776.7	776.4	776.2
5°	768.0	769.4	770.8	771.3	770.8	770.3	769.9	769.4
7.5°	755.5	755.9	756.4	756.2	755.4	754.5	753.8	752.9
10°	743.1	742.6	742.2	741.5	740.6	739.6	738.7	737.7
12.5°	728.9	728.0	727.2	725.9	724.3	722.8	721.2	719.7
15°	702.2	699.3	696.3	694.0	692.4	690.9	689.3	687.8
17.5°	672.0	668.5	665.0	661.9	659.2	656.5	653.8	651.1
20°	651.0	647.1	643.2	639.5	636.1	632.6	629.2	625.8
22.5°	627.9	622.9	617.9	614.1	611.5	609.0	606.4	603.8
25°	589.7	583.3	576.9	572.5	570.1	567.8	565.5	563.2
27.5°	553.3	545.7	538.3	532.7	529.0	525.3	521.5	517.8
30°	527.4	519.5	511.5	505.4	501.1	497.0	492.8	488.5
32.5°	501.5	492.5	483.3	476.8	472.9	468.9	464.9	460.9
35°	461.1	451.2	441.4	434.7	431.3	427.8	424.4	420.9
37.5°	421.6	410.8	399.9	392.5	388.6	384.7	380.7	376.7
40°	395.2	384.1	373.0	365.4	361.4	357.3	353.2	349.1
42.5°	368.5	357.0	345.6	337.9	333.9	330.0	326.0	322.1
45°	329.7	318.7	307.6	300.1	296.3	292.6	288.8	285.1
47.5°	292.0	281.0	269.9	262.7	259.3	255.9	252.4	249.0
50°	267.7	256.9	246.1	239.1	235.8	232.5	229.2	225.9
52.5°	244.8	234.4	223.9	217.3	214.2	211.2	208.1	205.1
55°	210.0	200.6	191.2	185.0	182.1	179.1	176.2	173.1
57.5°	178.3	169.8	161.2	155.6	153.1	150.6	148.1	145.5
60°	156.5	148.5	140.5	135.3	132.8	130.3	127.8	125.3
62.5°	137.5	130.0	122.3	117.8	116.3	114.8	113.3	111.8
65°	111.9	106.5	101.2	98.3	97.8	97.4	96.9	96.4
67.5°	90.3	87.8	85.4	84.0	83.4	82.9	82.5	81.9
70°	78.5	77.0	75.4	74.3	73.7	73.0	72.4	71.8
72.5°	68.3	67.0	65.7	64.8	64.5	64.1	63.7	63.3
75°	54.1	53.1	51.9	51.3	51.2	51.0	50.8	50.7
77.5°	41.0	40.3	39.8	39.3	39.0	38.8	38.5	38.3
80°	32.5	32.0	31.3	31.0	31.0	31.0	31.0	31.0
82.5°	24.6	24.2	23.8	23.7	23.7	23.7	23.7	23.7
85°	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4
87.5°	6.5	6.4	6.2	6.1	6.1	6.2	6.2	6.2
90°	11.4	11.2	11.0	11.0	11.1	11.2	11.2	11.3
92.5°	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7
95°	21.3	21.3	21.3	21.2	21.1	20.9	20.8	20.6
97.5°	35.8	35.8	35.8	35.8	35.8	35.8	35.8	35.7
100°	46.0	46.0	46.0	45.9	45.8	45.8	45.7	45.6
102.5°	57.0	57.0	57.1	57.1	57.0	56.9	56.9	56.8
105°	73.5	73.7	73.9	73.9	73.9	73.9	73.9	73.9
107.5°	91.4	91.5	91.5	91.4	91.0	90.8	90.4	90.0
110°	103.6	103.6	103.6	103.5	103.2	103.0	102.8	102.5



TEST NUMBER: P331649-830

CATALOG NUMBER: SA2XXRDIP-C485D330U830-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	115.7	115.6	115.4	115.2	115.1	114.9	114.7	114.5
115°	134.4	134.3	134.2	134.1	133.8	133.7	133.5	133.2
117.5°	152.4	152.2	152.0	151.8	151.7	151.5	151.2	151.0
120°	164.5	164.5	164.5	164.4	164.2	163.9	163.7	163.5
122.5°	176.9	176.7	176.5	176.4	176.3	176.1	175.9	175.8
125°	195.4	195.1	194.9	194.7	194.7	194.6	194.5	194.4
127.5°	213.3	213.0	212.7	212.4	212.3	212.0	211.8	211.5
130°	225.5	225.4	225.2	225.0	224.7	224.3	224.0	223.8
132.5°	237.3	237.0	236.8	236.5	236.2	236.0	235.7	235.5
135°	255.0	254.9	254.8	254.7	254.4	254.2	254.0	253.7
137.5°	271.7	271.6	271.6	271.5	271.2	270.9	270.6	270.2
140°	283.0	283.0	283.0	282.9	282.6	282.3	282.0	281.7
142.5°	293.3	293.3	293.4	293.3	293.0	292.7	292.4	292.1
145°	308.9	308.9	309.0	308.9	308.6	308.3	308.0	307.6
147.5°	322.4	322.6	322.8	322.7	322.4	322.2	321.9	321.6
150°	331.1	331.3	331.6	331.6	331.3	331.1	330.9	330.6
152.5°	339.8	340.1	340.4	340.4	340.1	339.8	339.5	339.2
155°	350.7	351.1	351.5	351.6	351.3	351.1	350.9	350.6
157.5°	360.8	361.4	361.8	361.9	361.6	361.2	360.9	360.5
160°	366.8	367.3	367.8	367.8	367.5	367.2	366.9	366.6
162.5°	372.3	372.8	373.3	373.3	373.1	372.7	372.3	371.9
165°	379.3	379.8	380.3	380.4	380.0	379.7	379.3	379.0
167.5°	385.1	385.6	386.2	386.3	385.9	385.4	385.0	384.7
170°	388.3	388.8	389.4	389.4	389.0	388.5	388.0	387.6
172.5°	390.7	391.2	391.7	391.8	391.3	390.9	390.5	390.0
175°	393.3	393.8	394.4	394.4	394.0	393.5	393.0	392.6
177.5°	394.5	394.8	395.2	395.2	394.8	394.5	394.2	393.8
180°	394.6	394.6	394.6	394.6	394.6	394.6	394.6	394.6

(END OF REPORT)