

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: P331289-930

Luminaire Tested: **SA2XXDIP-C485D330U930-4F0-1E-UDD-D1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331289-930
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-C485D330U930-4F0-1E-UDD-D1
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 330 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

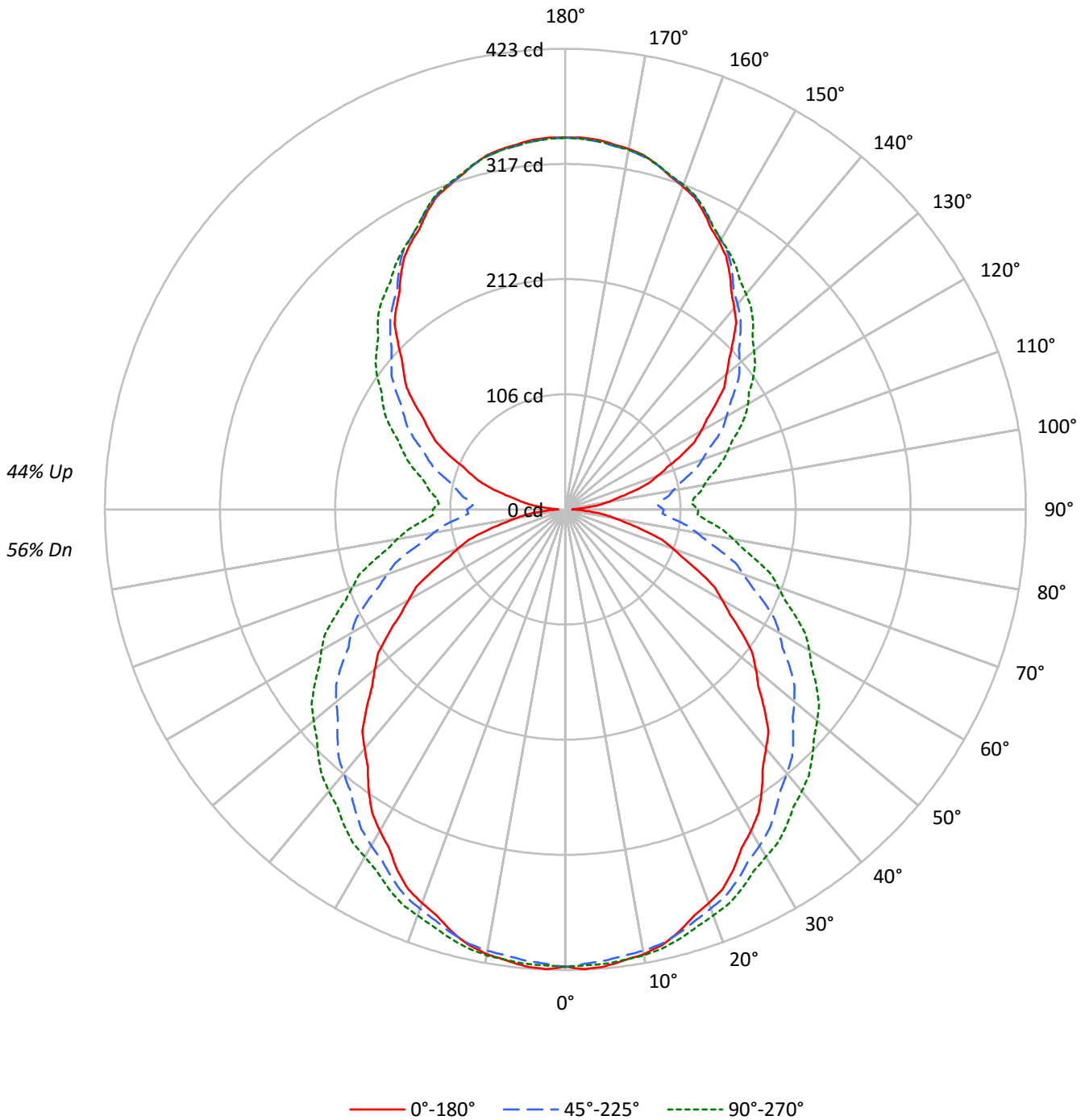
Lumens per Lamp: N/A
Luminaire Lumens: 2558.7 lumens
Efficiency: N/A
Efficacy: 93.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: General Diffuse

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: P331289-930
CATALOG NUMBER: SA2XXDIP-C485D330U930-4F0-1E-UDD-D1

Luminous Intensity Polar Plot





TEST NUMBER: P331289-930

CATALOG NUMBER: SA2XXDIP-C485D330U930-4F0-1E-UDD-D1

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									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	50	30	10	50	30	10	50	30	10	0																
RCR	0	109	109	109	109	109	109	109	101	101	101	101	101	101	87	87	87	73	73	73	61	61	61	56	56	56	56	56	56	56																
	1	97	92	88	84	90	86	82	78	73	70	68	62	60	58	52	50	48	43	43	43	43	43	43	43	43	43	43	43	43																
	2	88	80	73	67	81	74	68	63	63	59	55	54	50	47	44	42	40	35	35	35	35	35	35	35	35	35	35	35	35																
	3	80	69	61	55	74	65	57	52	55	50	45	47	43	39	39	36	33	29	29	29	29	29	29	29	29	29	29	29	29																
	4	73	61	53	46	67	57	49	43	49	43	38	41	37	33	34	31	28	24	24	24	24	24	24	24	24	24	24	24	24																
	5	67	54	46	39	62	51	43	37	43	37	33	37	32	28	31	27	24	21	21	21	21	21	21	21	21	21	21	21	21	21															
	6	61	49	40	34	57	45	38	32	39	33	28	33	28	25	28	24	21	18	18	18	18	18	18	18	18	18	18	18	18	18															
	7	57	44	35	29	52	41	33	28	35	29	25	30	25	22	25	21	19	16	16	16	16	16	16	16	16	16	16	16	16	16															
	8	53	40	32	26	49	37	30	25	32	26	22	28	23	19	23	19	16	14	14	14	14	14	14	14	14	14	14	14	14	14															
	9	49	36	28	23	45	34	27	22	29	24	19	25	21	17	21	18	15	13	13	13	13	13	13	13	13	13	13	13	13	13															
	10	46	33	26	21	42	31	24	20	27	21	17	23	19	15	20	16	13	11	11	11	11	11	11	11	11	11	11	11	11	11															

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6783	6783	6783
5°	6816	6530	6505
10°	6774	6337	6266
15°	6681	6133	6014
20°	6562	5913	5771
25°	6445	5701	5552
30°	6282	5486	5330
35°	6116	5276	5174
40°	5941	5099	5017
45°	5775	4940	4885
50°	5598	4794	4753
55°	5410	4638	4620
60°	5180	4477	4479
65°	4944	4290	4310
70°	4679	4085	4131
75°	4335	3888	3964
80°	3800	3685	3794
85°	3277	3510	3661



TEST NUMBER: P331289-930

CATALOG NUMBER: SA2XXDIP-C485D330U930-4F0-1E-UDD-D1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	39.8	1.6
10°-20°	114.2	4.5
20°-30°	173.0	6.8
30°-40°	210.7	8.2
40°-50°	226.7	8.9
50°-60°	220.1	8.6
60°-70°	192.2	7.5
70°-80°	148.0	5.8
80°-90°	100.7	3.9
90°-100°	90.0	3.5
100°-110°	117.1	4.6
110°-120°	147.8	5.8
120°-130°	169.4	6.6
130°-140°	177.2	6.9
140°-150°	167.5	6.5
150°-160°	139.4	5.4
160°-170°	92.4	3.6
170°-180°	32.3	1.3
0°-30°	327.0	12.8
0°-40°	537.7	21.0
0°-60°	984.5	38.5
0°-90°	1425.4	55.7
90°-120°	355.0	13.9
90°-150°	869.1	34.0
90°-180°	1133.0	44.3
0°-180°	2558.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	420	420	420	420	420	
5°	421	419	416	419	419	40
15°	402	403	403	408	408	113
25°	365	370	375	382	384	168
35°	315	325	337	350	354	197
45°	258	275	296	314	321	199
55°	198	220	251	273	281	177
65°	135	165	201	225	234	134
75°	75	109	148	173	182	79
85°	22	60	99	123	133	24
90°	6	46	90	113	122	5
95°	20	52	88	111	118	21
105°	65	84	116	137	144	69
115°	118	127	153	170	177	116
125°	169	172	190	205	211	151
135°	218	221	227	239	244	168
145°	263	265	267	271	273	165
155°	301	302	303	304	303	138
165°	328	327	327	329	328	92
175°	341	340	339	341	340	32
180°	341	341	341	341	341	



TEST NUMBER: P331289-930

CATALOG NUMBER: SA2XXDIP-C485D330U930-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	420.1	420.1	420.1	420.1	420.1	420.1	420.1	420.1	420.1	420.1	420.1
2.5°	422.6	422.2	421.9	421.6	421.3	420.7	420.0	419.2	418.5	417.7	418.2
5°	421.3	420.9	420.5	420.1	419.7	419.1	418.3	417.5	416.7	415.9	416.7
7.5°	417.6	417.3	417.0	416.8	416.5	416.0	415.4	414.8	414.2	413.5	414.5
10°	414.7	414.4	414.1	413.8	413.6	413.3	412.9	412.5	412.1	411.6	412.7
12.5°	409.8	409.9	409.9	409.9	410.0	409.9	409.6	409.3	409.0	408.7	409.8
15°	401.9	402.1	402.4	402.7	402.9	403.1	403.1	403.1	403.1	403.1	404.3
17.5°	391.7	392.2	392.8	393.4	394.0	394.4	394.8	395.3	395.7	396.2	397.4
20°	384.8	385.5	386.2	386.9	387.5	388.2	388.7	389.2	389.8	390.3	391.8
22.5°	377.5	378.3	379.1	379.8	380.7	381.4	382.2	382.9	383.7	384.5	386.0
25°	365.3	366.3	367.2	368.2	369.1	370.2	371.5	372.7	373.9	375.0	376.7
27.5°	350.7	352.3	353.8	355.4	356.9	358.4	359.8	361.3	362.6	364.1	366.2
30°	341.0	342.8	344.5	346.3	348.1	349.8	351.6	353.3	355.1	356.8	359.0
32.5°	330.3	332.2	334.2	336.2	338.2	340.2	342.3	344.4	346.4	348.5	351.0
35°	314.8	317.1	319.4	321.7	324.0	326.4	329.0	331.6	334.1	336.7	339.7
37.5°	298.0	300.7	303.3	306.0	308.6	311.6	315.0	318.2	321.6	324.9	328.2
40°	286.8	289.8	292.8	295.7	298.7	302.0	305.7	309.3	313.0	316.7	320.2
42.5°	276.1	279.1	282.0	285.0	288.0	291.6	295.8	299.9	304.2	308.3	312.2
45°	258.2	261.8	265.5	269.1	272.8	277.0	281.7	286.4	291.2	296.0	300.1
47.5°	240.5	244.5	248.5	252.4	256.4	261.2	266.8	272.3	277.9	283.4	287.8
50°	228.4	232.5	236.8	240.9	245.1	250.2	256.3	262.4	268.6	274.6	279.2
52.5°	216.6	221.0	225.4	229.9	234.3	239.7	246.1	252.5	258.9	265.4	270.0
55°	197.9	202.8	207.7	212.5	217.4	223.3	230.4	237.4	244.4	251.4	256.3
57.5°	179.4	184.9	190.4	195.8	201.4	207.7	214.8	222.0	229.2	236.4	241.7
60°	166.2	172.0	177.9	183.7	189.5	196.2	204.0	211.7	219.4	227.1	232.3
62.5°	154.5	160.5	166.6	172.7	178.7	185.6	193.2	201.0	208.7	216.4	221.8
65°	135.2	141.8	148.5	155.1	161.7	169.0	177.0	185.0	193.0	201.0	206.5
67.5°	117.4	124.3	131.3	138.2	145.1	152.6	160.9	169.0	177.2	185.3	190.9
70°	104.8	111.8	118.8	125.8	132.9	140.6	149.0	157.4	165.8	174.1	179.9
72.5°	93.0	100.3	107.5	114.8	122.1	130.0	138.4	146.9	155.4	163.9	169.7
75°	74.9	82.5	90.0	97.6	105.2	113.3	122.0	130.6	139.3	148.0	153.8
77.5°	57.4	65.3	73.2	81.1	89.1	97.4	106.2	115.0	123.8	132.6	138.4
80°	45.7	53.9	62.2	70.4	78.7	87.2	96.0	104.8	113.6	122.4	128.1
82.5°	36.0	44.1	52.2	60.3	68.5	77.0	85.9	94.8	103.7	112.7	118.3
85°	21.9	30.3	38.7	47.1	55.4	64.0	72.6	81.3	90.0	98.7	104.4
87.5°	12.0	20.2	28.5	36.6	44.8	53.5	62.4	71.3	80.3	89.2	94.7
90°	6.4	15.0	23.6	32.2	40.8	50.2	60.3	70.3	80.4	90.4	95.7
92.5°	10.8	18.6	26.5	34.3	42.2	50.5	59.1	67.8	76.5	85.1	90.5
95°	19.8	26.8	33.8	40.8	47.9	55.4	63.8	72.0	80.2	88.5	93.6
97.5°	31.6	37.8	44.0	50.3	56.5	63.6	71.7	79.7	87.7	95.8	100.8
100°	40.8	46.4	51.9	57.4	62.9	69.5	77.4	85.1	92.9	100.6	105.7
102.5°	50.1	55.0	60.0	65.0	70.0	76.2	83.9	91.5	99.1	106.6	111.6
105°	65.0	69.1	73.2	77.3	81.4	87.1	94.2	101.4	108.6	115.8	120.6
107.5°	80.6	84.1	87.5	90.9	94.3	99.4	106.2	112.8	119.6	126.4	130.9
110°	90.3	93.4	96.4	99.5	102.6	107.5	114.1	120.7	127.4	134.0	138.4



TEST NUMBER: P331289-930

CATALOG NUMBER: SA2XXDIP-C485D330U930-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	101.3	104.0	106.6	109.3	111.9	116.4	122.7	129.0	135.2	141.5	145.6
115°	117.6	119.5	121.4	123.3	125.1	129.1	135.0	141.0	146.9	152.9	156.9
117.5°	133.3	134.8	136.2	137.8	139.3	142.6	147.9	153.2	158.4	163.7	167.5
120°	144.1	145.2	146.3	147.2	148.3	151.3	156.2	161.1	166.0	170.9	174.7
122.5°	154.0	154.8	155.7	156.5	157.4	160.1	164.9	169.6	174.3	179.0	182.5
125°	168.8	169.4	170.0	170.6	171.1	173.5	177.7	181.8	186.0	190.0	193.6
127.5°	183.9	184.5	185.1	185.6	186.3	188.2	191.4	194.7	198.0	201.2	204.4
130°	193.3	194.0	194.8	195.4	196.2	197.9	200.6	203.3	205.9	208.7	211.8
132.5°	203.9	204.5	205.0	205.5	206.1	207.5	209.7	211.9	214.2	216.4	219.2
135°	217.5	218.2	218.9	219.6	220.3	221.4	222.9	224.4	225.8	227.3	230.2
137.5°	232.4	233.0	233.5	234.1	234.6	235.3	236.0	236.8	237.6	238.3	240.8
140°	241.4	241.8	242.3	242.7	243.2	243.7	244.3	244.9	245.5	246.1	248.3
142.5°	250.6	251.1	251.5	251.9	252.4	252.7	253.0	253.3	253.6	253.8	255.6
145°	263.3	263.7	264.2	264.6	265.1	265.5	265.9	266.3	266.6	267.0	267.9
147.5°	275.1	275.7	276.1	276.7	277.2	277.6	277.9	278.2	278.4	278.7	278.9
150°	283.2	283.6	283.9	284.3	284.7	285.0	285.3	285.5	285.8	286.0	286.3
152.5°	290.3	290.7	291.1	291.5	291.8	292.2	292.4	292.8	293.1	293.4	293.7
155°	301.0	301.2	301.4	301.6	301.7	302.0	302.1	302.3	302.6	302.7	303.0
157.5°	310.1	310.3	310.4	310.5	310.7	310.8	311.0	311.0	311.1	311.3	311.7
160°	315.7	315.8	315.9	316.1	316.2	316.3	316.3	316.4	316.5	316.6	316.9
162.5°	320.7	320.8	320.8	320.8	320.9	320.9	321.0	321.1	321.1	321.1	321.6
165°	327.5	327.4	327.3	327.3	327.3	327.2	327.2	327.2	327.2	327.2	327.7
167.5°	333.1	333.0	332.8	332.6	332.4	332.3	332.2	332.2	332.2	332.2	332.6
170°	336.1	336.0	335.7	335.6	335.4	335.3	335.2	335.1	335.1	335.0	335.4
172.5°	338.2	338.0	337.9	337.6	337.5	337.3	337.3	337.2	337.1	337.0	337.5
175°	340.8	340.6	340.4	340.1	340.0	339.8	339.7	339.6	339.4	339.3	339.7
177.5°	341.8	341.6	341.4	341.4	341.2	341.0	341.0	340.9	340.7	340.6	341.0
180°	341.4	341.4	341.4	341.4	341.4	341.4	341.4	341.4	341.4	341.4	341.4



TEST NUMBER: P331289-930

CATALOG NUMBER: SA2XXDIP-C485D330U930-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	420.1	420.1	420.1	420.1	420.1	420.1	420.1	420.1
2.5°	418.8	419.3	419.9	420.0	419.8	419.6	419.4	419.1
5°	417.5	418.3	419.1	419.5	419.3	419.2	419.1	418.9
7.5°	415.5	416.5	417.4	417.8	417.8	417.6	417.4	417.4
10°	413.8	414.8	416.0	416.5	416.3	416.1	416.0	415.9
12.5°	410.8	412.0	413.0	413.5	413.4	413.2	413.1	412.9
15°	405.5	406.8	408.0	408.5	408.4	408.2	408.1	408.0
17.5°	398.7	400.0	401.2	401.9	401.9	401.9	401.9	401.9
20°	393.3	394.8	396.2	397.0	397.0	397.0	397.0	397.0
22.5°	387.4	388.9	390.4	391.3	391.5	391.7	391.9	392.2
25°	378.3	379.9	381.6	382.6	383.0	383.4	383.8	384.3
27.5°	368.3	370.3	372.3	373.5	373.8	374.1	374.4	374.7
30°	361.2	363.3	365.5	366.7	367.1	367.5	367.9	368.4
32.5°	353.5	356.0	358.5	360.1	360.9	361.6	362.3	363.1
35°	342.7	345.7	348.6	350.6	351.6	352.5	353.4	354.4
37.5°	331.5	334.8	338.1	340.2	341.3	342.3	343.2	344.3
40°	323.7	327.2	330.7	333.0	334.3	335.5	336.7	337.9
42.5°	316.0	319.8	323.7	326.3	327.4	328.6	329.9	331.1
45°	304.4	308.5	312.7	315.4	316.8	318.2	319.5	320.9
47.5°	292.1	296.5	300.9	303.9	305.3	306.8	308.3	309.8
50°	283.8	288.4	293.0	296.0	297.6	299.1	300.5	302.0
52.5°	274.8	279.5	284.2	287.3	288.9	290.6	292.1	293.8
55°	261.2	266.1	270.9	274.3	276.1	277.8	279.6	281.3
57.5°	246.9	252.1	257.4	260.9	262.7	264.5	266.3	268.1
60°	237.4	242.6	247.7	251.2	253.1	255.0	256.9	258.8
62.5°	227.3	232.8	238.2	241.9	243.7	245.5	247.3	249.1
65°	212.1	217.6	223.1	226.8	228.5	230.3	232.0	233.8
67.5°	196.6	202.1	207.7	211.5	213.3	215.2	217.0	218.8
70°	185.8	191.6	197.4	201.1	202.8	204.4	206.0	207.7
72.5°	175.4	181.1	186.8	190.6	192.5	194.4	196.4	198.4
75°	159.6	165.4	171.2	175.0	176.8	178.6	180.3	182.1
77.5°	144.2	150.0	155.8	159.6	161.5	163.4	165.3	167.2
80°	133.8	139.4	145.1	148.9	150.8	152.7	154.6	156.5
82.5°	124.0	129.7	135.3	139.1	140.9	142.7	144.5	146.3
85°	110.0	115.7	121.4	125.1	127.0	129.0	130.9	132.7
87.5°	100.2	105.7	111.2	114.8	116.6	118.3	120.0	121.8
90°	101.0	106.3	111.6	115.0	116.8	118.5	120.2	121.8
92.5°	95.8	101.2	106.5	110.0	111.6	113.2	114.9	116.5
95°	98.7	103.9	109.0	112.3	113.8	115.4	116.8	118.3
97.5°	105.8	110.8	115.8	119.1	120.7	122.3	123.8	125.5
100°	110.6	115.7	120.7	123.8	125.3	126.7	128.2	129.6
102.5°	116.6	121.6	126.5	129.6	131.1	132.5	134.0	135.3
105°	125.5	130.4	135.2	138.4	139.8	141.4	142.8	144.3
107.5°	135.6	140.1	144.7	147.7	148.9	150.0	151.2	152.4
110°	142.7	147.0	151.3	154.2	155.5	156.8	158.1	159.3



TEST NUMBER: P331289-930

CATALOG NUMBER: SA2XXDIP-C485D330U930-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	149.8	154.0	158.2	160.9	162.2	163.6	164.9	166.3
115°	160.9	164.9	168.8	171.5	172.8	174.1	175.5	176.8
117.5°	171.4	175.3	179.1	181.6	182.8	184.0	185.2	186.4
120°	178.5	182.3	186.1	188.6	189.9	191.2	192.5	193.8
122.5°	186.1	189.6	193.1	195.5	196.7	197.7	198.9	200.0
125°	197.0	200.5	203.9	206.2	207.4	208.6	209.7	210.8
127.5°	207.5	210.6	213.8	215.8	216.8	217.8	218.7	219.7
130°	214.9	218.0	221.2	223.1	224.0	224.8	225.6	226.4
132.5°	222.1	224.9	227.8	229.7	230.6	231.4	232.3	233.2
135°	232.9	235.7	238.5	240.3	241.2	242.1	243.0	243.9
137.5°	243.2	245.6	248.1	249.6	250.3	250.9	251.6	252.3
140°	250.4	252.6	254.7	256.1	256.7	257.2	257.7	258.3
142.5°	257.4	259.2	261.0	262.1	262.5	263.0	263.4	263.9
145°	268.8	269.6	270.5	271.2	271.6	272.0	272.4	272.9
147.5°	279.2	279.4	279.6	279.8	279.9	280.0	280.1	280.1
150°	286.4	286.6	286.8	286.8	286.6	286.4	286.3	286.0
152.5°	293.9	294.2	294.4	294.4	294.2	293.9	293.7	293.4
155°	303.4	303.7	304.0	304.1	303.9	303.7	303.5	303.3
157.5°	312.1	312.6	313.0	313.1	312.7	312.4	312.2	311.9
160°	317.3	317.7	318.1	318.1	317.9	317.6	317.4	317.2
162.5°	322.0	322.5	322.9	322.9	322.7	322.4	322.0	321.7
165°	328.1	328.6	329.0	329.1	328.7	328.4	328.1	327.8
167.5°	333.1	333.5	334.0	334.1	333.8	333.4	333.0	332.7
170°	335.9	336.3	336.8	336.8	336.5	336.1	335.7	335.3
172.5°	337.9	338.4	338.8	338.9	338.5	338.1	337.8	337.4
175°	340.2	340.6	341.1	341.1	340.8	340.4	340.0	339.6
177.5°	341.3	341.5	341.9	341.9	341.5	341.3	341.0	340.6
180°	341.4	341.4	341.4	341.4	341.4	341.4	341.4	341.4

(END OF REPORT)