

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: P331288-830

Luminaire Tested: **SA2XXDIP-C485D330U830-4F0-1E-UDD-D**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331288-830
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-2,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXDIP-C485D330U830-4F0-1E-UDD-D
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 330 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

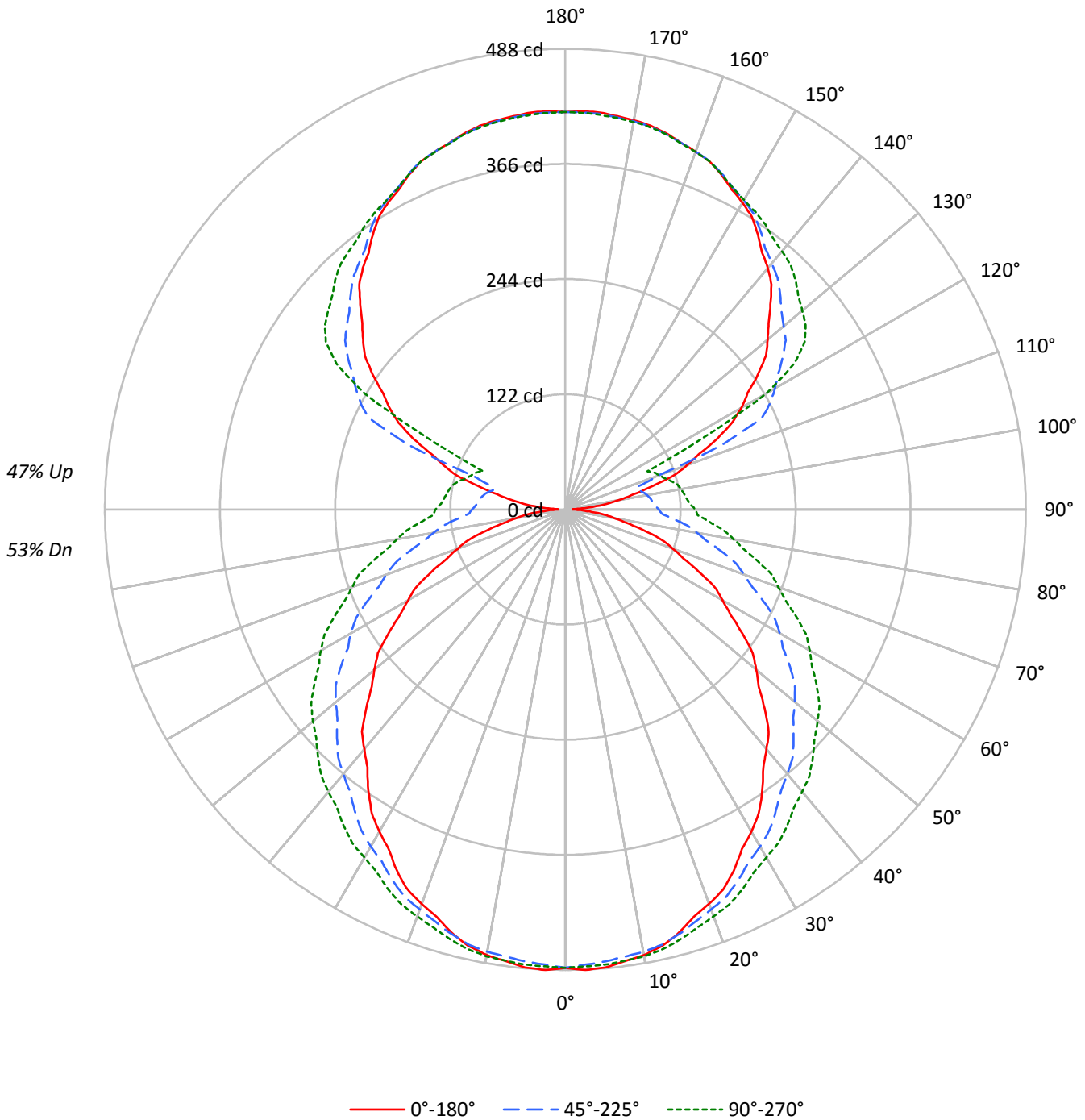
Lumens per Lamp: N/A
Luminaire Lumens: 3088.3 lumens
Efficiency: N/A
Efficacy: 112.3 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: General Diffuse

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: P331288-830
CATALOG NUMBER: SA2XXDIP-C485D330U830-4F0-1E-UDD-D

Luminous Intensity Polar Plot





TEST NUMBER: P331288-830

CATALOG NUMBER: SA2XXDIP-C485D330U830-4F0-1E-UDD-D

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	108	108	108	108	100	100	100	100	85	85	85	72	72	72	59	59	59	53
1	97	92	87	83	89	85	81	78	72	69	67	61	58	56	50	48	47	42
2	88	79	72	67	81	73	67	62	62	58	54	52	49	46	43	40	38	34
3	80	69	61	55	73	64	57	51	55	49	45	46	42	38	37	34	32	28
4	73	61	52	46	67	57	49	43	48	42	38	40	36	32	33	30	27	23
5	66	54	45	39	61	50	42	37	43	37	32	36	31	28	30	26	23	20
6	61	48	40	34	56	45	37	32	39	32	28	32	28	24	27	23	20	17
7	56	44	35	29	52	41	33	28	35	29	24	29	25	21	24	21	18	15
8	52	39	31	26	48	37	29	24	32	26	22	27	22	19	22	19	16	14
9	49	36	28	23	45	34	27	22	29	23	19	25	20	17	21	17	14	12
10	45	33	25	21	42	31	24	19	27	21	17	23	18	15	19	16	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7842	7842	7842
5°	7880	7549	7520
10°	7831	7327	7244
15°	7723	7090	6952
20°	7587	6836	6671
25°	7453	6592	6417
30°	7262	6342	6160
35°	7069	6100	5981
40°	6869	5895	5801
45°	6677	5709	5648
50°	6471	5541	5495
55°	6254	5363	5341
60°	5990	5177	5178
65°	5716	4959	4983
70°	5407	4723	4775
75°	5013	4495	4582
80°	4391	4260	4385
85°	3800	4054	4232



TEST NUMBER: P331288-830

CATALOG NUMBER: SA2XXDIP-C485D330U830-4F0-1E-UDD-D

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	46.0	1.5
10°-20°	132.0	4.3
20°-30°	200.0	6.5
30°-40°	243.6	7.9
40°-50°	262.1	8.5
50°-60°	254.5	8.2
60°-70°	222.2	7.2
70°-80°	171.1	5.5
80°-90°	115.9	3.8
90°-100°	93.1	3.0
100°-110°	109.3	3.5
110°-120°	175.9	5.7
120°-130°	248.6	8.1
130°-140°	250.7	8.1
140°-150°	226.3	7.3
150°-160°	180.7	5.8
160°-170°	116.4	3.8
170°-180°	40.1	1.3
0°-30°	378.0	12.2
0°-40°	621.6	20.1
0°-60°	1138.1	36.9
0°-90°	1647.3	53.3
90°-120°	378.3	12.2
90°-150°	1103.9	35.7
90°-180°	1441.0	46.7
0°-180°	3088.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	486	486	486	486	486	
5°	487	485	481	485	484	46
15°	465	466	466	472	472	131
25°	422	427	434	442	444	194
35°	364	376	389	404	410	227
45°	298	318	342	363	371	230
55°	229	255	291	315	325	204
65°	156	191	232	260	270	155
75°	87	126	171	200	210	92
85°	25	69	114	142	153	27
90°	7	52	99	128	138	6
95°	25	50	93	120	129	29
105°	96	122	79	106	116	103
115°	178	192	230	116	96	175
125°	249	254	281	302	310	222
135°	307	312	322	339	345	237
145°	356	356	360	367	369	223
155°	392	389	392	394	392	180
165°	413	411	412	414	412	117
175°	422	420	421	422	420	40
180°	421	421	421	421	421	



TEST NUMBER: P331288-830

CATALOG NUMBER: SA2XXDIP-C485D330U830-4F0-1E-UDD-D

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	485.7	485.7	485.7	485.7	485.7	485.7	485.7	485.7	485.7	485.7	485.7
2.5°	488.5	488.1	487.8	487.4	487.0	486.4	485.5	484.7	483.8	482.9	483.5
5°	487.1	486.6	486.2	485.7	485.2	484.6	483.6	482.7	481.7	480.8	481.7
7.5°	482.8	482.4	482.1	481.8	481.5	481.0	480.2	479.6	478.8	478.1	479.2
10°	479.4	479.1	478.7	478.4	478.2	477.8	477.3	476.8	476.4	475.9	477.1
12.5°	473.7	473.8	473.9	473.9	474.0	473.8	473.5	473.2	472.8	472.5	473.7
15°	464.6	464.9	465.2	465.5	465.8	466.0	466.0	466.0	466.0	466.0	467.4
17.5°	452.8	453.5	454.1	454.8	455.4	456.0	456.5	456.9	457.5	458.0	459.4
20°	444.9	445.6	446.5	447.2	448.0	448.7	449.3	450.0	450.6	451.2	452.9
22.5°	436.4	437.3	438.3	439.1	440.1	440.9	441.9	442.7	443.6	444.5	446.2
25°	422.4	423.5	424.5	425.7	426.7	428.0	429.4	430.8	432.3	433.6	435.5
27.5°	405.5	407.3	409.1	410.9	412.6	414.3	415.9	417.6	419.2	420.9	423.3
30°	394.2	396.2	398.2	400.3	402.4	404.4	406.4	408.4	410.5	412.5	415.0
32.5°	381.8	384.1	386.3	388.7	391.0	393.3	395.7	398.1	400.5	402.9	405.8
35°	363.9	366.6	369.3	371.9	374.6	377.4	380.3	383.3	386.3	389.3	392.7
37.5°	344.5	347.6	350.6	353.7	356.8	360.2	364.1	367.9	371.7	375.6	379.5
40°	331.6	335.0	338.5	341.9	345.3	349.1	353.4	357.6	361.8	366.1	370.1
42.5°	319.1	322.6	326.0	329.5	332.9	337.1	342.0	346.8	351.7	356.5	360.9
45°	298.5	302.7	306.9	311.1	315.4	320.2	325.6	331.1	336.7	342.1	346.9
47.5°	278.1	282.7	287.3	291.8	296.4	302.0	308.4	314.8	321.2	327.6	332.7
50°	264.0	268.8	273.7	278.5	283.3	289.3	296.3	303.4	310.5	317.4	322.8
52.5°	250.4	255.5	260.6	265.8	270.9	277.1	284.6	291.9	299.4	306.8	312.2
55°	228.8	234.4	240.1	245.6	251.3	258.2	266.4	274.5	282.6	290.7	296.3
57.5°	207.4	213.8	220.1	226.4	232.8	240.1	248.4	256.7	264.9	273.2	279.4
60°	192.2	198.9	205.7	212.4	219.0	226.9	235.8	244.7	253.6	262.6	268.5
62.5°	178.6	185.6	192.7	199.6	206.6	214.5	223.4	232.3	241.3	250.2	256.5
65°	156.3	163.9	171.6	179.3	186.9	195.4	204.6	213.9	223.1	232.3	238.7
67.5°	135.7	143.7	151.7	159.8	167.8	176.4	186.0	195.4	204.8	214.2	220.7
70°	121.1	129.2	137.3	145.4	153.6	162.5	172.2	181.9	191.6	201.3	208.0
72.5°	107.5	115.9	124.3	132.7	141.1	150.2	160.0	169.8	179.6	189.5	196.1
75°	86.6	95.4	104.1	112.8	121.6	131.0	141.0	151.0	161.1	171.1	177.8
77.5°	66.4	75.5	84.6	93.8	103.0	112.6	122.8	133.0	143.2	153.4	160.0
80°	52.8	62.3	71.9	81.4	91.0	100.9	111.0	121.1	131.3	141.5	148.1
82.5°	41.6	51.0	60.3	69.7	79.2	89.1	99.3	109.6	119.9	130.3	136.8
85°	25.4	35.1	44.8	54.5	64.1	74.0	84.0	94.0	104.1	114.0	120.6
87.5°	13.9	23.4	32.8	42.3	51.7	61.5	71.6	81.8	91.9	102.0	108.5
90°	7.4	17.2	27.0	36.8	46.7	56.8	67.4	77.9	88.5	99.0	105.6
92.5°	12.6	21.0	29.4	37.8	46.2	55.3	65.2	75.1	85.0	94.9	101.2
95°	25.4	30.5	35.6	40.8	45.9	53.4	63.2	73.1	82.9	92.8	99.2
97.5°	44.2	44.5	44.7	45.0	45.2	50.3	60.5	70.6	80.7	90.8	96.9
100°	58.9	55.4	51.9	48.4	44.9	48.2	58.1	68.0	77.9	87.8	94.1
102.5°	74.4	77.8	81.1	84.4	87.7	88.8	87.7	86.5	85.4	84.3	90.7
105°	96.1	102.7	109.3	115.8	122.4	120.6	110.2	99.8	89.4	79.2	85.3
107.5°	121.8	127.1	132.3	137.6	142.9	138.4	123.9	109.5	95.2	80.8	85.3
110°	137.8	142.4	146.9	151.5	156.0	152.3	140.4	128.6	116.6	104.7	102.9



TEST NUMBER: P331288-830

CATALOG NUMBER: SA2XXDIP-C485D330U830-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	153.4	157.3	161.2	165.1	169.0	172.1	174.6	177.0	179.6	182.0	162.3
115°	178.0	180.9	183.8	186.6	189.5	195.3	204.1	212.8	221.5	230.3	203.6
117.5°	199.3	201.8	204.2	206.6	209.0	214.1	221.7	229.4	237.0	244.7	241.8
120°	215.5	217.1	218.8	220.4	222.0	226.6	234.0	241.5	249.0	256.5	261.6
122.5°	229.1	230.5	231.8	233.1	234.4	238.7	245.8	253.1	260.2	267.5	272.2
125°	249.2	250.1	250.9	251.8	252.7	256.3	262.6	268.9	275.1	281.4	286.2
127.5°	268.0	268.8	269.7	270.4	271.3	274.2	279.2	284.2	289.2	294.2	298.8
130°	279.9	280.9	281.8	282.8	283.7	286.2	290.2	294.2	298.2	302.3	306.8
132.5°	292.1	292.9	293.7	294.5	295.2	297.2	300.5	303.8	307.1	310.4	314.6
135°	307.3	308.4	309.4	310.6	311.6	313.2	315.4	317.6	319.8	322.0	325.9
137.5°	323.3	324.0	324.8	325.5	326.2	327.3	328.7	330.1	331.4	332.8	336.3
140°	333.8	334.2	334.6	335.0	335.4	336.0	337.1	338.2	339.2	340.3	343.4
142.5°	342.6	342.9	343.3	343.6	343.9	344.5	345.4	346.4	347.2	348.2	350.7
145°	355.6	355.6	355.5	355.4	355.3	355.9	357.0	358.3	359.4	360.5	361.9
147.5°	367.7	367.4	367.1	366.8	366.6	367.0	368.2	369.4	370.5	371.6	372.1
150°	375.4	374.9	374.5	374.0	373.5	373.9	374.9	376.1	377.1	378.2	378.6
152.5°	382.0	381.5	381.0	380.4	379.9	380.1	381.2	382.2	383.2	384.3	384.7
155°	391.6	391.0	390.4	389.7	389.2	389.3	390.1	390.9	391.7	392.5	392.9
157.5°	399.1	398.6	398.0	397.6	397.0	397.1	397.7	398.2	398.8	399.4	399.8
160°	403.5	403.1	402.7	402.3	401.9	401.9	402.3	402.7	403.1	403.5	403.9
162.5°	407.4	407.0	406.6	406.1	405.8	405.8	406.0	406.4	406.8	407.2	407.6
165°	412.6	412.3	411.8	411.4	411.0	410.9	411.1	411.3	411.5	411.7	412.2
167.5°	416.5	416.1	415.8	415.3	414.9	414.8	415.0	415.2	415.4	415.6	416.0
170°	418.8	418.3	417.9	417.5	417.1	417.0	417.1	417.3	417.4	417.5	418.0
172.5°	420.2	419.8	419.3	419.0	418.6	418.4	418.6	418.7	418.9	419.0	419.4
175°	422.1	421.6	421.1	420.7	420.2	420.0	420.2	420.3	420.5	420.6	421.0
177.5°	422.4	422.0	421.6	421.2	420.8	420.8	420.8	420.8	420.8	420.9	421.3
180°	421.1	421.1	421.1	421.1	421.1	421.1	421.1	421.1	421.1	421.1	421.1



TEST NUMBER: P331288-830
 CATALOG NUMBER: SA2XXDIP-C485D330U830-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	485.7	485.7	485.7	485.7	485.7	485.7	485.7	485.7
2.5°	484.2	484.7	485.4	485.6	485.3	485.1	484.8	484.6
5°	482.7	483.6	484.6	484.9	484.7	484.7	484.5	484.3
7.5°	480.3	481.5	482.6	483.1	483.0	482.8	482.6	482.5
10°	478.3	479.6	480.9	481.5	481.3	481.1	481.0	480.8
12.5°	474.9	476.3	477.5	478.1	477.9	477.7	477.6	477.4
15°	468.8	470.2	471.6	472.2	472.1	471.9	471.7	471.6
17.5°	460.9	462.4	463.8	464.6	464.6	464.6	464.6	464.6
20°	454.7	456.4	458.1	458.9	458.9	458.9	458.9	458.9
22.5°	447.9	449.6	451.4	452.3	452.6	452.8	453.1	453.4
25°	437.3	439.2	441.1	442.3	442.8	443.3	443.7	444.2
27.5°	425.7	428.1	430.5	431.8	432.2	432.5	432.8	433.2
30°	417.5	420.0	422.5	424.0	424.4	424.9	425.4	425.8
32.5°	408.7	411.5	414.4	416.3	417.2	418.0	418.9	419.7
35°	396.2	399.6	403.0	405.3	406.4	407.5	408.6	409.7
37.5°	383.2	387.1	390.9	393.3	394.5	395.7	396.8	398.0
40°	374.2	378.2	382.3	385.0	386.4	387.9	389.3	390.7
42.5°	365.3	369.8	374.2	377.2	378.5	379.9	381.4	382.8
45°	351.9	356.7	361.5	364.7	366.3	367.9	369.4	371.0
47.5°	337.7	342.8	347.9	351.3	353.0	354.7	356.5	358.2
50°	328.1	333.4	338.7	342.2	344.0	345.7	347.4	349.1
52.5°	317.6	323.1	328.6	332.2	334.0	335.9	337.7	339.6
55°	302.0	307.6	313.2	317.1	319.1	321.1	323.2	325.2
57.5°	285.4	291.4	297.6	301.6	303.7	305.8	307.8	309.9
60°	274.5	280.4	286.3	290.4	292.6	294.8	297.0	299.2
62.5°	262.8	269.1	275.4	279.7	281.7	283.8	285.9	287.9
65°	245.2	251.6	258.0	262.2	264.2	266.3	268.2	270.3
67.5°	227.2	233.7	240.2	244.5	246.6	248.7	250.9	253.0
70°	214.8	221.5	228.2	232.5	234.4	236.3	238.2	240.1
72.5°	202.7	209.3	215.9	220.4	222.5	224.8	227.1	229.3
75°	184.5	191.2	197.9	202.4	204.3	206.4	208.4	210.5
77.5°	166.7	173.4	180.1	184.5	186.7	188.9	191.1	193.3
80°	154.7	161.2	167.8	172.1	174.4	176.5	178.7	180.9
82.5°	143.4	150.0	156.5	160.8	162.9	164.9	167.0	169.1
85°	127.1	133.7	140.3	144.7	146.8	149.1	151.3	153.4
87.5°	114.9	121.4	127.8	132.1	134.1	136.1	138.2	140.2
90°	112.2	118.8	125.4	129.7	131.7	133.7	135.7	137.7
92.5°	107.5	113.9	120.2	124.3	126.2	128.2	130.2	132.1
95°	105.4	111.7	118.0	122.1	123.9	125.6	127.4	129.2
97.5°	102.9	109.0	115.1	119.0	120.9	122.9	124.8	126.8
100°	100.4	106.8	113.1	117.2	119.0	120.9	122.7	124.6
102.5°	97.1	103.4	109.8	114.0	115.8	117.7	119.6	121.6
105°	91.5	97.7	104.0	108.1	110.1	112.1	114.0	116.1
107.5°	89.8	94.3	98.8	102.0	104.1	106.0	108.0	110.0
110°	101.2	99.4	97.6	97.7	99.7	101.7	103.8	105.8



TEST NUMBER: P331288-830

CATALOG NUMBER: SA2XXDIP-C485D330U830-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	142.6	122.9	103.2	94.3	96.2	98.1	100.1	102.1
115°	176.9	150.2	123.7	108.7	105.6	102.4	99.2	96.0
117.5°	238.8	235.8	232.9	224.2	209.8	195.4	181.0	166.5
120°	266.8	272.0	277.2	276.2	268.7	261.3	253.8	246.5
122.5°	276.9	281.7	286.4	288.7	288.3	288.0	287.8	287.5
125°	290.9	295.6	300.2	303.4	305.0	306.6	308.2	309.8
127.5°	303.3	307.9	312.5	315.5	316.9	318.3	319.7	321.1
130°	311.2	315.8	320.3	323.1	324.2	325.5	326.7	327.8
132.5°	318.9	323.1	327.4	330.1	331.3	332.5	333.7	334.9
135°	329.9	333.8	337.8	340.4	341.5	342.5	343.7	344.8
137.5°	339.9	343.5	346.9	349.1	350.0	350.8	351.7	352.5
140°	346.5	349.6	352.7	354.6	355.2	355.8	356.4	357.0
142.5°	353.3	355.9	358.4	360.0	360.4	360.9	361.4	361.8
145°	363.4	364.8	366.2	367.1	367.5	368.0	368.4	368.9
147.5°	372.6	373.1	373.5	373.8	373.9	374.0	374.1	374.2
150°	379.0	379.4	379.8	379.8	379.6	379.2	378.8	378.5
152.5°	385.1	385.5	385.9	385.9	385.4	385.0	384.6	384.1
155°	393.3	393.7	394.2	394.1	393.5	393.0	392.5	391.9
157.5°	400.3	400.8	401.1	401.1	400.6	400.1	399.5	399.1
160°	404.4	404.7	405.1	405.1	404.6	404.2	403.7	403.2
162.5°	408.0	408.5	409.0	409.0	408.3	407.7	407.2	406.6
165°	412.6	413.1	413.6	413.6	413.1	412.6	412.2	411.7
167.5°	416.5	417.0	417.5	417.4	416.8	416.1	415.6	414.9
170°	418.5	419.0	419.4	419.3	418.8	418.1	417.5	416.9
172.5°	419.9	420.4	420.8	420.8	420.2	419.6	419.0	418.4
175°	421.5	422.0	422.4	422.4	421.7	421.0	420.3	419.6
177.5°	421.7	422.1	422.4	422.4	421.9	421.4	420.9	420.5
180°	421.1	421.1	421.1	421.1	421.1	421.1	421.1	421.1

(END OF REPORT)