

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: P331290-840

Luminaire Tested: **SA2XXDIP-C485D330U840-4F0-1E-UDD-D4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331290-840
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-C485D330U840-4F0-1E-UDD-D4
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 330 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

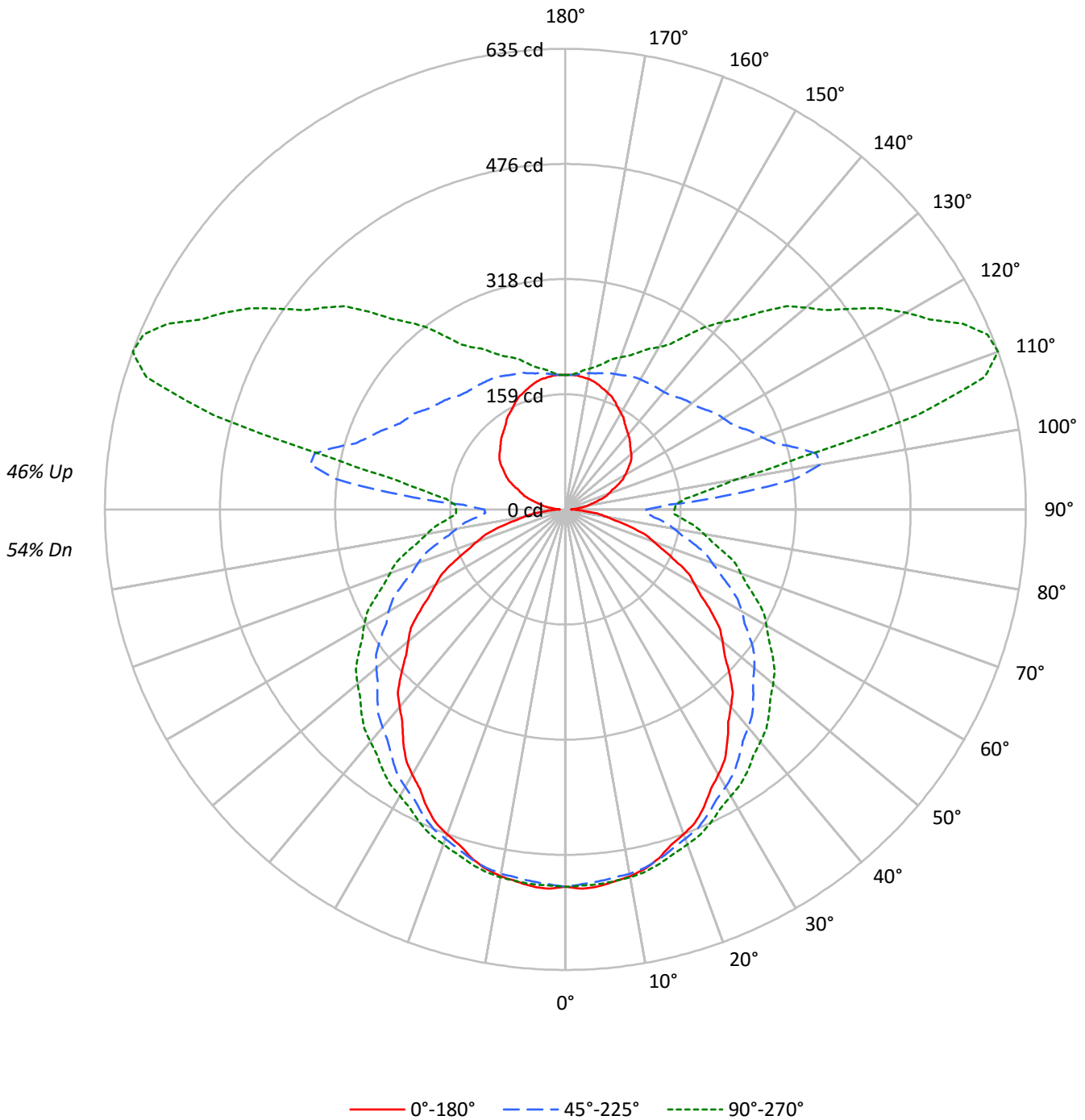
Lumens per Lamp: N/A
Luminaire Lumens: 3278.2 lumens
Efficiency: N/A
Efficacy: 119.2 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: General Diffuse

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: P331290-840
CATALOG NUMBER: SA2XXDIP-C485D330U840-4F0-1E-UDD-D4

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	0
RCR																		
0	108	108	108	108	100	100	100	100	85	85	85	72	72	72	60	60	60	54
1	97	92	87	83	90	85	81	78	73	70	67	61	59	57	50	49	47	42
2	88	79	73	67	81	74	68	62	63	58	54	53	49	46	43	41	38	34
3	80	69	61	55	73	64	57	51	55	49	45	46	42	38	38	35	32	28
4	73	61	52	46	67	57	49	43	48	42	38	41	36	32	33	30	27	24
5	66	54	45	39	61	50	43	37	43	37	32	36	31	28	30	26	23	20
6	61	48	40	34	56	45	37	32	39	32	28	33	28	24	27	23	20	17
7	56	44	35	29	52	41	33	28	35	29	24	30	25	21	25	21	18	15
8	52	40	31	26	48	37	30	24	32	26	22	27	22	19	23	19	16	14
9	49	36	28	23	45	34	27	22	29	23	19	25	20	17	21	17	14	12
10	46	33	26	21	42	31	24	19	27	21	17	23	18	15	19	16	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8402	8402	8402
5°	8443	8088	8058
10°	8390	7850	7761
15°	8275	7596	7448
20°	8129	7324	7148
25°	7984	7062	6875
30°	7780	6794	6601
35°	7575	6536	6409
40°	7360	6315	6215
45°	7153	6118	6051
50°	6934	5937	5888
55°	6700	5744	5722
60°	6417	5546	5546
65°	6122	5313	5339
70°	5796	5061	5115
75°	5371	4816	4908
80°	4707	4564	4698
85°	4070	4346	4535



TEST NUMBER: P331290-840

CATALOG NUMBER: SA2XXDIP-C485D330U840-4F0-1E-UDD-D4

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	49.3	1.5
10°-20°	141.4	4.3
20°-30°	214.3	6.5
30°-40°	261.0	8.0
40°-50°	280.8	8.6
50°-60°	272.7	8.3
60°-70°	238.1	7.3
70°-80°	183.3	5.6
80°-90°	124.7	3.8
90°-100°	158.9	4.8
100°-110°	313.6	9.6
110°-120°	308.3	9.4
120°-130°	243.0	7.4
130°-140°	186.4	5.7
140°-150°	135.3	4.1
150°-160°	93.9	2.9
160°-170°	55.3	1.7
170°-180°	18.0	0.5
0°-30°	405.0	12.4
0°-40°	666.0	20.3
0°-60°	1219.4	37.2
0°-90°	1765.5	53.9
90°-120°	780.9	23.8
90°-150°	1345.5	41.0
90°-180°	1513.0	46.2
0°-180°	3278.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	520	520	520	520	520	
5°	522	520	515	519	519	49
15°	498	499	499	506	505	140
25°	452	458	464	473	476	208
35°	390	403	417	433	439	244
45°	320	340	367	389	398	247
55°	245	273	311	338	348	219
65°	167	205	249	279	290	166
75°	93	135	183	214	226	98
85°	27	74	122	153	164	29
90°	8	56	112	140	151	6
95°	18	73	227	167	165	18
105°	47	92	329	563	502	51
115°	80	110	266	524	605	79
125°	109	130	238	415	482	97
135°	126	151	218	334	386	98
145°	143	165	209	264	292	90
155°	163	176	203	230	239	75
165°	178	183	194	206	209	50
175°	185	185	187	189	189	18
180°	186	186	186	186	186	



TEST NUMBER: P331290-840

CATALOG NUMBER: SA2XXDIP-C485D330U840-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	520.4	520.4	520.4	520.4	520.4	520.4	520.4	520.4	520.4	520.4	520.4
2.5°	523.4	523.0	522.6	522.2	521.8	521.1	520.2	519.3	518.4	517.4	518.1
5°	521.9	521.4	520.9	520.4	519.9	519.2	518.2	517.2	516.1	515.1	516.1
7.5°	517.3	516.8	516.5	516.2	515.9	515.3	514.5	513.8	513.0	512.2	513.4
10°	513.6	513.3	512.9	512.6	512.3	511.9	511.4	510.9	510.4	509.9	511.2
12.5°	507.6	507.7	507.8	507.8	507.9	507.7	507.4	507.0	506.5	506.2	507.6
15°	497.8	498.1	498.5	498.8	499.1	499.3	499.3	499.3	499.3	499.3	500.8
17.5°	485.1	485.8	486.6	487.3	488.0	488.6	489.1	489.6	490.2	490.7	492.2
20°	476.7	477.5	478.4	479.2	480.0	480.8	481.4	482.1	482.8	483.4	485.2
22.5°	467.6	468.6	469.6	470.5	471.5	472.4	473.4	474.3	475.2	476.3	478.1
25°	452.5	453.7	454.8	456.1	457.2	458.6	460.1	461.6	463.1	464.5	466.6
27.5°	434.4	436.4	438.3	440.2	442.0	443.9	445.7	447.5	449.2	451.0	453.5
30°	422.3	424.5	426.7	428.9	431.1	433.2	435.5	437.6	439.8	441.9	444.6
32.5°	409.1	411.5	413.9	416.5	418.9	421.4	423.9	426.6	429.1	431.7	434.7
35°	389.9	392.7	395.7	398.5	401.3	404.3	407.5	410.7	413.8	417.1	420.7
37.5°	369.1	372.4	375.7	379.0	382.2	386.0	390.1	394.2	398.3	402.4	406.6
40°	355.3	358.9	362.6	366.3	370.0	374.1	378.6	383.1	387.7	392.2	396.6
42.5°	341.9	345.7	349.3	353.0	356.7	361.1	366.4	371.5	376.8	381.9	386.7
45°	319.8	324.3	328.8	333.4	337.9	343.1	348.9	354.8	360.7	366.6	371.7
47.5°	297.9	302.9	307.8	312.7	317.6	323.6	330.4	337.3	344.2	351.0	356.5
50°	282.9	288.0	293.3	298.4	303.6	309.9	317.5	325.1	332.6	340.1	345.9
52.5°	268.3	273.8	279.2	284.8	290.2	296.9	304.9	312.8	320.7	328.7	334.5
55°	245.1	251.2	257.2	263.2	269.2	276.6	285.4	294.1	302.8	311.4	317.5
57.5°	222.2	229.0	235.8	242.6	249.4	257.2	266.1	275.0	283.9	292.8	299.3
60°	205.9	213.1	220.4	227.5	234.7	243.1	252.7	262.2	271.8	281.3	287.7
62.5°	191.4	198.8	206.4	213.9	221.4	229.8	239.3	248.9	258.5	268.0	274.8
65°	167.4	175.6	183.9	192.1	200.3	209.3	219.2	229.1	239.0	248.9	255.8
67.5°	145.4	154.0	162.6	171.2	179.8	189.0	199.2	209.3	219.4	229.5	236.5
70°	129.8	138.5	147.1	155.8	164.6	174.1	184.5	194.9	205.3	215.7	222.9
72.5°	115.2	124.2	133.2	142.2	151.2	161.0	171.5	182.0	192.5	203.0	210.2
75°	92.8	102.2	111.5	120.9	130.3	140.4	151.1	161.8	172.6	183.3	190.5
77.5°	71.1	80.9	90.7	100.5	110.4	120.7	131.6	142.5	153.4	164.3	171.5
80°	56.6	66.8	77.1	87.3	97.5	108.1	119.0	129.8	140.7	151.6	158.6
82.5°	44.5	54.6	64.6	74.7	84.8	95.4	106.4	117.4	128.5	139.6	146.5
85°	27.2	37.6	48.0	58.4	68.7	79.3	90.0	100.7	111.5	122.2	129.3
87.5°	14.8	25.0	35.3	45.4	55.6	66.1	77.3	88.5	99.7	110.4	117.1
90°	7.9	18.7	29.8	40.3	50.7	62.0	74.5	87.8	100.6	111.7	118.1
92.5°	11.3	22.3	33.9	44.5	55.9	69.1	87.5	109.1	129.6	140.5	139.9
95°	18.5	27.9	39.3	50.4	63.9	81.5	108.0	149.1	200.5	226.6	215.5
97.5°	25.7	34.5	45.3	57.2	70.8	88.8	119.1	172.0	250.4	319.0	336.9
100°	32.7	40.0	49.5	61.3	74.7	92.5	120.8	173.7	260.1	357.3	414.9
102.5°	38.7	45.1	54.0	65.4	78.5	95.8	122.5	170.3	250.7	354.5	441.3
105°	47.3	53.6	61.0	71.2	83.9	100.7	126.1	166.6	234.2	329.2	430.0
107.5°	57.5	62.4	68.8	77.6	89.3	105.4	130.1	166.1	223.1	302.9	392.3
110°	63.7	68.5	73.9	81.9	92.8	108.9	132.8	166.7	218.4	289.5	368.7



TEST NUMBER: P331290-840

CATALOG NUMBER: SA2XXDIP-C485D330U840-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	70.0	74.2	79.5	86.6	96.6	112.6	135.5	167.6	214.9	279.0	350.8
115°	79.8	83.3	87.4	93.5	102.4	116.7	139.7	169.0	211.2	266.5	327.9
117.5°	89.1	91.7	95.1	100.1	108.2	122.2	143.4	170.8	208.0	256.9	310.9
120°	95.4	97.5	100.3	104.2	112.0	125.6	146.3	172.3	206.4	251.4	301.3
122.5°	101.4	102.8	105.2	109.0	116.3	130.0	149.3	173.4	205.2	246.5	292.8
125°	108.6	109.7	111.8	116.0	123.2	135.8	154.1	175.5	203.0	238.3	279.5
127.5°	114.8	116.1	119.0	123.5	130.2	142.5	159.4	178.0	201.7	231.7	267.3
130°	118.6	119.8	123.2	128.1	135.0	146.6	162.7	179.8	201.1	227.4	259.3
132.5°	122.0	123.5	127.2	132.3	139.6	150.9	165.4	181.5	200.6	223.6	252.2
135°	126.3	127.7	132.1	137.4	145.6	156.4	169.6	183.7	199.7	218.4	242.3
137.5°	131.2	132.9	137.1	142.8	150.9	160.6	172.6	184.9	198.6	214.0	234.2
140°	134.9	136.1	140.3	145.8	153.5	162.9	173.9	185.3	197.7	211.4	229.3
142.5°	138.7	139.6	143.4	149.0	156.3	165.0	175.5	186.3	197.7	210.2	225.6
145°	143.4	144.9	148.5	153.8	161.0	168.7	178.4	188.4	198.3	209.0	221.6
147.5°	149.5	150.5	153.9	158.9	164.8	171.8	180.9	189.7	198.6	207.8	217.9
150°	153.4	154.5	157.3	162.0	167.3	173.8	182.0	190.2	198.3	206.9	215.5
152.5°	157.4	157.9	160.8	164.8	170.0	175.7	183.1	190.5	197.8	205.5	213.5
155°	163.1	163.4	165.5	169.5	173.4	178.7	184.8	190.9	196.9	203.0	209.8
157.5°	167.7	168.1	169.9	173.3	176.4	180.9	186.0	190.9	195.3	200.5	206.3
160°	170.9	171.3	172.7	175.5	178.4	182.4	186.6	190.9	194.5	198.7	203.7
162.5°	174.1	173.8	175.3	177.5	180.2	183.2	186.9	190.6	193.6	197.3	201.5
165°	177.7	177.3	178.0	180.2	182.0	184.1	187.3	189.9	192.0	194.5	197.6
167.5°	180.7	180.3	180.9	182.3	183.6	184.9	187.2	189.3	190.4	192.0	194.0
170°	182.7	182.0	182.4	183.4	184.1	185.2	186.9	188.7	189.5	190.6	192.0
172.5°	183.8	183.4	183.2	184.3	184.7	185.5	186.7	187.9	188.3	188.8	190.0
175°	185.2	184.8	184.5	185.2	185.2	185.5	186.2	186.9	186.6	186.9	187.3
177.5°	185.8	185.2	185.0	185.5	185.5	185.5	185.8	186.4	185.8	185.5	185.8
180°	185.5	185.5	185.5	185.5	185.5	185.5	185.5	185.5	185.5	185.5	185.5



TEST NUMBER: P331290-840

CATALOG NUMBER: SA2XXDIP-C485D330U840-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	520.4	520.4	520.4	520.4	520.4	520.4	520.4	520.4
2.5°	518.8	519.4	520.1	520.3	520.0	519.8	519.5	519.2
5°	517.2	518.2	519.2	519.6	519.4	519.3	519.1	518.9
7.5°	514.6	515.8	517.1	517.6	517.5	517.3	517.1	516.9
10°	512.5	513.8	515.2	515.8	515.6	515.4	515.3	515.1
12.5°	508.9	510.3	511.6	512.2	512.0	511.8	511.7	511.5
15°	502.3	503.8	505.3	505.9	505.8	505.6	505.4	505.3
17.5°	493.8	495.4	497.0	497.8	497.8	497.8	497.8	497.8
20°	487.2	489.0	490.8	491.7	491.7	491.7	491.7	491.7
22.5°	479.9	481.7	483.6	484.6	484.9	485.1	485.4	485.7
25°	468.6	470.6	472.6	473.9	474.4	474.9	475.4	475.9
27.5°	456.2	458.7	461.2	462.6	463.0	463.4	463.7	464.1
30°	447.4	450.0	452.7	454.2	454.7	455.2	455.8	456.3
32.5°	437.9	440.9	444.0	446.1	447.0	447.9	448.8	449.7
35°	424.4	428.2	431.8	434.2	435.5	436.6	437.8	439.0
37.5°	410.6	414.8	418.8	421.4	422.7	423.9	425.2	426.5
40°	400.9	405.3	409.6	412.5	414.0	415.6	417.1	418.6
42.5°	391.4	396.2	400.9	404.1	405.6	407.1	408.6	410.1
45°	377.0	382.1	387.3	390.7	392.4	394.2	395.8	397.5
47.5°	361.8	367.3	372.7	376.4	378.2	380.0	381.9	383.7
50°	351.5	357.2	362.9	366.7	368.6	370.4	372.2	374.1
52.5°	340.3	346.2	352.0	355.9	357.9	359.9	361.8	363.9
55°	323.6	329.6	335.6	339.7	341.9	344.1	346.3	348.4
57.5°	305.8	312.3	318.8	323.2	325.4	327.6	329.8	332.0
60°	294.1	300.4	306.8	311.1	313.5	315.9	318.2	320.5
62.5°	281.6	288.3	295.1	299.6	301.8	304.1	306.3	308.5
65°	262.7	269.5	276.4	280.9	283.1	285.3	287.4	289.6
67.5°	243.5	250.3	257.3	262.0	264.2	266.5	268.8	271.0
70°	230.1	237.3	244.5	249.1	251.2	253.2	255.2	257.2
72.5°	217.2	224.3	231.4	236.1	238.4	240.9	243.3	245.7
75°	197.7	204.9	212.1	216.8	218.9	221.2	223.3	225.5
77.5°	178.6	185.8	193.0	197.7	200.1	202.4	204.8	207.1
80°	165.7	172.7	179.8	184.4	186.8	189.1	191.5	193.8
82.5°	153.6	160.7	167.6	172.3	174.5	176.7	178.9	181.2
85°	136.2	143.3	150.4	155.0	157.3	159.8	162.1	164.4
87.5°	124.0	130.7	137.6	142.2	144.3	146.5	148.7	150.8
90°	124.4	130.4	137.7	142.5	144.5	146.5	148.6	150.6
92.5°	138.4	140.6	144.1	146.1	147.9	148.8	151.1	152.5
95°	193.0	177.5	169.0	165.3	162.7	161.8	162.8	165.1
97.5°	310.8	277.3	244.9	223.3	208.1	201.4	198.1	197.1
100°	413.6	375.6	332.9	293.7	265.9	252.5	244.0	239.3
102.5°	479.6	475.6	446.0	404.2	373.9	349.5	338.4	331.5
105°	510.1	556.3	566.8	558.9	538.7	518.4	504.8	501.7
107.5°	476.7	543.0	585.7	606.7	611.4	612.0	610.8	606.0
110°	449.4	518.6	569.7	602.5	619.7	628.3	633.4	634.8



TEST NUMBER: P331290-840

CATALOG NUMBER: SA2XXDIP-C485D330U840-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	424.0	490.7	544.8	582.0	605.2	618.3	626.3	630.1
115°	391.8	451.7	503.5	543.7	570.9	589.2	600.3	605.3
117.5°	365.9	419.1	466.5	504.2	531.8	550.9	562.4	566.7
120°	352.0	401.0	443.5	479.3	506.0	524.6	536.8	542.3
122.5°	340.4	385.6	426.0	458.3	482.3	500.4	511.2	515.7
125°	323.0	364.3	400.2	430.0	452.2	467.3	477.7	482.0
127.5°	305.8	343.2	377.0	404.5	423.9	438.2	447.4	451.1
130°	294.8	329.4	361.6	387.9	406.7	420.2	428.7	432.8
132.5°	284.0	316.3	346.1	370.8	389.4	402.8	410.7	414.7
135°	269.0	296.1	323.2	345.6	362.2	375.4	383.1	385.9
137.5°	256.1	278.9	300.7	320.2	335.4	346.6	353.5	356.7
140°	248.1	267.9	287.0	304.5	317.0	327.2	333.6	336.7
142.5°	241.8	258.5	274.8	289.4	301.1	310.4	316.1	317.4
145°	233.6	246.4	258.4	269.7	279.1	286.0	290.4	292.4
147.5°	227.5	236.9	245.7	253.5	260.9	266.2	269.0	270.1
150°	224.1	232.0	239.4	245.8	251.2	255.5	257.6	258.0
152.5°	221.0	228.2	234.6	240.1	244.4	248.0	249.6	249.7
155°	216.6	222.3	227.6	231.6	235.5	238.0	239.4	238.7
157.5°	211.6	216.3	220.8	223.9	226.6	228.7	229.3	229.3
160°	208.3	212.3	216.2	218.7	221.3	223.0	223.4	223.4
162.5°	205.2	208.6	212.0	213.9	216.4	217.6	217.9	217.6
165°	200.6	203.0	205.5	206.9	208.3	209.8	209.8	209.4
167.5°	196.0	197.9	199.7	201.0	201.6	202.4	202.3	201.9
170°	193.8	194.8	196.2	196.9	197.3	198.3	198.0	197.3
172.5°	191.2	192.0	193.1	193.5	193.9	194.4	194.0	193.6
175°	188.4	188.7	189.1	189.5	189.5	189.9	189.5	188.7
177.5°	186.4	186.4	186.7	186.7	186.7	186.7	186.4	185.8
180°	185.5	185.5	185.5	185.5	185.5	185.5	185.5	185.5

(END OF REPORT)