

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: P331290-935

Luminaire Tested: **SA2XXDIP-C485D330U935-4F0-1E-UDD-D4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331290-935
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-C485D330U935-4F0-1E-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

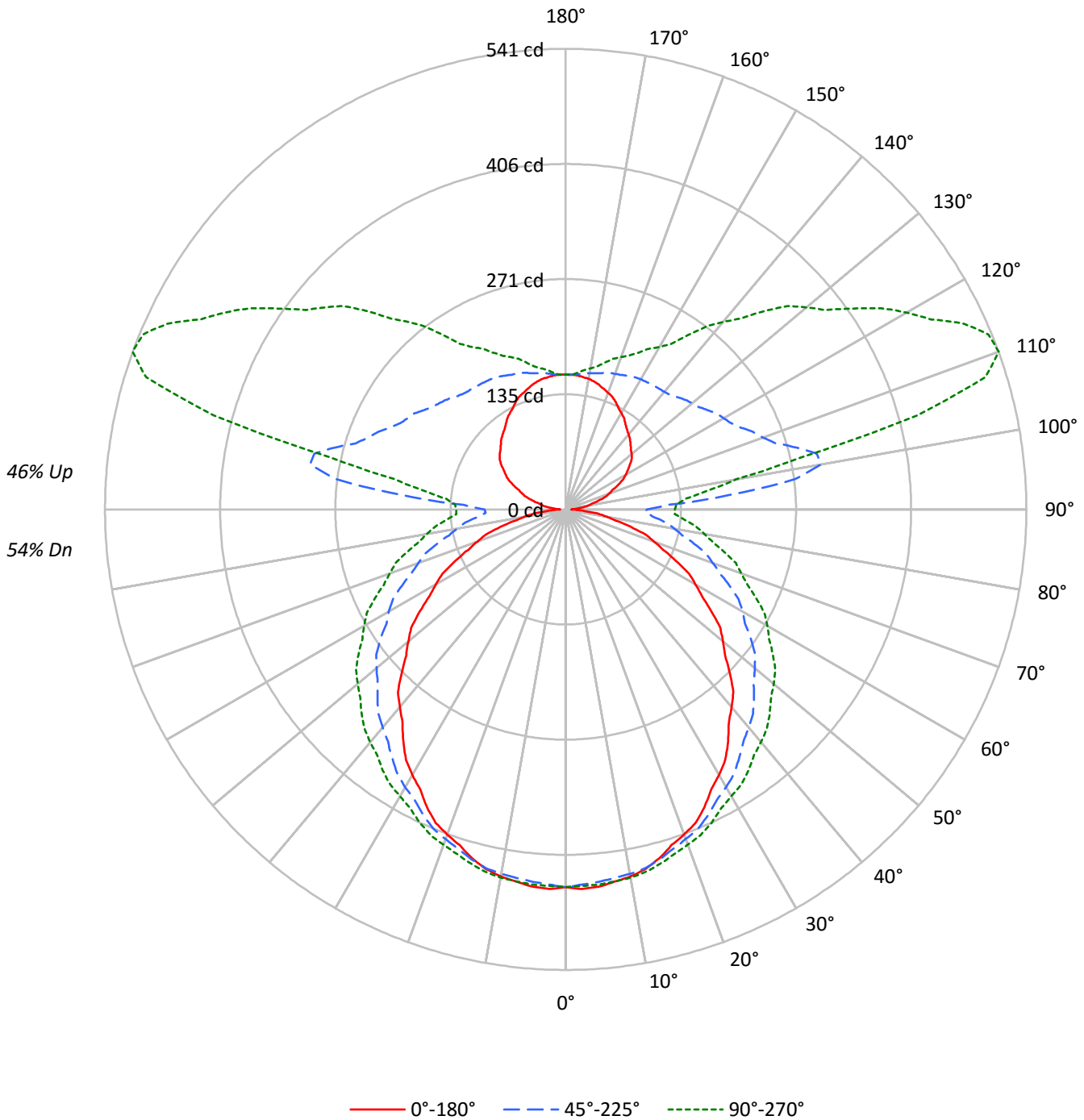
Lumens per Lamp: N/A
Luminaire Lumens: 2794.9 lumens
Efficiency: N/A
Efficacy: 101.6 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: General Diffuse

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: P331290-935
CATALOG NUMBER: SA2XXDIP-C485D330U935-4F0-1E-UDD-D4

Luminous Intensity Polar Plot





TEST NUMBER: P331290-935

CATALOG NUMBER: SA2XXDIP-C485D330U935-4F0-1E-UDD-D4

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	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°	7164	7164	7164
5°	7199	6896	6870
10°	7153	6692	6617
15°	7055	6477	6350
20°	6930	6245	6094
25°	6807	6022	5862
30°	6634	5793	5628
35°	6458	5572	5464
40°	6275	5384	5299
45°	6100	5215	5159
50°	5912	5062	5019
55°	5713	4898	4878
60°	5473	4730	4729
65°	5222	4530	4552
70°	4938	4315	4361
75°	4578	4106	4186
80°	4008	3889	4005
85°	3471	3705	3868



TEST NUMBER: P331290-935

CATALOG NUMBER: SA2XXDIP-C485D330U935-4F0-1E-UDD-D4

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	42.0	1.5
10°-20°	120.6	4.3
20°-30°	182.7	6.5
30°-40°	222.5	8.0
40°-50°	239.4	8.6
50°-60°	232.5	8.3
60°-70°	203.0	7.3
70°-80°	156.3	5.6
80°-90°	106.3	3.8
90°-100°	135.5	4.8
100°-110°	267.4	9.6
110°-120°	262.9	9.4
120°-130°	207.2	7.4
130°-140°	158.9	5.7
140°-150°	115.3	4.1
150°-160°	80.1	2.9
160°-170°	47.1	1.7
170°-180°	15.3	0.5
0°-30°	345.3	12.4
0°-40°	567.8	20.3
0°-60°	1039.7	37.2
0°-90°	1505.2	53.9
90°-120°	665.8	23.8
90°-150°	1147.2	41.0
90°-180°	1290.0	46.2
0°-180°	2794.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	444	444	444	444	444	
5°	445	443	439	443	442	42
15°	424	426	426	431	431	119
25°	386	390	396	404	406	177
35°	332	343	356	369	374	208
45°	273	290	312	332	339	210
55°	209	233	266	288	297	187
65°	143	175	212	238	247	142
75°	79	115	156	183	192	84
85°	23	63	104	130	140	25
90°	7	48	95	119	128	5
95°	16	62	193	142	141	15
105°	40	79	281	480	428	43
115°	68	93	227	446	516	67
125°	93	110	203	354	411	82
135°	108	129	186	285	329	83
145°	122	141	178	225	249	77
155°	139	150	173	196	204	64
165°	152	156	166	176	179	43
175°	158	158	159	161	161	15
180°	158	158	158	158	158	



TEST NUMBER: P331290-935

CATALOG NUMBER: SA2XXDIP-C485D330U935-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	443.7	443.7	443.7	443.7	443.7	443.7	443.7	443.7	443.7	443.7	443.7
2.5°	446.3	445.9	445.6	445.2	444.9	444.3	443.5	442.7	442.0	441.1	441.7
5°	445.0	444.5	444.1	443.7	443.2	442.6	441.8	440.9	440.1	439.2	440.1
7.5°	441.0	440.7	440.4	440.1	439.9	439.4	438.7	438.1	437.4	436.7	437.7
10°	437.9	437.6	437.3	437.0	436.8	436.4	436.0	435.6	435.1	434.7	435.8
12.5°	432.7	432.8	432.9	432.9	433.0	432.8	432.6	432.2	431.9	431.6	432.7
15°	424.4	424.6	425.0	425.2	425.5	425.7	425.7	425.7	425.7	425.7	427.0
17.5°	413.6	414.2	414.8	415.4	416.0	416.6	417.0	417.4	417.9	418.4	419.7
20°	406.4	407.1	407.9	408.5	409.2	409.9	410.4	411.0	411.6	412.2	413.7
22.5°	398.6	399.5	400.4	401.1	402.0	402.8	403.6	404.4	405.2	406.0	407.6
25°	385.8	386.8	387.8	388.8	389.8	391.0	392.3	393.6	394.9	396.1	397.8
27.5°	370.4	372.0	373.7	375.3	376.9	378.5	380.0	381.5	383.0	384.5	386.7
30°	360.1	362.0	363.8	365.7	367.6	369.4	371.3	373.1	375.0	376.8	379.1
32.5°	348.8	350.9	352.9	355.1	357.1	359.3	361.4	363.7	365.8	368.1	370.7
35°	332.4	334.8	337.3	339.8	342.2	344.7	347.4	350.2	352.8	355.6	358.7
37.5°	314.7	317.5	320.3	323.1	325.9	329.1	332.6	336.0	339.6	343.1	346.6
40°	302.9	306.0	309.2	312.3	315.5	318.9	322.8	326.7	330.5	334.4	338.1
42.5°	291.5	294.7	297.8	301.0	304.1	307.9	312.4	316.8	321.2	325.6	329.7
45°	272.7	276.5	280.3	284.2	288.1	292.5	297.5	302.5	307.5	312.5	316.9
47.5°	254.0	258.2	262.4	266.6	270.8	275.9	281.7	287.6	293.4	299.3	303.9
50°	241.2	245.6	250.0	254.4	258.8	264.2	270.7	277.2	283.6	290.0	294.9
52.5°	228.8	233.4	238.1	242.8	247.5	253.1	259.9	266.7	273.5	280.3	285.2
55°	209.0	214.1	219.3	224.4	229.5	235.8	243.3	250.7	258.1	265.5	270.7
57.5°	189.4	195.3	201.0	206.8	212.7	219.3	226.9	234.5	242.0	249.6	255.2
60°	175.6	181.7	187.9	194.0	200.1	207.2	215.4	223.5	231.7	239.9	245.3
62.5°	163.2	169.5	176.0	182.4	188.7	196.0	204.1	212.2	220.4	228.5	234.3
65°	142.8	149.7	156.8	163.8	170.7	178.5	186.9	195.4	203.8	212.2	218.1
67.5°	124.0	131.3	138.6	145.9	153.3	161.2	169.9	178.5	187.1	195.7	201.6
70°	110.6	118.0	125.4	132.9	140.3	148.4	157.3	166.2	175.0	183.9	190.0
72.5°	98.2	105.9	113.6	121.2	128.9	137.2	146.2	155.2	164.1	173.1	179.2
75°	79.1	87.1	95.1	103.1	111.1	119.7	128.8	137.9	147.1	156.3	162.4
77.5°	60.6	69.0	77.3	85.7	94.1	102.9	112.2	121.5	130.8	140.1	146.2
80°	48.2	56.9	65.7	74.4	83.1	92.1	101.4	110.6	119.9	129.2	135.3
82.5°	38.0	46.6	55.1	63.7	72.3	81.4	90.7	100.1	109.5	119.0	124.9
85°	23.2	32.0	40.9	49.8	58.5	67.6	76.7	85.8	95.1	104.2	110.2
87.5°	12.7	21.4	30.1	38.7	47.4	56.4	65.9	75.4	85.0	94.1	99.9
90°	6.7	15.9	25.4	34.4	43.2	52.9	63.5	74.8	85.8	95.2	100.7
92.5°	9.6	19.0	28.9	38.0	47.7	58.9	74.6	93.0	110.5	119.8	119.2
95°	15.8	23.8	33.5	43.0	54.5	69.5	92.0	127.1	170.9	193.2	183.7
97.5°	21.9	29.4	38.7	48.7	60.4	75.7	101.5	146.6	213.5	272.0	287.2
100°	27.9	34.1	42.2	52.3	63.7	78.9	103.0	148.1	221.8	304.6	353.7
102.5°	33.0	38.5	46.1	55.8	66.9	81.7	104.4	145.2	213.8	302.2	376.3
105°	40.3	45.7	52.0	60.7	71.5	85.8	107.5	142.1	199.7	280.7	366.6
107.5°	49.0	53.2	58.6	66.1	76.1	89.9	110.9	141.6	190.2	258.2	334.5
110°	54.3	58.4	63.0	69.8	79.1	92.8	113.2	142.2	186.2	246.8	314.4



TEST NUMBER: P331290-935

CATALOG NUMBER: SA2XXDIP-C485D330U935-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	59.7	63.3	67.8	73.9	82.4	96.0	115.5	142.9	183.2	237.9	299.1
115°	68.0	71.0	74.5	79.7	87.3	99.5	119.1	144.0	180.0	227.2	279.6
117.5°	75.9	78.2	81.1	85.3	92.2	104.2	122.3	145.6	177.4	219.0	265.1
120°	81.4	83.1	85.5	88.9	95.5	107.1	124.8	146.9	176.0	214.3	256.9
122.5°	86.4	87.6	89.7	92.9	99.2	110.8	127.3	147.8	175.0	210.2	249.6
125°	92.6	93.5	95.3	98.9	105.0	115.8	131.4	149.6	173.1	203.2	238.3
127.5°	97.9	99.0	101.4	105.3	111.0	121.5	135.9	151.8	171.9	197.5	227.9
130°	101.1	102.1	105.0	109.2	115.1	125.0	138.7	153.3	171.4	193.9	221.1
132.5°	104.0	105.3	108.5	112.8	119.0	128.6	141.0	154.7	171.0	190.6	215.0
135°	107.7	108.9	112.6	117.2	124.2	133.4	144.6	156.6	170.2	186.2	206.6
137.5°	111.8	113.3	116.9	121.7	128.6	136.9	147.1	157.6	169.4	182.4	199.7
140°	115.0	116.1	119.6	124.3	130.9	138.9	148.3	158.0	168.6	180.2	195.5
142.5°	118.2	119.0	122.3	127.0	133.3	140.7	149.6	158.9	168.6	179.2	192.3
145°	122.3	123.6	126.6	131.1	137.2	143.9	152.1	160.7	169.1	178.2	188.9
147.5°	127.4	128.3	131.2	135.4	140.5	146.5	154.2	161.7	169.4	177.2	185.8
150°	130.8	131.7	134.1	138.1	142.7	148.2	155.2	162.1	169.1	176.4	183.7
152.5°	134.2	134.7	137.1	140.5	144.9	149.8	156.1	162.4	168.7	175.2	182.0
155°	139.1	139.3	141.1	144.5	147.8	152.4	157.6	162.7	167.9	173.1	178.9
157.5°	143.0	143.4	144.8	147.7	150.4	154.2	158.6	162.7	166.5	170.9	175.9
160°	145.7	146.0	147.2	149.6	152.1	155.5	159.1	162.7	165.8	169.4	173.7
162.5°	148.4	148.2	149.5	151.4	153.6	156.2	159.4	162.5	165.1	168.2	171.8
165°	151.5	151.2	151.8	153.6	155.2	157.0	159.7	161.9	163.7	165.8	168.5
167.5°	154.0	153.7	154.2	155.4	156.5	157.6	159.6	161.4	162.3	163.7	165.4
170°	155.8	155.2	155.5	156.4	157.0	157.9	159.4	160.9	161.5	162.5	163.7
172.5°	156.7	156.4	156.2	157.1	157.5	158.2	159.2	160.2	160.6	161.0	162.0
175°	157.9	157.6	157.3	157.9	157.9	158.2	158.8	159.4	159.1	159.4	159.7
177.5°	158.4	157.9	157.7	158.2	158.2	158.2	158.4	158.9	158.4	158.2	158.4
180°	158.2	158.2	158.2	158.2	158.2	158.2	158.2	158.2	158.2	158.2	158.2



TEST NUMBER: P331290-935

CATALOG NUMBER: SA2XXDIP-C485D330U935-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	443.7	443.7	443.7	443.7	443.7	443.7	443.7	443.7
2.5°	442.3	442.8	443.4	443.6	443.3	443.2	442.9	442.6
5°	440.9	441.8	442.6	443.0	442.8	442.7	442.6	442.4
7.5°	438.8	439.8	440.8	441.3	441.2	441.0	440.8	440.7
10°	437.0	438.1	439.3	439.8	439.6	439.5	439.4	439.2
12.5°	433.9	435.1	436.2	436.7	436.5	436.4	436.3	436.1
15°	428.3	429.6	430.8	431.4	431.3	431.1	430.9	430.8
17.5°	421.0	422.4	423.7	424.4	424.4	424.4	424.4	424.4
20°	415.3	416.9	418.4	419.2	419.2	419.2	419.2	419.2
22.5°	409.1	410.7	412.3	413.2	413.5	413.6	413.9	414.1
25°	399.5	401.2	402.9	404.1	404.5	404.9	405.4	405.8
27.5°	388.9	391.1	393.2	394.4	394.8	395.1	395.4	395.7
30°	381.4	383.7	386.0	387.3	387.7	388.1	388.6	389.0
32.5°	373.3	375.9	378.6	380.3	381.1	381.9	382.6	383.4
35°	361.9	365.1	368.2	370.2	371.3	372.2	373.2	374.3
37.5°	350.1	353.6	357.1	359.3	360.4	361.4	362.5	363.6
40°	341.8	345.5	349.2	351.7	353.0	354.3	355.6	356.9
42.5°	333.7	337.8	341.8	344.6	345.8	347.1	348.4	349.7
45°	321.4	325.8	330.2	333.1	334.6	336.0	337.4	338.9
47.5°	308.5	313.1	317.8	320.9	322.4	324.0	325.6	327.2
50°	299.7	304.5	309.4	312.6	314.3	315.8	317.4	318.9
52.5°	290.2	295.2	300.1	303.4	305.1	306.9	308.5	310.2
55°	275.9	281.0	286.1	289.6	291.5	293.3	295.2	297.0
57.5°	260.7	266.2	271.8	275.5	277.4	279.3	281.2	283.1
60°	250.7	256.1	261.6	265.3	267.3	269.3	271.3	273.3
62.5°	240.0	245.8	251.6	255.5	257.4	259.2	261.1	263.0
65°	223.9	229.8	235.7	239.5	241.3	243.2	245.0	246.9
67.5°	207.6	213.4	219.4	223.3	225.2	227.2	229.2	231.1
70°	196.2	202.3	208.4	212.4	214.1	215.9	217.6	219.3
72.5°	185.2	191.2	197.3	201.3	203.3	205.3	207.4	209.5
75°	168.6	174.7	180.8	184.9	186.7	188.6	190.4	192.3
77.5°	152.3	158.4	164.5	168.6	170.6	172.5	174.6	176.6
80°	141.3	147.2	153.3	157.2	159.3	161.3	163.2	165.2
82.5°	131.0	137.0	142.9	146.9	148.8	150.7	152.6	154.5
85°	116.1	122.2	128.2	132.2	134.1	136.2	138.2	140.2
87.5°	105.7	111.4	117.4	121.2	123.0	124.9	126.7	128.5
90°	106.1	111.2	117.4	121.5	123.2	124.9	126.7	128.4
92.5°	118.0	119.9	122.9	124.6	126.1	126.8	128.8	130.0
95°	164.5	151.4	144.0	140.9	138.7	137.9	138.8	140.8
97.5°	265.0	236.4	208.8	190.4	177.5	171.7	168.9	168.1
100°	352.7	320.2	283.8	250.4	226.7	215.2	208.0	204.1
102.5°	408.9	405.5	380.2	344.7	318.7	298.0	288.5	282.7
105°	434.9	474.3	483.3	476.5	459.3	442.0	430.4	427.7
107.5°	406.4	463.0	499.4	517.3	521.2	521.8	520.7	516.7
110°	383.1	442.1	485.7	513.7	528.3	535.7	540.0	541.2



TEST NUMBER: P331290-935

CATALOG NUMBER: SA2XXDIP-C485D330U935-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	361.5	418.4	464.5	496.2	516.0	527.2	534.0	537.2
115°	334.1	385.1	429.3	463.6	486.7	502.3	511.8	516.1
117.5°	311.9	357.3	397.7	429.9	453.4	469.7	479.5	483.2
120°	300.1	341.9	378.2	408.6	431.4	447.3	457.7	462.4
122.5°	290.2	328.7	363.2	390.7	411.2	426.6	435.8	439.7
125°	275.3	310.6	341.2	366.6	385.6	398.4	407.3	411.0
127.5°	260.7	292.6	321.4	344.8	361.4	373.6	381.4	384.6
130°	251.3	280.9	308.3	330.7	346.7	358.3	365.5	369.0
132.5°	242.1	269.7	295.1	316.2	332.0	343.5	350.2	353.5
135°	229.4	252.4	275.5	294.6	308.8	320.0	326.7	329.0
137.5°	218.3	237.8	256.4	273.0	285.9	295.5	301.4	304.1
140°	211.5	228.4	244.7	259.6	270.3	279.0	284.4	287.1
142.5°	206.1	220.4	234.3	246.8	256.8	264.7	269.5	270.6
145°	199.1	210.1	220.3	230.0	238.0	243.8	247.6	249.3
147.5°	194.0	202.0	209.5	216.1	222.5	227.0	229.4	230.3
150°	191.1	197.8	204.1	209.6	214.1	217.8	219.6	220.0
152.5°	188.4	194.6	200.0	204.7	208.4	211.5	212.8	212.9
155°	184.7	189.5	194.1	197.4	200.8	202.9	204.1	203.5
157.5°	180.4	184.4	188.2	190.9	193.2	195.0	195.5	195.5
160°	177.6	181.0	184.3	186.5	188.6	190.1	190.5	190.5
162.5°	175.0	177.9	180.7	182.4	184.5	185.5	185.8	185.5
165°	171.0	173.1	175.2	176.4	177.6	178.9	178.9	178.6
167.5°	167.1	168.8	170.2	171.3	171.9	172.5	172.5	172.1
170°	165.2	166.1	167.3	167.9	168.2	169.1	168.8	168.2
172.5°	163.0	163.7	164.6	165.0	165.3	165.7	165.4	165.1
175°	160.7	160.9	161.3	161.5	161.5	161.9	161.5	160.9
177.5°	158.9	158.9	159.2	159.2	159.2	159.2	158.9	158.4
180°	158.2	158.2	158.2	158.2	158.2	158.2	158.2	158.2

(END OF REPORT)