

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: P331263-927

Luminaire Tested: **SA2XXDIP-C290D725U927-4F0-1E-UDD-D4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331263-927
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-C290D725U927-4F0-1E-UDD-D4
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 290 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 725 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3191.0 lumens
Efficiency: N/A
Efficacy: 102.3 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: Semi-Indirect

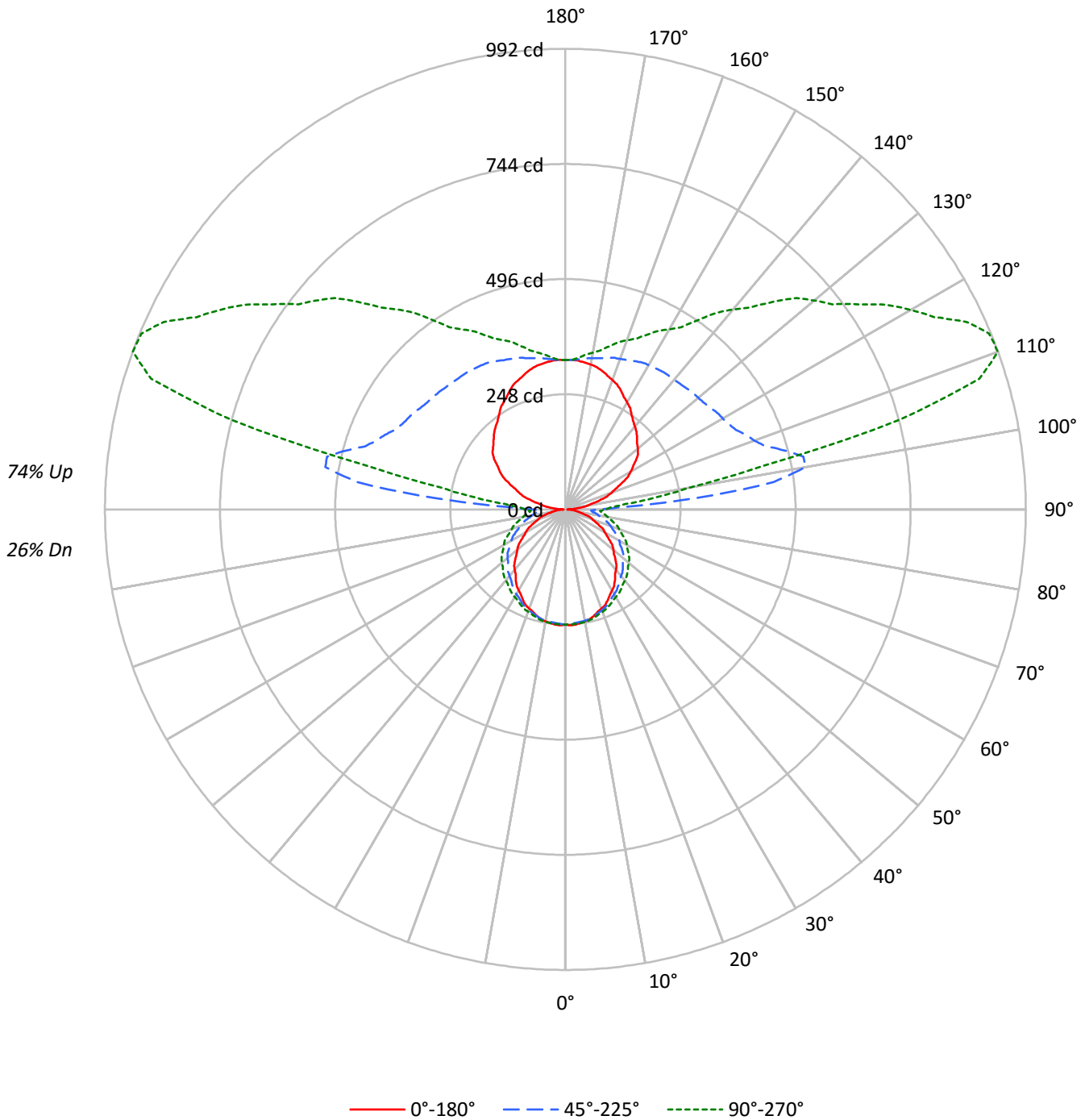
Input Watts (W): 31.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331263-927

CATALOG NUMBER: SA2XXDIP-C290D725U927-4F0-1E-UDD-D4

Luminous Intensity Polar Plot





TEST NUMBER: P331263-927

CATALOG NUMBER: SA2XXDIP-C290D725U927-4F0-1E-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	102	102	102	102	91	91	91	91	70	70	70	52	52	52	35	35	35	26				
1	92	87	83	79	82	78	74	71	60	58	56	44	43	41	29	28	27	21				
2	83	76	69	64	74	67	62	58	52	49	45	38	36	34	25	24	22	17				
3	76	66	59	53	67	59	53	48	46	41	38	33	31	28	22	20	19	14				
4	69	58	50	44	61	52	45	40	40	36	32	30	26	24	20	18	16	12				
5	63	52	44	38	56	46	39	34	36	31	27	26	23	20	17	15	14	10				
6	58	46	38	32	51	41	34	29	32	27	23	24	20	18	16	14	12	9				
7	53	41	34	28	47	37	30	26	29	24	20	21	18	15	14	12	10	8				
8	49	37	30	25	44	34	27	22	26	21	18	19	16	14	13	11	9	7				
9	46	34	27	22	41	30	24	20	24	19	16	18	14	12	12	10	8	6				
10	43	31	24	19	38	28	22	18	22	17	14	16	13	11	11	9	8	5				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4009	4009	4009
5°	4030	3859	3845
10°	4004	3746	3703
15°	3948	3624	3554
20°	3878	3495	3410
25°	3809	3371	3279
30°	3712	3242	3150
35°	3615	3118	3059
40°	3511	3013	2965
45°	3413	2919	2886
50°	3309	2833	2810
55°	3196	2741	2731
60°	3061	2646	2648
65°	2922	2534	2548
70°	2764	2415	2440
75°	2564	2299	2342
80°	2245	2177	2240
85°	1945	2073	2163



TEST NUMBER: P331263-927

CATALOG NUMBER: SA2XXDIP-C290D725U927-4F0-1E-UDD-D4

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	23.5	0.7
10°-20°	67.5	2.1
20°-30°	102.2	3.2
30°-40°	124.5	3.9
40°-50°	134.0	4.2
50°-60°	130.1	4.1
60°-70°	113.6	3.6
70°-80°	87.5	2.7
80°-90°	61.6	1.9
90°-100°	169.2	5.3
100°-110°	466.4	14.6
110°-120°	483.7	15.2
120°-130°	393.0	12.3
130°-140°	311.4	9.8
140°-150°	232.7	7.3
150°-160°	163.0	5.1
160°-170°	95.9	3.0
170°-180°	31.2	1.0
0°-30°	193.2	6.1
0°-40°	317.8	10.0
0°-60°	581.9	18.2
0°-90°	844.5	26.5
90°-120°	1119.3	35.1
90°-150°	2056.4	64.4
90°-180°	2346.0	73.5
0°-180°	3191.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	248	248	248	248	248	
5°	249	248	246	248	248	24
15°	238	238	238	241	241	67
25°	216	218	222	226	227	99
35°	186	192	199	207	210	116
45°	153	162	175	186	190	118
55°	117	130	149	161	166	105
65°	80	98	119	133	138	79
75°	44	65	88	102	108	47
85°	13	35	58	73	78	14
90°	4	33	68	81	87	4
95°	25	73	284	146	130	25
105°	77	127	490	863	745	82
115°	135	174	406	824	955	133
125°	186	221	381	663	770	166
135°	218	261	369	551	632	169
145°	249	286	363	453	497	156
155°	283	306	352	398	414	130
165°	308	318	338	358	364	87
175°	321	322	324	328	328	31
180°	322	322	322	322	322	



TEST NUMBER: P331263-927

CATALOG NUMBER: SA2XXDIP-C290D725U927-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	248.3	248.3	248.3	248.3	248.3	248.3	248.3	248.3	248.3	248.3	248.3
2.5°	249.8	249.5	249.4	249.1	249.0	248.7	248.2	247.8	247.3	246.8	247.2
5°	249.1	248.8	248.6	248.3	248.0	247.7	247.2	246.8	246.3	245.8	246.3
7.5°	246.8	246.6	246.4	246.3	246.1	245.9	245.5	245.2	244.8	244.4	245.0
10°	245.1	244.9	244.8	244.6	244.5	244.2	244.0	243.8	243.5	243.3	243.9
12.5°	242.2	242.2	242.2	242.3	242.3	242.2	242.1	241.9	241.7	241.5	242.2
15°	237.5	237.7	237.8	238.0	238.1	238.2	238.2	238.2	238.2	238.2	238.9
17.5°	231.5	231.8	232.1	232.5	232.8	233.1	233.4	233.6	233.9	234.2	234.9
20°	227.4	227.8	228.2	228.6	229.0	229.4	229.7	230.0	230.4	230.7	231.6
22.5°	223.2	223.6	224.0	224.5	225.0	225.5	225.9	226.3	226.8	227.2	228.1
25°	215.9	216.5	217.1	217.6	218.2	218.8	219.5	220.2	220.9	221.7	222.6
27.5°	207.3	208.2	209.1	210.0	211.0	211.8	212.6	213.5	214.4	215.2	216.4
30°	201.5	202.6	203.6	204.6	205.7	206.8	207.8	208.8	209.8	210.9	212.1
32.5°	195.2	196.4	197.5	198.7	199.9	201.1	202.3	203.5	204.8	206.0	207.5
35°	186.1	187.4	188.8	190.1	191.5	192.9	194.5	196.0	197.5	199.0	200.7
37.5°	176.1	177.7	179.3	180.9	182.4	184.2	186.2	188.1	190.0	192.0	194.0
40°	169.5	171.3	173.0	174.8	176.5	178.5	180.6	182.8	185.0	187.1	189.2
42.5°	163.2	164.9	166.7	168.4	170.2	172.3	174.8	177.3	179.7	182.2	184.5
45°	152.6	154.7	156.9	159.1	161.2	163.7	166.5	169.3	172.1	174.9	177.4
47.5°	142.1	144.5	146.9	149.2	151.5	154.4	157.6	160.9	164.2	167.5	170.1
50°	135.0	137.4	139.9	142.4	144.9	147.9	151.5	155.1	158.7	162.3	165.0
52.5°	128.0	130.6	133.2	135.9	138.5	141.6	145.4	149.2	153.0	156.9	159.6
55°	116.9	119.9	122.7	125.6	128.5	132.0	136.2	140.3	144.5	148.6	151.5
57.5°	106.0	109.2	112.5	115.7	119.0	122.7	127.0	131.2	135.5	139.7	142.8
60°	98.2	101.7	105.1	108.5	112.0	116.0	120.6	125.1	129.7	134.2	137.3
62.5°	91.3	94.9	98.5	102.0	105.6	109.6	114.2	118.7	123.3	127.9	131.1
65°	79.9	83.8	87.7	91.7	95.5	99.9	104.6	109.3	114.1	118.7	122.1
67.5°	69.4	73.5	77.6	81.7	85.8	90.2	95.1	99.9	104.7	109.6	112.9
70°	61.9	66.1	70.2	74.4	78.5	83.1	88.0	93.0	98.0	102.9	106.4
72.5°	55.0	59.3	63.5	67.8	72.2	76.8	81.8	86.8	91.9	96.9	100.3
75°	44.3	48.7	53.2	57.7	62.2	66.9	72.1	77.2	82.3	87.5	90.9
77.5°	33.9	38.6	43.3	47.9	52.7	57.6	62.8	68.0	73.2	78.3	81.8
80°	27.0	31.8	36.8	41.6	46.5	51.6	56.7	61.9	67.1	72.3	75.7
82.5°	21.2	26.1	30.9	35.6	40.5	45.6	50.8	56.1	61.3	66.5	69.9
85°	13.0	17.9	22.9	27.8	32.8	37.8	42.9	48.1	53.2	58.3	61.6
87.5°	7.2	12.3	17.6	22.6	27.6	33.0	38.7	44.7	50.5	55.8	58.9
90°	4.2	10.7	17.8	23.7	29.5	36.3	44.5	53.9	62.8	68.5	71.1
92.5°	10.9	18.5	27.3	34.4	42.9	53.3	72.2	96.9	119.4	125.4	116.1
95°	24.6	30.8	40.7	50.1	63.8	82.9	116.1	174.8	251.4	284.2	256.8
97.5°	37.8	44.5	54.4	66.1	80.9	101.7	142.1	221.8	345.8	452.7	475.9
100°	50.2	55.1	63.5	76.4	91.7	112.8	150.1	230.1	368.4	525.2	617.3
102.5°	61.3	65.4	73.7	86.3	101.9	122.7	157.4	228.9	357.1	525.7	668.8
105°	77.3	82.1	88.8	100.4	116.4	136.9	170.2	229.5	335.8	489.8	657.4
107.5°	95.1	98.9	105.0	115.4	130.8	151.1	183.4	235.4	323.8	451.7	599.9
110°	106.7	110.8	116.1	125.7	140.4	161.1	192.3	240.7	320.2	433.1	563.9



TEST NUMBER: P331263-927

CATALOG NUMBER: SA2XXDIP-C290D725U927-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	117.6	121.4	127.0	135.9	149.7	170.7	200.7	246.5	318.9	420.2	538.1
115°	134.6	138.6	143.1	151.5	164.7	183.7	213.9	255.3	318.9	405.5	505.7
117.5°	151.8	154.9	159.1	166.3	178.7	198.0	226.0	264.7	320.8	396.7	484.2
120°	162.7	165.5	169.5	175.5	188.1	207.2	234.6	271.2	322.1	391.6	472.5
122.5°	173.1	175.2	179.0	185.3	197.8	217.1	242.8	276.8	324.0	387.9	462.2
125°	186.5	188.4	192.1	199.5	211.9	230.5	255.3	285.8	326.7	381.3	447.3
127.5°	197.4	199.8	204.9	213.0	224.8	243.7	267.4	294.5	329.9	376.6	433.3
130°	203.8	206.2	212.3	220.9	233.2	251.4	274.7	299.9	332.6	373.9	424.1
132.5°	209.8	212.7	219.3	228.4	241.1	259.1	281.1	305.4	335.2	371.7	416.4
135°	218.3	220.8	228.2	237.5	251.8	269.5	290.1	312.6	338.2	368.7	405.7
137.5°	226.7	229.7	237.1	247.0	261.1	277.4	297.3	317.8	340.7	366.5	397.6
140°	233.2	235.6	243.0	252.8	266.3	282.5	301.2	320.5	341.7	364.8	392.8
142.5°	239.6	241.5	248.4	258.3	271.2	286.4	304.4	323.2	342.8	364.2	388.4
145°	248.9	251.4	257.6	266.9	279.2	292.9	309.7	326.9	344.3	362.9	383.2
147.5°	259.4	261.2	267.1	275.7	286.0	298.1	313.9	329.1	344.8	360.7	378.0
150°	266.3	268.2	273.1	281.1	290.4	301.6	315.8	330.0	344.3	359.2	374.0
152.5°	273.2	274.1	279.0	286.1	294.9	305.1	317.8	330.6	343.3	356.7	370.6
155°	283.0	283.6	287.3	294.1	301.0	310.2	320.8	331.3	341.8	352.4	364.1
157.5°	291.2	291.8	294.8	300.7	306.2	313.9	322.9	331.3	339.0	347.9	358.1
160°	296.6	297.2	299.7	304.7	309.7	316.4	323.8	331.3	337.5	344.9	353.6
162.5°	302.1	301.7	304.2	308.2	312.6	317.9	324.4	330.8	336.0	342.5	349.6
165°	308.4	307.8	309.0	312.8	315.8	319.6	325.1	329.5	333.2	337.5	343.1
167.5°	313.6	312.8	313.9	316.3	318.5	320.9	325.0	328.6	330.3	333.2	336.6
170°	317.0	315.8	316.4	318.3	319.6	321.4	324.5	327.6	328.8	330.7	333.2
172.5°	319.0	318.3	317.9	319.8	320.5	321.9	324.0	326.1	326.9	327.7	329.7
175°	321.4	320.8	320.1	321.4	321.4	322.0	323.2	324.5	323.8	324.5	325.1
177.5°	322.5	321.5	321.0	322.0	322.0	322.0	322.5	323.5	322.5	322.0	322.5
180°	322.0	322.0	322.0	322.0	322.0	322.0	322.0	322.0	322.0	322.0	322.0



TEST NUMBER: P331263-927

CATALOG NUMBER: SA2XXDIP-C290D725U927-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	248.3	248.3	248.3	248.3	248.3	248.3	248.3	248.3
2.5°	247.5	247.8	248.1	248.3	248.1	248.0	247.9	247.7
5°	246.8	247.2	247.7	247.9	247.8	247.7	247.6	247.6
7.5°	245.6	246.1	246.8	247.0	246.9	246.8	246.8	246.7
10°	244.5	245.2	245.8	246.1	246.1	246.0	245.9	245.8
12.5°	242.8	243.4	244.1	244.4	244.3	244.2	244.2	244.1
15°	239.6	240.4	241.1	241.5	241.4	241.3	241.2	241.1
17.5°	235.7	236.4	237.1	237.5	237.5	237.5	237.5	237.5
20°	232.4	233.3	234.2	234.6	234.6	234.6	234.6	234.6
22.5°	229.0	229.9	230.8	231.2	231.4	231.5	231.6	231.8
25°	223.6	224.6	225.5	226.1	226.3	226.6	226.8	227.0
27.5°	217.6	218.9	220.1	220.8	220.9	221.1	221.3	221.5
30°	213.4	214.8	216.0	216.7	217.0	217.2	217.5	217.7
32.5°	208.9	210.4	211.9	212.9	213.3	213.7	214.1	214.5
35°	202.6	204.3	206.0	207.2	207.8	208.3	208.9	209.5
37.5°	195.9	197.9	199.9	201.1	201.7	202.3	202.9	203.4
40°	191.3	193.4	195.4	196.9	197.6	198.3	199.0	199.7
42.5°	186.8	189.0	191.3	192.8	193.5	194.2	195.0	195.7
45°	179.8	182.4	184.8	186.5	187.3	188.1	188.9	189.6
47.5°	172.7	175.2	177.8	179.6	180.5	181.3	182.2	183.1
50°	167.7	170.5	173.2	175.0	175.9	176.7	177.6	178.5
52.5°	162.4	165.2	167.9	169.8	170.8	171.7	172.7	173.6
55°	154.4	157.2	160.2	162.1	163.1	164.2	165.2	166.3
57.5°	145.9	149.0	152.1	154.2	155.3	156.3	157.3	158.4
60°	140.3	143.4	146.4	148.5	149.6	150.7	151.9	153.0
62.5°	134.4	137.6	140.9	143.0	144.0	145.0	146.2	147.2
65°	125.3	128.6	131.9	134.0	135.1	136.1	137.1	138.2
67.5°	116.1	119.5	122.8	125.0	126.0	127.1	128.3	129.4
70°	109.8	113.2	116.7	118.9	119.9	120.8	121.8	122.7
72.5°	103.6	107.0	110.4	112.6	113.8	114.9	116.1	117.2
75°	94.3	97.8	101.2	103.5	104.5	105.5	106.5	107.6
77.5°	85.2	88.6	92.1	94.3	95.5	96.6	97.7	98.8
80°	79.1	82.4	85.8	88.0	89.1	90.2	91.3	92.4
82.5°	73.3	76.7	80.0	82.2	83.3	84.4	85.4	86.4
85°	65.0	68.4	71.8	74.0	75.1	76.2	77.3	78.4
87.5°	62.0	65.0	68.5	70.8	71.9	72.9	73.9	74.9
90°	73.8	75.7	80.1	82.8	83.7	84.8	85.7	86.7
92.5°	105.2	100.6	98.5	96.8	97.3	96.3	97.7	97.7
95°	209.7	175.0	152.0	140.4	133.3	129.3	128.4	130.0
97.5°	422.8	356.9	292.9	250.1	221.5	207.2	199.1	194.8
100°	607.3	533.5	451.5	378.6	328.0	302.3	285.2	275.0
102.5°	727.5	713.0	653.9	576.4	521.4	476.8	455.3	441.1
105°	788.9	861.7	872.6	854.0	816.4	779.0	753.2	745.4
107.5°	739.2	847.2	914.3	946.1	951.8	950.6	946.2	935.5
110°	697.1	810.5	892.3	944.8	972.3	985.0	991.4	991.7



TEST NUMBER: P331263-927

CATALOG NUMBER: SA2XXDIP-C290D725U927-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	658.4	767.4	854.6	914.6	952.4	973.0	984.4	988.6
115°	610.4	708.1	791.6	857.1	901.9	931.3	948.2	954.7
117.5°	573.4	659.5	735.4	796.9	842.5	873.4	891.2	896.7
120°	554.5	633.6	701.5	759.4	803.6	833.6	852.5	859.5
122.5°	539.3	611.9	676.2	728.6	768.2	797.6	814.3	820.2
125°	516.9	582.9	639.5	687.4	724.1	748.3	764.5	770.2
127.5°	494.8	554.4	607.8	652.0	684.0	706.9	720.9	725.6
130°	480.5	535.7	586.5	628.7	659.7	681.4	694.4	700.0
132.5°	466.8	517.9	564.7	604.4	634.9	656.6	668.6	673.7
135°	447.6	490.1	532.7	568.5	595.8	616.9	628.7	631.8
137.5°	431.8	467.5	501.5	532.7	557.5	575.6	585.9	590.2
140°	421.9	452.9	482.7	510.8	531.1	547.6	557.5	561.7
142.5°	413.8	440.1	465.7	489.2	508.4	523.5	532.2	533.4
145°	402.8	423.7	443.5	461.8	477.1	488.1	494.6	496.9
147.5°	394.4	410.7	425.7	438.9	451.4	460.0	464.4	465.7
150°	388.9	402.5	415.5	426.7	435.9	443.4	447.1	447.7
152.5°	383.4	396.1	407.1	416.8	424.1	430.5	433.2	433.3
155°	375.9	385.8	395.1	401.9	408.7	413.0	415.5	414.3
157.5°	367.1	375.4	383.2	388.5	393.3	397.0	398.1	398.1
160°	361.6	368.4	375.3	379.6	384.0	387.1	387.6	387.6
162.5°	356.2	362.0	367.8	371.2	375.5	377.6	378.3	377.7
165°	348.0	352.4	356.7	359.2	361.6	364.1	364.1	363.5
167.5°	340.2	343.6	346.5	348.8	349.9	351.3	351.1	350.4
170°	336.3	338.1	340.6	341.8	342.5	344.3	343.6	342.5
172.5°	331.8	333.2	335.2	335.9	336.5	337.4	336.8	336.0
175°	326.9	327.6	328.2	328.8	328.8	329.5	328.8	327.6
177.5°	323.5	323.5	324.0	324.0	324.0	324.0	323.5	322.5
180°	322.0	322.0	322.0	322.0	322.0	322.0	322.0	322.0

(END OF REPORT)