

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: P331263-930

Luminaire Tested: **SA2XXDIP-C290D725U930-4F0-1E-UDD-D4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331263-930
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-C290D725U930-4F0-1E-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

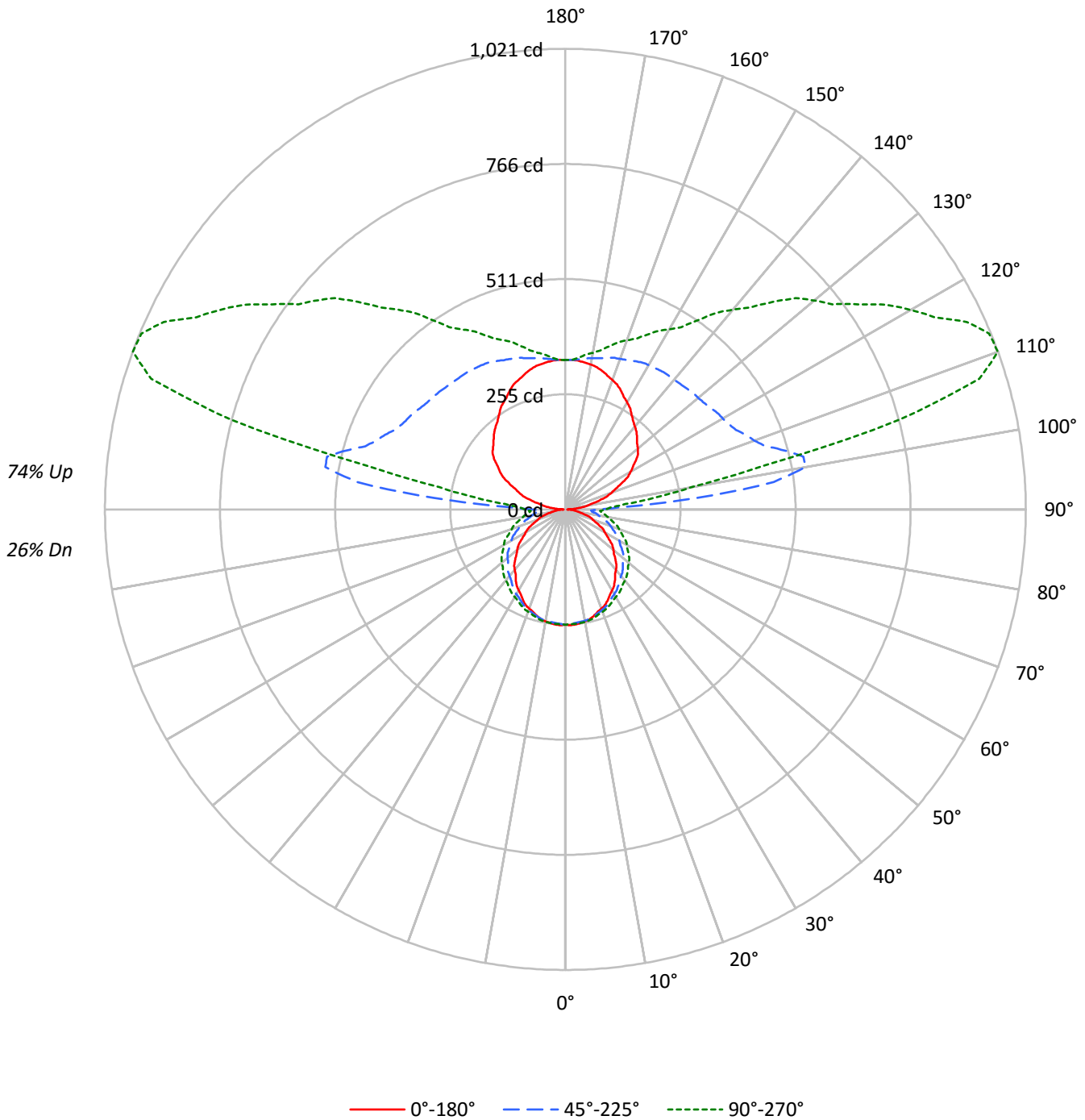
Lumens per Lamp: N/A
Luminaire Lumens: 3284.1 lumens
Efficiency: N/A
Efficacy: 105.3 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.31 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

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



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4127	4127	4127
5°	4146	3973	3957
10°	4121	3855	3812
15°	4063	3730	3659
20°	3992	3597	3511
25°	3922	3468	3376
30°	3821	3336	3241
35°	3720	3209	3148
40°	3615	3101	3051
45°	3512	3004	2971
50°	3404	2917	2891
55°	3289	2822	2810
60°	3151	2723	2724
65°	3006	2608	2622
70°	2844	2485	2512
75°	2639	2365	2410
80°	2312	2240	2305
85°	2005	2134	2226



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	24.2	0.7
10°-20°	69.4	2.1
20°-30°	105.2	3.2
30°-40°	128.2	3.9
40°-50°	137.9	4.2
50°-60°	133.9	4.1
60°-70°	116.9	3.6
70°-80°	90.0	2.7
80°-90°	63.4	1.9
90°-100°	174.1	5.3
100°-110°	480.1	14.6
110°-120°	497.8	15.2
120°-130°	404.4	12.3
130°-140°	320.5	9.8
140°-150°	239.5	7.3
150°-160°	167.7	5.1
160°-170°	98.7	3.0
170°-180°	32.1	1.0
0°-30°	198.9	6.1
0°-40°	327.1	10.0
0°-60°	598.8	18.2
0°-90°	869.2	26.5
90°-120°	1152.0	35.1
90°-150°	2116.4	64.4
90°-180°	2415.0	73.5
0°-180°	3284.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	256	256	256	256	256	
5°	256	255	253	255	255	24
15°	244	245	245	248	248	69
25°	222	225	228	232	234	102
35°	192	198	205	213	216	120
45°	157	167	180	191	195	121
55°	120	134	153	166	171	108
65°	82	101	122	137	142	82
75°	46	66	90	105	111	48
85°	13	36	60	75	81	14
90°	4	34	70	84	89	4
95°	25	75	292	150	134	26
105°	80	130	504	888	767	85
115°	138	179	417	848	982	137
125°	192	228	392	683	793	170
135°	225	268	379	567	650	174
145°	256	294	374	466	511	161
155°	291	314	363	410	426	134
165°	317	327	347	368	374	89
175°	331	331	334	338	337	31
180°	331	331	331	331	331	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	255.6	255.6	255.6	255.6	255.6	255.6	255.6	255.6	255.6	255.6	255.6
2.5°	257.1	256.8	256.7	256.4	256.2	255.9	255.4	255.0	254.5	254.0	254.4
5°	256.3	256.1	255.8	255.6	255.3	254.9	254.5	254.0	253.5	253.0	253.5
7.5°	254.0	253.8	253.6	253.5	253.3	253.1	252.7	252.3	251.9	251.5	252.2
10°	252.3	252.1	251.9	251.8	251.6	251.4	251.1	250.9	250.6	250.4	251.0
12.5°	249.2	249.3	249.3	249.4	249.4	249.3	249.2	249.0	248.7	248.6	249.2
15°	244.4	244.6	244.8	244.9	245.1	245.2	245.2	245.2	245.2	245.2	245.9
17.5°	238.2	238.6	238.9	239.3	239.6	239.9	240.2	240.4	240.7	241.0	241.7
20°	234.1	234.5	234.9	235.3	235.7	236.1	236.4	236.8	237.1	237.4	238.3
22.5°	229.7	230.1	230.6	231.1	231.5	232.0	232.4	232.9	233.4	233.8	234.7
25°	222.3	222.8	223.4	224.0	224.5	225.2	225.9	226.7	227.4	228.1	229.1
27.5°	213.4	214.3	215.2	216.1	217.1	218.0	218.8	219.7	220.6	221.5	222.7
30°	207.4	208.5	209.5	210.6	211.7	212.8	213.9	214.9	216.0	217.0	218.3
32.5°	200.9	202.1	203.3	204.5	205.7	206.9	208.2	209.5	210.8	212.0	213.5
35°	191.5	192.9	194.3	195.7	197.1	198.5	200.2	201.7	203.3	204.8	206.6
37.5°	181.2	182.9	184.5	186.1	187.7	189.6	191.6	193.6	195.6	197.6	199.7
40°	174.5	176.3	178.1	179.9	181.6	183.7	185.9	188.2	190.4	192.6	194.7
42.5°	168.0	169.7	171.5	173.3	175.2	177.3	179.9	182.5	185.0	187.5	189.9
45°	157.0	159.2	161.5	163.7	165.9	168.4	171.4	174.2	177.1	180.0	182.5
47.5°	146.3	148.7	151.2	153.5	156.0	158.9	162.2	165.6	169.0	172.4	175.0
50°	138.9	141.5	144.0	146.5	149.1	152.2	156.0	159.6	163.3	167.1	169.8
52.5°	131.8	134.4	137.1	139.8	142.5	145.8	149.7	153.6	157.5	161.4	164.3
55°	120.3	123.4	126.3	129.2	132.2	135.8	140.1	144.4	148.7	153.0	156.0
57.5°	109.1	112.4	115.8	119.1	122.5	126.3	130.7	135.0	139.4	143.8	147.0
60°	101.1	104.7	108.2	111.7	115.3	119.4	124.1	128.7	133.5	138.1	141.3
62.5°	94.0	97.7	101.3	105.0	108.7	112.8	117.6	122.2	126.9	131.7	134.9
65°	82.2	86.3	90.3	94.3	98.3	102.8	107.6	112.5	117.4	122.2	125.6
67.5°	71.4	75.7	79.8	84.1	88.3	92.9	97.8	102.8	107.8	112.8	116.2
70°	63.7	68.0	72.2	76.6	80.8	85.5	90.6	95.7	100.9	105.9	109.5
72.5°	56.6	61.0	65.4	69.8	74.3	79.0	84.2	89.4	94.6	99.7	103.2
75°	45.6	50.1	54.8	59.4	64.0	68.9	74.2	79.5	84.7	90.0	93.5
77.5°	34.9	39.7	44.5	49.3	54.2	59.3	64.7	70.0	75.3	80.6	84.2
80°	27.8	32.8	37.8	42.8	47.9	53.1	58.4	63.8	69.1	74.4	77.9
82.5°	21.9	26.8	31.8	36.7	41.7	46.9	52.3	57.7	63.1	68.5	72.0
85°	13.4	18.4	23.6	28.6	33.8	38.9	44.2	49.5	54.7	60.0	63.4
87.5°	7.4	12.6	18.1	23.2	28.4	33.9	39.8	46.0	52.0	57.4	60.6
90°	4.3	11.0	18.3	24.4	30.4	37.3	45.8	55.5	64.7	70.5	73.2
92.5°	11.2	19.1	28.1	35.4	44.1	54.9	74.4	99.7	122.9	129.1	119.4
95°	25.3	31.7	41.9	51.5	65.6	85.3	119.5	179.9	258.8	292.4	264.3
97.5°	38.9	45.8	56.0	68.1	83.2	104.7	146.3	228.3	355.9	465.9	489.8
100°	51.7	56.7	65.4	78.7	94.4	116.1	154.5	236.8	379.1	540.5	635.4
102.5°	63.1	67.3	75.8	88.8	104.8	126.3	162.0	235.5	367.5	541.0	688.3
105°	79.6	84.5	91.4	103.3	119.8	140.9	175.1	236.2	345.6	504.1	676.5
107.5°	97.9	101.8	108.1	118.8	134.6	155.6	188.7	242.3	333.3	464.9	617.4
110°	109.8	114.1	119.5	129.4	144.5	165.8	197.9	247.8	329.5	445.7	580.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	121.1	125.0	130.7	139.8	154.1	175.7	206.6	253.7	328.2	432.4	553.8
115°	138.5	142.6	147.3	155.9	169.5	189.1	220.1	262.8	328.2	417.4	520.5
117.5°	156.2	159.4	163.8	171.1	183.9	203.8	232.6	272.5	330.1	408.3	498.3
120°	167.5	170.3	174.5	180.6	193.6	213.3	241.4	279.2	331.5	403.0	486.2
122.5°	178.1	180.3	184.3	190.7	203.6	223.5	249.9	284.9	333.5	399.2	475.7
125°	191.9	193.9	197.7	205.3	218.1	237.3	262.8	294.2	336.2	392.4	460.3
127.5°	203.2	205.6	210.9	219.2	231.4	250.8	275.2	303.0	339.6	387.6	446.0
130°	209.8	212.2	218.5	227.4	240.0	258.7	282.7	308.7	342.3	384.8	436.5
132.5°	215.9	218.9	225.7	235.1	248.2	266.7	289.3	314.3	345.0	382.5	428.5
135°	224.7	227.2	234.9	244.4	259.1	277.4	298.6	321.7	348.1	379.4	417.5
137.5°	233.3	236.4	244.0	254.2	268.7	285.5	306.0	327.1	350.7	377.2	409.2
140°	240.0	242.5	250.1	260.2	274.1	290.7	310.0	329.9	351.7	375.4	404.2
142.5°	246.6	248.6	255.7	265.8	279.2	294.7	313.3	332.6	352.8	374.9	399.7
145°	256.2	258.8	265.1	274.7	287.4	301.4	318.7	336.5	354.3	373.5	394.4
147.5°	266.9	268.8	274.9	283.7	294.3	306.8	323.0	338.7	354.9	371.2	389.1
150°	274.0	276.0	281.0	289.3	298.9	310.4	325.1	339.7	354.3	369.7	384.9
152.5°	281.2	282.1	287.1	294.4	303.5	314.0	327.1	340.2	353.4	367.1	381.4
155°	291.2	291.9	295.7	302.7	309.7	319.3	330.1	341.0	351.8	362.6	374.7
157.5°	299.7	300.3	303.4	309.5	315.1	323.1	332.3	341.0	348.9	358.1	368.5
160°	305.2	305.9	308.4	313.6	318.7	325.6	333.3	341.0	347.3	355.0	363.9
162.5°	310.9	310.5	313.1	317.2	321.7	327.2	333.9	340.5	345.8	352.5	359.8
165°	317.4	316.7	318.0	321.9	325.1	328.9	334.6	339.1	342.9	347.3	353.1
167.5°	322.8	322.0	323.1	325.5	327.8	330.3	334.4	338.2	340.0	342.9	346.4
170°	326.3	325.1	325.6	327.6	328.9	330.8	333.9	337.1	338.4	340.3	342.9
172.5°	328.3	327.6	327.2	329.1	329.9	331.3	333.5	335.6	336.4	337.3	339.3
175°	330.8	330.1	329.5	330.8	330.8	331.4	332.6	333.9	333.3	333.9	334.6
177.5°	331.9	330.9	330.4	331.4	331.4	331.4	331.9	333.0	331.9	331.4	331.9
180°	331.4	331.4	331.4	331.4	331.4	331.4	331.4	331.4	331.4	331.4	331.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	255.6	255.6	255.6	255.6	255.6	255.6	255.6	255.6
2.5°	254.7	255.0	255.4	255.5	255.4	255.2	255.1	254.9
5°	254.0	254.5	254.9	255.1	255.0	254.9	254.9	254.8
7.5°	252.7	253.3	254.0	254.2	254.1	254.0	254.0	253.9
10°	251.7	252.3	253.0	253.3	253.2	253.2	253.1	253.0
12.5°	249.9	250.5	251.2	251.5	251.4	251.4	251.3	251.2
15°	246.6	247.4	248.2	248.5	248.4	248.3	248.3	248.2
17.5°	242.6	243.3	244.0	244.4	244.4	244.4	244.4	244.4
20°	239.2	240.1	241.0	241.5	241.5	241.5	241.5	241.5
22.5°	235.7	236.6	237.5	238.0	238.1	238.2	238.4	238.6
25°	230.2	231.1	232.1	232.7	232.9	233.2	233.4	233.7
27.5°	224.0	225.3	226.5	227.2	227.4	227.6	227.7	228.0
30°	219.6	221.0	222.3	223.1	223.3	223.6	223.8	224.0
32.5°	215.0	216.5	218.1	219.1	219.5	220.0	220.4	220.8
35°	208.5	210.3	212.1	213.3	213.9	214.4	215.0	215.6
37.5°	201.6	203.7	205.7	207.0	207.6	208.2	208.8	209.4
40°	196.9	199.0	201.1	202.6	203.3	204.1	204.8	205.5
42.5°	192.2	194.5	196.9	198.4	199.2	199.9	200.6	201.4
45°	185.1	187.7	190.2	191.9	192.7	193.6	194.4	195.2
47.5°	177.7	180.3	183.0	184.8	185.7	186.6	187.5	188.4
50°	172.6	175.5	178.2	180.1	181.0	181.9	182.8	183.7
52.5°	167.1	170.0	172.8	174.8	175.8	176.8	177.7	178.6
55°	158.9	161.8	164.9	166.8	167.9	169.0	170.1	171.1
57.5°	150.2	153.4	156.5	158.7	159.8	160.9	161.9	163.1
60°	144.4	147.6	150.7	152.8	153.9	155.1	156.3	157.4
62.5°	138.3	141.6	145.0	147.2	148.2	149.3	150.4	151.5
65°	129.0	132.3	135.7	137.9	139.0	140.1	141.1	142.2
67.5°	119.5	122.9	126.4	128.7	129.7	130.9	132.0	133.1
70°	113.0	116.5	120.1	122.4	123.4	124.3	125.3	126.3
72.5°	106.6	110.1	113.6	115.9	117.1	118.3	119.5	120.7
75°	97.1	100.6	104.2	106.5	107.5	108.6	109.7	110.7
77.5°	87.7	91.2	94.7	97.1	98.2	99.4	100.5	101.7
80°	81.4	84.8	88.3	90.6	91.7	92.9	94.0	95.1
82.5°	75.4	78.9	82.3	84.6	85.7	86.8	87.9	88.9
85°	66.9	70.4	73.9	76.1	77.3	78.4	79.6	80.7
87.5°	63.8	66.9	70.5	72.9	73.9	75.0	76.1	77.1
90°	75.9	77.9	82.4	85.2	86.2	87.2	88.2	89.2
92.5°	108.3	103.5	101.4	99.6	100.1	99.1	100.5	100.5
95°	215.8	180.1	156.5	144.5	137.2	133.1	132.2	133.8
97.5°	435.1	367.3	301.4	257.4	228.0	213.2	204.9	200.5
100°	625.0	549.0	464.7	389.6	337.6	311.1	293.5	283.0
102.5°	748.8	733.9	672.9	593.2	536.6	490.7	468.6	454.0
105°	812.0	886.9	898.1	878.9	840.2	801.7	775.2	767.1
107.5°	760.8	872.0	941.0	973.7	979.6	978.4	973.8	962.8
110°	717.5	834.1	918.4	972.4	1000.7	1013.7	1020.3	1020.6



TEST NUMBER: P331263-930

CATALOG NUMBER: SA2XXDIP-C290D725U930-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	677.6	789.8	879.5	941.3	980.2	1001.4	1013.2	1017.5
115°	628.2	728.8	814.7	882.1	928.2	958.5	975.9	982.5
117.5°	590.1	678.7	756.8	820.1	867.1	898.9	917.2	922.8
120°	570.7	652.1	721.9	781.5	827.0	857.9	877.3	884.6
122.5°	555.1	629.7	695.9	749.8	790.6	820.8	838.0	844.2
125°	532.0	599.9	658.2	707.4	745.2	770.1	786.8	792.6
127.5°	509.2	570.6	625.6	671.1	704.0	727.5	741.9	746.7
130°	494.6	551.3	603.6	647.0	678.9	701.2	714.7	720.4
132.5°	480.4	533.0	581.2	622.0	653.4	675.7	688.1	693.3
135°	460.6	504.4	548.3	585.1	613.2	634.9	647.0	650.2
137.5°	444.4	481.1	516.1	548.2	573.7	592.4	603.0	607.4
140°	434.2	466.1	496.8	525.7	546.6	563.6	573.7	578.0
142.5°	425.9	453.0	479.3	503.4	523.3	538.7	547.7	548.9
145°	414.6	436.1	456.4	475.3	491.1	502.3	509.1	511.4
147.5°	405.9	422.7	438.1	451.8	464.6	473.4	477.9	479.3
150°	400.2	414.3	427.6	439.1	448.7	456.3	460.2	460.8
152.5°	394.6	407.6	419.0	428.9	436.4	443.0	445.9	446.0
155°	386.9	397.1	406.6	413.6	420.6	425.1	427.6	426.4
157.5°	377.8	386.4	394.4	399.8	404.8	408.5	409.7	409.7
160°	372.2	379.2	386.2	390.7	395.2	398.4	398.9	398.9
162.5°	366.6	372.6	378.5	382.0	386.5	388.7	389.3	388.7
165°	358.2	362.6	367.1	369.7	372.2	374.7	374.7	374.1
167.5°	350.2	353.6	356.6	359.0	360.1	361.5	361.3	360.6
170°	346.1	348.0	350.5	351.8	352.5	354.3	353.7	352.5
172.5°	341.4	342.9	345.0	345.7	346.3	347.2	346.6	345.8
175°	336.5	337.1	337.8	338.4	338.4	339.1	338.4	337.1
177.5°	333.0	333.0	333.5	333.5	333.5	333.5	333.0	331.9
180°	331.4	331.4	331.4	331.4	331.4	331.4	331.4	331.4

(END OF REPORT)