

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: P331261-940

Luminaire Tested: **SA2XXDIP-C290D725U940-4F0-1E-UDD-D**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331261-940
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-C290D725U940-4F0-1E-UDD-D
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 290 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 725 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

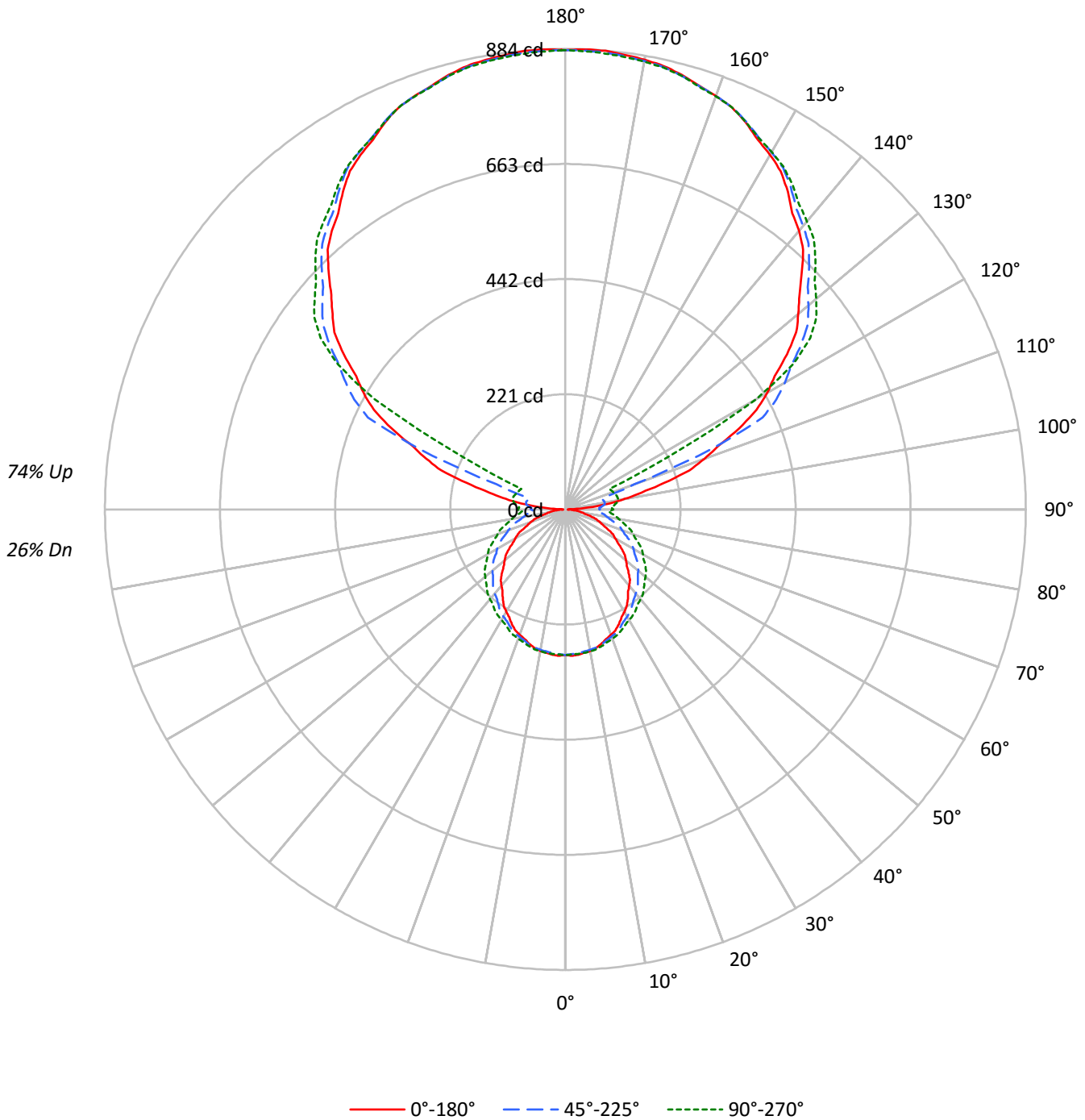
Lumens per Lamp: N/A
Luminaire Lumens: 3651.9 lumens
Efficiency: N/A
Efficacy: 117.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.31 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

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



TEST NUMBER: P331261-940
CATALOG NUMBER: SA2XXDIP-C290D725U940-4F0-1E-UDD-D

Luminous Intensity Polar Plot





TEST NUMBER: P331261-940

CATALOG NUMBER: SA2XXDIP-C290D725U940-4F0-1E-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	101	101	101	101	90	90	90	90	70	70	70	51	51	51	34	34	34	26
1	92	87	83	79	81	78	74	71	60	58	56	44	42	41	29	28	27	20
2	83	76	69	64	74	67	62	58	52	48	45	38	36	34	25	23	22	16
3	76	66	59	53	67	59	53	48	46	41	38	33	30	28	22	20	19	13
4	69	58	50	44	61	52	45	40	40	36	32	29	26	24	19	17	16	11
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	13	12	8
7	53	41	34	28	47	37	30	25	29	24	20	21	18	15	14	12	10	7
8	49	37	30	25	44	33	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	17	22	17	14	16	13	11	11	9	7	5

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4514	4514	4514
5°	4536	4345	4328
10°	4507	4215	4169
15°	4443	4079	4001
20°	4366	3935	3839
25°	4289	3793	3693
30°	4180	3650	3544
35°	4070	3510	3442
40°	3952	3391	3338
45°	3841	3286	3250
50°	3723	3189	3162
55°	3597	3086	3074
60°	3447	2979	2980
65°	3288	2854	2867
70°	3108	2717	2746
75°	2883	2585	2636
80°	2528	2450	2524
85°	2185	2333	2436



TEST NUMBER: P331261-940

CATALOG NUMBER: SA2XXDIP-C290D725U940-4F0-1E-UDD-D

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	26.5	0.7
10°-20°	75.9	2.1
20°-30°	115.1	3.2
30°-40°	140.2	3.8
40°-50°	150.8	4.1
50°-60°	146.5	4.0
60°-70°	127.9	3.5
70°-80°	98.4	2.7
80°-90°	68.2	1.9
90°-100°	74.9	2.1
100°-110°	141.1	3.9
110°-120°	310.2	8.5
120°-130°	488.1	13.4
130°-140°	511.2	14.0
140°-150°	471.2	12.9
150°-160°	378.1	10.4
160°-170°	243.7	6.7
170°-180°	83.9	2.3
0°-30°	217.5	6.0
0°-40°	357.7	9.8
0°-60°	654.9	17.9
0°-90°	949.5	26.0
90°-120°	526.2	14.4
90°-150°	1996.7	54.7
90°-180°	2702.0	74.0
0°-180°	3651.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	280	280	280	280	280	
5°	280	279	277	279	279	27
15°	267	268	268	272	271	75
25°	243	246	250	254	256	112
35°	210	216	224	233	236	131
45°	172	183	197	209	214	133
55°	132	147	167	181	187	118
65°	90	110	134	150	156	89
75°	50	73	98	115	121	53
85°	15	40	66	82	88	16
90°	5	35	66	85	92	5
95°	45	44	71	89	94	53
105°	196	217	74	94	102	210
115°	368	385	418	148	93	362
125°	519	529	553	568	574	463
135°	642	652	662	676	679	496
145°	744	744	755	761	760	466
155°	820	815	822	825	820	378
165°	864	860	862	866	862	244
175°	883	879	880	884	878	84
180°	882	882	882	882	882	



TEST NUMBER: P331261-940

CATALOG NUMBER: SA2XXDIP-C290D725U940-4F0-1E-UDD-D

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	279.6	279.6	279.6	279.6	279.6	279.6	279.6	279.6	279.6	279.6	279.6
2.5°	281.2	280.9	280.7	280.4	280.3	279.9	279.4	278.9	278.4	277.9	278.2
5°	280.4	280.1	279.8	279.6	279.2	278.8	278.3	277.8	277.2	276.7	277.2
7.5°	277.8	277.6	277.4	277.2	277.1	276.8	276.3	276.0	275.5	275.1	275.8
10°	275.9	275.7	275.5	275.4	275.2	274.9	274.6	274.4	274.1	273.8	274.6
12.5°	272.6	272.7	272.7	272.8	272.8	272.7	272.5	272.3	272.1	271.9	272.6
15°	267.3	267.5	267.7	267.9	268.0	268.1	268.1	268.1	268.1	268.1	268.9
17.5°	260.6	260.9	261.3	261.7	262.1	262.4	262.7	263.0	263.2	263.6	264.4
20°	256.0	256.5	256.9	257.3	257.8	258.2	258.6	259.0	259.3	259.7	260.6
22.5°	251.2	251.6	252.2	252.7	253.2	253.8	254.2	254.8	255.3	255.7	256.7
25°	243.1	243.7	244.3	245.0	245.6	246.3	247.1	247.9	248.7	249.5	250.6
27.5°	233.4	234.3	235.4	236.4	237.5	238.4	239.3	240.3	241.3	242.3	243.6
30°	226.9	228.0	229.2	230.3	231.5	232.7	233.9	235.1	236.2	237.4	238.8
32.5°	219.7	221.1	222.3	223.6	225.0	226.3	227.7	229.1	230.5	231.8	233.5
35°	209.5	211.0	212.5	214.0	215.5	217.1	218.9	220.6	222.3	224.0	226.0
37.5°	198.2	200.0	201.8	203.6	205.3	207.3	209.6	211.7	213.9	216.2	218.4
40°	190.8	192.8	194.7	196.7	198.7	200.9	203.3	205.8	208.2	210.6	212.9
42.5°	183.7	185.7	187.6	189.6	191.6	193.9	196.8	199.6	202.3	205.1	207.7
45°	171.7	174.2	176.6	179.1	181.5	184.2	187.4	190.6	193.7	196.9	199.7
47.5°	160.0	162.6	165.3	167.9	170.6	173.8	177.5	181.1	184.9	188.5	191.5
50°	151.9	154.7	157.5	160.2	163.1	166.5	170.6	174.6	178.6	182.7	185.7
52.5°	144.1	147.0	150.0	152.9	155.9	159.4	163.7	168.0	172.3	176.6	179.7
55°	131.6	134.9	138.1	141.3	144.6	148.6	153.3	157.9	162.6	167.3	170.6
57.5°	119.3	123.0	126.6	130.3	133.9	138.1	142.9	147.7	152.5	157.3	160.8
60°	110.6	114.5	118.3	122.2	126.1	130.5	135.7	140.8	146.0	151.1	154.5
62.5°	102.8	106.8	110.8	114.9	118.9	123.4	128.6	133.7	138.8	144.0	147.6
65°	89.9	94.3	98.7	103.2	107.5	112.4	117.7	123.1	128.4	133.7	137.4
67.5°	78.1	82.8	87.3	91.9	96.6	101.6	107.0	112.4	117.9	123.3	127.1
70°	69.6	74.4	79.0	83.7	88.4	93.5	99.1	104.7	110.3	115.8	119.8
72.5°	61.9	66.7	71.5	76.3	81.2	86.4	92.1	97.7	103.4	109.1	112.9
75°	49.8	54.8	59.9	64.9	70.0	75.3	81.1	86.9	92.6	98.4	102.3
77.5°	38.2	43.4	48.7	53.9	59.3	64.8	70.7	76.5	82.4	88.2	92.1
80°	30.4	35.8	41.4	46.8	52.3	58.1	63.8	69.7	75.5	81.4	85.2
82.5°	23.9	29.3	34.8	40.1	45.6	51.3	57.2	63.1	69.0	74.9	78.7
85°	14.6	20.2	25.8	31.3	36.9	42.5	48.3	54.1	59.8	65.6	69.4
87.5°	8.0	13.7	19.4	25.1	30.8	36.6	42.6	48.6	54.6	60.5	64.4
90°	4.7	11.5	18.3	25.1	31.8	38.6	45.6	52.4	59.3	66.3	70.5
92.5°	16.6	21.3	26.0	30.8	35.5	40.9	47.0	53.1	59.2	65.4	69.3
95°	44.7	44.2	43.8	43.3	42.9	45.9	52.3	58.7	65.1	71.4	75.6
97.5°	85.2	75.7	66.3	56.9	47.4	46.5	53.9	61.4	68.9	76.4	80.3
100°	115.7	99.7	83.6	67.5	51.4	47.1	54.5	62.0	69.4	76.9	81.3
102.5°	149.1	148.0	147.0	145.9	144.8	136.7	121.4	106.1	90.9	75.6	80.3
105°	195.9	202.8	209.6	216.5	223.4	209.8	175.8	141.8	107.8	73.7	78.5
107.5°	249.9	255.3	260.8	266.4	271.9	253.7	211.8	169.9	127.9	86.0	87.4
110°	284.2	289.0	293.7	298.5	303.3	287.4	250.8	214.3	177.7	141.2	129.9



TEST NUMBER: P331261-940

CATALOG NUMBER: SA2XXDIP-C290D725U940-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	316.8	321.0	325.1	329.3	333.4	332.5	326.6	320.7	314.8	308.9	260.0
115°	368.4	371.8	375.2	378.6	382.0	387.5	395.1	402.7	410.3	417.9	354.9
117.5°	414.0	417.4	420.7	424.1	427.4	432.2	438.4	444.5	450.8	456.9	443.7
120°	447.7	450.2	452.7	455.2	457.6	462.0	468.1	474.3	480.5	486.6	490.8
122.5°	476.3	478.7	481.1	483.5	485.8	490.1	496.2	502.5	508.6	514.8	518.3
125°	519.4	521.2	523.1	525.0	526.7	530.5	536.1	541.6	547.2	552.8	556.2
127.5°	558.8	560.8	562.8	564.6	566.6	569.8	574.1	578.5	582.7	587.1	590.8
130°	583.8	586.0	588.2	590.4	592.5	595.3	598.8	602.3	605.7	609.1	612.9
132.5°	609.3	611.2	613.1	614.8	616.7	619.1	622.1	625.2	628.2	631.2	634.6
135°	642.1	644.4	646.7	648.9	651.2	653.4	655.6	657.7	660.0	662.1	665.4
137.5°	675.6	677.3	678.8	680.4	681.9	683.7	685.5	687.3	689.2	691.0	694.0
140°	697.6	698.7	699.7	700.7	701.8	703.2	704.9	706.7	708.4	710.2	712.8
142.5°	716.0	716.9	717.8	718.7	719.7	721.0	722.9	724.7	726.6	728.3	730.7
145°	744.4	744.2	744.1	744.0	743.9	744.9	747.3	749.8	752.2	754.6	756.2
147.5°	769.5	769.0	768.5	767.9	767.4	768.3	770.7	773.0	775.4	777.8	778.6
150°	785.9	784.9	783.9	782.9	781.9	782.6	784.8	787.0	789.3	791.6	792.5
152.5°	799.6	798.5	797.5	796.3	795.2	795.8	797.9	800.0	802.2	804.3	805.2
155°	819.7	818.4	817.1	815.8	814.6	814.8	816.5	818.1	819.8	821.5	822.4
157.5°	835.4	834.3	833.2	832.1	831.1	831.1	832.3	833.5	834.6	835.9	836.9
160°	844.5	843.6	842.8	842.0	841.2	841.2	842.0	842.8	843.6	844.5	845.4
162.5°	852.7	851.9	851.0	850.2	849.3	849.3	850.0	850.7	851.5	852.2	853.2
165°	863.7	862.8	862.0	861.1	860.2	860.1	860.5	860.9	861.3	861.7	862.7
167.5°	871.8	871.0	870.1	869.3	868.4	868.2	868.6	869.0	869.4	869.8	870.8
170°	876.5	875.6	874.8	873.9	873.1	872.7	873.1	873.3	873.6	873.9	874.9
172.5°	879.5	878.6	877.8	876.9	876.1	875.8	876.1	876.4	876.6	876.9	878.0
175°	883.4	882.4	881.5	880.5	879.5	879.1	879.4	879.7	879.9	880.3	881.3
177.5°	884.1	883.3	882.5	881.7	880.9	880.6	880.7	880.8	880.9	881.0	881.8
180°	881.5	881.5	881.5	881.5	881.5	881.5	881.5	881.5	881.5	881.5	881.5



TEST NUMBER: P331261-940

CATALOG NUMBER: SA2XXDIP-C290D725U940-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	279.6	279.6	279.6	279.6	279.6	279.6	279.6	279.6
2.5°	278.6	278.9	279.3	279.5	279.3	279.1	279.0	278.8
5°	277.8	278.3	278.8	279.0	278.9	278.8	278.7	278.7
7.5°	276.4	277.1	277.8	278.0	277.9	277.9	277.8	277.7
10°	275.3	276.0	276.7	277.1	277.0	276.9	276.8	276.7
12.5°	273.3	274.0	274.7	275.1	275.0	274.9	274.8	274.7
15°	269.7	270.6	271.4	271.8	271.7	271.6	271.5	271.4
17.5°	265.3	266.1	266.9	267.3	267.3	267.3	267.3	267.3
20°	261.6	262.6	263.6	264.1	264.1	264.1	264.1	264.1
22.5°	257.8	258.8	259.8	260.3	260.5	260.6	260.7	260.9
25°	251.7	252.8	253.9	254.5	254.8	255.0	255.3	255.6
27.5°	245.0	246.4	247.7	248.5	248.7	248.9	249.1	249.3
30°	240.2	241.7	243.2	244.0	244.2	244.5	244.8	245.0
32.5°	235.1	236.8	238.5	239.6	240.0	240.6	241.0	241.5
35°	228.0	230.0	231.9	233.3	233.9	234.5	235.1	235.8
37.5°	220.5	222.7	225.0	226.4	227.0	227.7	228.4	229.0
40°	215.3	217.7	220.0	221.6	222.4	223.2	224.0	224.8
42.5°	210.3	212.8	215.3	217.0	217.8	218.6	219.5	220.3
45°	202.4	205.3	208.0	209.9	210.8	211.7	212.6	213.5
47.5°	194.4	197.2	200.2	202.2	203.1	204.1	205.1	206.1
50°	188.8	191.9	194.9	197.0	198.0	198.9	199.9	200.9
52.5°	182.8	185.9	189.0	191.2	192.3	193.3	194.4	195.4
55°	173.8	177.0	180.3	182.4	183.6	184.9	186.0	187.2
57.5°	164.3	167.7	171.2	173.5	174.8	175.9	177.1	178.3
60°	157.9	161.4	164.8	167.1	168.4	169.6	170.9	172.2
62.5°	151.2	154.9	158.5	161.0	162.1	163.3	164.5	165.7
65°	141.1	144.7	148.5	150.9	152.0	153.2	154.4	155.5
67.5°	130.7	134.5	138.2	140.7	141.9	143.1	144.4	145.6
70°	123.6	127.4	131.3	133.8	134.9	136.0	137.1	138.1
72.5°	116.6	120.5	124.2	126.8	128.0	129.4	130.7	132.0
75°	106.2	110.0	114.0	116.5	117.6	118.8	119.9	121.1
77.5°	95.9	99.8	103.6	106.2	107.5	108.7	109.9	111.2
80°	89.0	92.7	96.6	99.1	100.3	101.6	102.8	104.1
82.5°	82.5	86.3	90.1	92.6	93.7	95.0	96.1	97.3
85°	73.2	77.0	80.8	83.3	84.5	85.8	87.0	88.3
87.5°	68.2	72.0	75.8	78.3	79.5	80.8	81.9	83.2
90°	74.8	79.2	83.5	86.3	87.7	89.0	90.4	91.8
92.5°	73.1	77.0	81.0	83.6	84.8	86.1	87.3	88.5
95°	79.7	83.8	88.0	90.5	91.5	92.4	93.4	94.3
97.5°	84.2	88.1	92.0	94.5	95.8	97.0	98.3	99.5
100°	85.8	90.2	94.7	97.6	98.9	100.1	101.4	102.7
102.5°	85.1	89.8	94.5	97.6	99.0	100.4	101.7	103.2
105°	83.2	87.8	92.6	95.7	97.3	98.8	100.4	101.9
107.5°	88.9	90.3	91.8	93.3	94.8	96.4	97.9	99.4
110°	118.6	107.3	96.0	91.1	92.7	94.3	95.9	97.4



TEST NUMBER: P331261-940

CATALOG NUMBER: SA2XXDIP-C290D725U940-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	211.2	162.4	113.5	89.9	91.3	92.7	94.2	95.6
115°	292.0	229.1	166.1	130.1	120.8	111.6	102.5	93.2
117.5°	430.5	417.2	404.0	381.1	348.5	315.9	283.3	250.7
120°	495.1	499.3	503.5	496.5	478.4	460.2	442.1	423.9
122.5°	521.7	525.1	528.6	529.0	526.1	523.2	520.3	517.5
125°	559.6	563.0	566.5	568.8	570.1	571.2	572.5	573.7
127.5°	594.5	598.2	601.8	604.1	604.9	605.8	606.7	607.6
130°	616.6	620.3	624.0	626.2	626.8	627.3	627.9	628.5
132.5°	638.0	641.4	644.9	646.8	647.5	648.0	648.6	649.2
135°	668.7	672.0	675.3	677.2	677.6	678.1	678.5	678.9
137.5°	697.1	700.2	703.2	704.8	704.9	705.1	705.2	705.3
140°	715.6	718.3	720.9	722.3	722.1	721.9	721.8	721.6
142.5°	733.0	735.3	737.6	738.7	738.4	738.2	737.9	737.7
145°	757.7	759.2	760.7	761.3	761.1	760.8	760.6	760.4
147.5°	779.4	780.2	781.0	781.2	780.9	780.5	780.2	779.7
150°	793.3	794.2	795.0	795.0	794.3	793.6	792.9	792.2
152.5°	806.0	806.9	807.8	807.7	806.8	805.8	804.9	804.0
155°	823.3	824.1	825.0	824.8	823.7	822.6	821.4	820.3
157.5°	837.8	838.7	839.7	839.6	838.6	837.4	836.3	835.3
160°	846.2	847.1	847.9	847.8	846.9	845.9	844.9	843.9
162.5°	854.1	855.1	856.0	856.0	854.7	853.5	852.3	851.0
165°	863.7	864.8	865.8	865.8	864.8	863.7	862.7	861.7
167.5°	871.8	872.8	873.8	873.6	872.4	871.1	869.8	868.5
170°	875.8	876.8	877.9	877.7	876.5	875.1	873.9	872.6
172.5°	879.0	879.9	880.9	880.7	879.5	878.2	876.9	875.7
175°	882.3	883.2	884.2	884.0	882.6	881.2	879.8	878.3
177.5°	882.6	883.4	884.2	884.1	883.1	882.1	881.0	880.0
180°	881.5	881.5	881.5	881.5	881.5	881.5	881.5	881.5

(END OF REPORT)