

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: P331351-840

Luminaire Tested: **SA2XXDIP-C675D725U840-4F0-1E-UDD-D**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331351-840
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-C675D725U840-4F0-1E-UDD-D
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 725 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

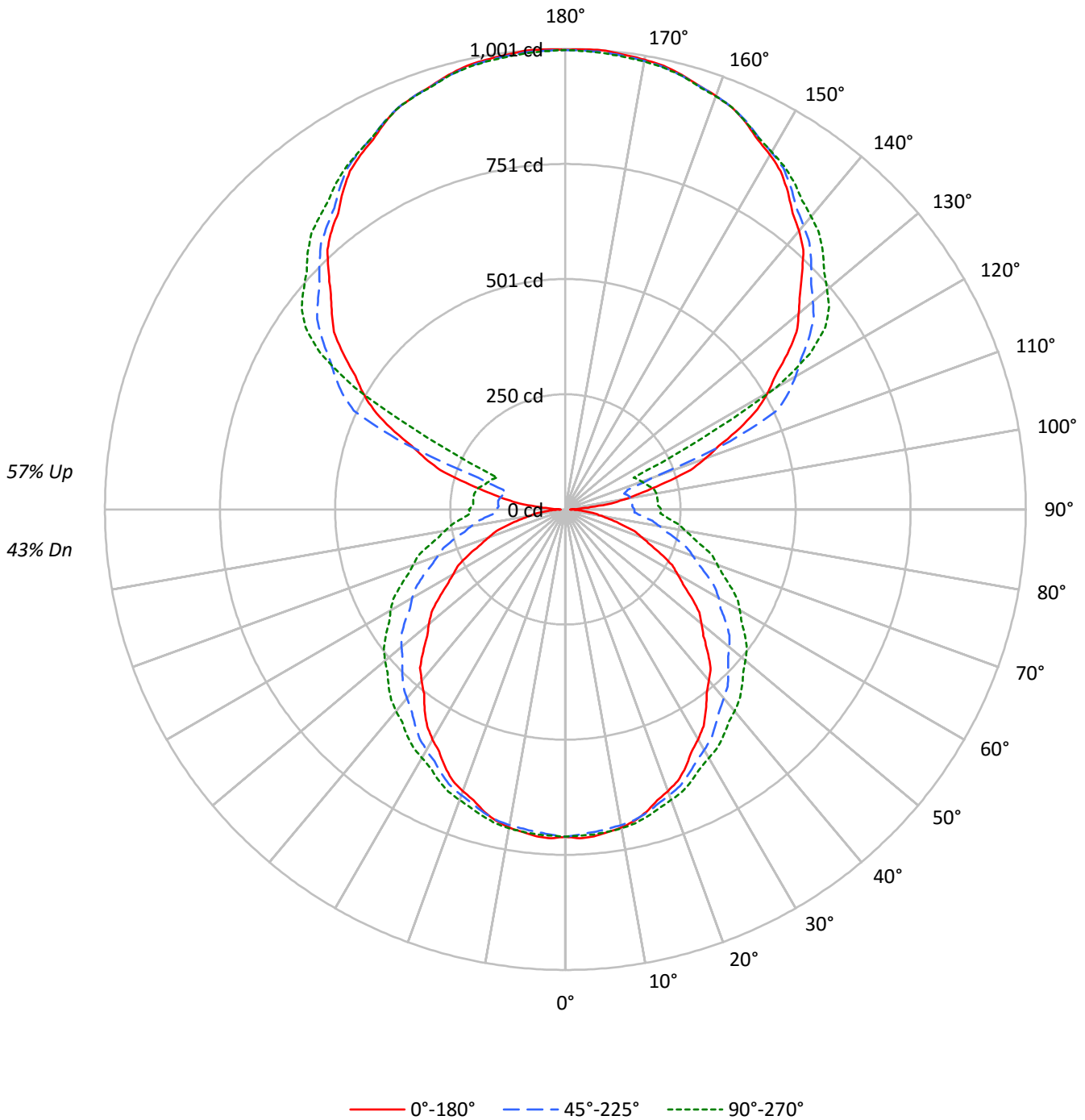
Lumens per Lamp: N/A
Luminaire Lumens: 5641.9 lumens
Efficiency: N/A
Efficacy: 122.9 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: General Diffuse

Input Watts (W): 45.9
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: P331351-840
CATALOG NUMBER: SA2XXDIP-C675D725U840-4F0-1E-UDD-D

Luminous Intensity Polar Plot





TEST NUMBER: P331351-840

CATALOG NUMBER: SA2XXDIP-C675D725U840-4F0-1E-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	105	105	105	105	96	96	96	96	79	79	79	64	64	64	49	49	49	43
1	95	90	86	82	86	82	78	75	68	65	62	54	52	50	42	40	39	33
2	86	78	71	66	78	71	65	61	58	54	51	47	44	41	36	34	32	27
3	78	68	60	54	71	62	55	50	51	46	42	41	37	34	31	29	27	22
4	71	60	52	45	64	55	48	42	45	40	35	36	32	29	28	25	23	19
5	65	53	45	39	59	49	41	36	40	35	30	32	28	25	25	22	19	16
6	60	47	39	33	54	44	36	31	36	30	26	29	25	22	22	19	17	14
7	55	43	35	29	50	39	32	27	33	27	23	26	22	19	20	17	15	12
8	51	39	31	25	46	36	28	24	30	24	20	24	20	17	19	16	13	11
9	48	35	28	22	43	32	26	21	27	22	18	22	18	15	17	14	12	10
10	44	32	25	20	40	30	23	19	25	20	16	20	16	13	16	13	11	9

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11485	11485	11485
5°	11541	11055	11013
10°	11469	10729	10608
15°	11310	10384	10181
20°	11112	10013	9772
25°	10913	9655	9399
30°	10635	9288	9023
35°	10355	8933	8760
40°	10057	8630	8496
45°	9777	8361	8270
50°	9476	8116	8048
55°	9160	7855	7822
60°	8770	7583	7583
65°	8367	7262	7299
70°	7917	6920	6990
75°	7339	6581	6708
80°	6436	6238	6424
85°	5566	5939	6199



TEST NUMBER: P331351-840

CATALOG NUMBER: SA2XXDIP-C675D725U840-4F0-1E-UDD-D

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	67.4	1.2
10°-20°	193.3	3.4
20°-30°	292.9	5.2
30°-40°	356.7	6.3
40°-50°	383.8	6.8
50°-60°	372.7	6.6
60°-70°	325.4	5.8
70°-80°	250.5	4.4
80°-90°	170.6	3.0
90°-100°	149.1	2.6
100°-110°	206.7	3.7
110°-120°	382.3	6.8
120°-130°	570.0	10.1
130°-140°	586.2	10.4
140°-150°	534.9	9.5
150°-160°	428.3	7.6
160°-170°	276.0	4.9
170°-180°	95.0	1.7
0°-30°	553.6	9.8
0°-40°	910.3	16.1
0°-60°	1666.8	29.5
0°-90°	2413.4	42.8
90°-120°	738.2	13.1
90°-150°	2429.3	43.1
90°-180°	3229.0	57.2
0°-180°	5641.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	711	711	711	711	711	
5°	713	710	704	710	709	68
15°	680	682	682	691	691	192
25°	618	626	635	647	651	284
35°	533	551	570	592	600	333
45°	437	465	501	532	543	337
55°	335	373	426	462	476	299
65°	229	280	340	381	396	227
75°	127	185	250	293	308	134
85°	37	101	167	209	225	40
90°	11	79	151	194	209	9
95°	55	82	147	188	201	64
105°	225	265	133	175	191	241
115°	420	445	508	219	163	413
125°	589	601	646	677	690	526
135°	728	740	756	784	792	562
145°	843	843	854	865	867	527
155°	928	923	930	934	929	428
165°	978	974	976	980	976	276
175°	1000	996	997	1001	995	95
180°	998	998	998	998	998	



TEST NUMBER: P331351-840

CATALOG NUMBER: SA2XXDIP-C675D725U840-4F0-1E-UDD-D

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	711.3	711.3	711.3	711.3	711.3	711.3	711.3	711.3	711.3	711.3	711.3
2.5°	715.5	714.9	714.4	713.8	713.3	712.4	711.0	709.7	708.5	707.2	708.1
5°	713.4	712.7	712.1	711.3	710.6	709.6	708.2	706.9	705.5	704.1	705.5
7.5°	707.0	706.5	706.1	705.6	705.2	704.4	703.4	702.3	701.3	700.2	701.9
10°	702.1	701.6	701.1	700.6	700.2	699.6	698.9	698.3	697.6	696.9	698.7
12.5°	693.8	693.9	694.0	694.1	694.2	694.0	693.5	693.0	692.5	692.0	693.8
15°	680.4	680.9	681.4	681.8	682.3	682.5	682.5	682.5	682.5	682.5	684.5
17.5°	663.1	664.1	665.0	666.0	666.9	667.8	668.5	669.2	669.9	670.8	672.9
20°	651.6	652.7	653.8	655.0	656.1	657.1	658.0	659.0	659.9	660.9	663.4
22.5°	639.1	640.5	641.9	643.2	644.5	645.8	647.1	648.3	649.6	651.0	653.5
25°	618.5	620.2	621.8	623.4	625.0	626.8	628.8	631.0	633.0	635.0	637.8
27.5°	593.8	596.4	599.1	601.7	604.3	606.8	609.3	611.7	614.1	616.5	620.0
30°	577.3	580.3	583.3	586.2	589.3	592.2	595.2	598.1	601.2	604.1	607.7
32.5°	559.2	562.5	565.8	569.2	572.6	576.0	579.6	583.0	586.5	590.1	594.3
35°	533.0	536.8	540.8	544.6	548.6	552.7	557.0	561.4	565.7	570.1	575.1
37.5°	504.5	509.1	513.5	518.0	522.5	527.6	533.2	538.9	544.4	550.1	555.7
40°	485.5	490.6	495.6	500.7	505.7	511.3	517.6	523.7	529.9	536.0	542.0
42.5°	467.5	472.4	477.5	482.5	487.6	493.6	500.8	507.9	514.9	522.1	528.6
45°	437.1	443.3	449.5	455.7	461.8	469.0	477.0	485.0	493.0	501.0	508.2
47.5°	407.2	413.9	420.7	427.4	434.1	442.2	451.6	461.0	470.4	479.8	487.3
50°	386.6	393.7	400.8	407.9	415.0	423.7	434.0	444.3	454.6	464.9	472.7
52.5°	366.8	374.3	381.7	389.2	396.7	405.9	416.7	427.6	438.4	449.3	457.3
55°	335.1	343.3	351.5	359.8	368.0	378.1	390.0	401.9	413.8	425.8	434.0
57.5°	303.7	313.1	322.3	331.6	340.9	351.6	363.8	375.9	388.1	400.2	409.1
60°	281.4	291.2	301.1	311.0	320.8	332.3	345.4	358.4	371.4	384.6	393.2
62.5°	261.7	271.9	282.1	292.3	302.6	314.2	327.2	340.2	353.4	366.4	375.7
65°	228.8	240.0	251.4	262.6	273.8	286.1	299.6	313.2	326.7	340.2	349.6
67.5°	198.7	210.5	222.3	234.0	245.7	258.4	272.3	286.1	299.9	313.8	323.3
70°	177.3	189.2	201.2	213.1	225.0	238.0	252.3	266.4	280.6	294.9	304.7
72.5°	157.5	169.8	182.1	194.4	206.6	219.9	234.4	248.7	263.2	277.5	287.2
75°	126.8	139.7	152.5	165.3	178.1	191.9	206.5	221.2	235.8	250.5	260.3
77.5°	97.1	110.6	124.0	137.3	150.8	165.0	179.9	194.8	209.6	224.5	234.4
80°	77.4	91.3	105.2	119.3	133.2	147.6	162.6	177.4	192.3	207.2	216.8
82.5°	60.8	74.6	88.4	102.2	116.0	130.4	145.5	160.6	175.6	190.8	200.4
85°	37.2	51.3	65.5	79.7	93.9	108.4	123.0	137.6	152.4	167.0	176.6
87.5°	20.4	34.3	48.4	62.4	76.3	90.9	105.7	120.7	135.6	150.5	160.1
90°	11.0	26.1	41.1	56.1	71.2	86.7	102.7	118.7	134.6	150.6	160.5
92.5°	24.0	36.3	48.5	60.7	72.9	86.4	101.2	115.9	130.7	145.4	154.8
95°	55.2	60.7	66.1	71.6	77.1	87.3	102.1	116.9	131.9	146.7	156.2
97.5°	100.4	95.0	89.7	84.3	79.0	84.2	100.0	115.8	131.6	147.4	156.5
100°	135.1	121.6	108.1	94.5	81.0	82.0	97.6	113.1	128.8	144.3	154.0
102.5°	172.4	175.5	178.5	181.7	184.7	181.1	170.8	160.4	150.1	139.7	149.7
105°	224.8	236.2	247.7	259.1	270.6	260.3	228.4	196.5	164.6	132.7	142.5
107.5°	285.7	294.9	304.1	313.3	322.4	306.5	265.4	224.2	183.1	141.9	147.8
110°	324.2	332.1	340.0	348.0	356.0	342.3	307.2	272.1	236.8	201.7	193.0



TEST NUMBER: P331351-840

CATALOG NUMBER: SA2XXDIP-C675D725U840-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	361.1	368.0	374.8	381.6	388.5	391.5	390.7	389.9	389.1	388.4	337.1
115°	419.5	424.7	430.0	435.3	440.5	450.3	464.6	478.9	493.2	507.6	440.1
117.5°	470.6	475.3	480.0	484.7	489.4	498.0	510.2	522.5	534.8	547.0	535.9
120°	508.8	512.1	515.4	518.8	522.1	529.8	541.8	553.8	565.9	577.9	586.3
122.5°	541.1	544.0	546.9	549.9	552.7	560.1	571.8	583.6	595.3	607.1	614.5
125°	589.4	591.5	593.5	595.6	597.7	603.9	614.3	624.7	635.1	645.5	652.8
127.5°	634.0	636.1	638.1	640.3	642.4	647.5	655.7	663.9	672.1	680.2	687.5
130°	662.4	664.7	667.0	669.3	671.7	676.1	682.8	689.3	695.9	702.5	709.7
132.5°	691.3	693.2	695.1	697.1	699.0	702.8	708.2	713.7	719.2	724.7	731.4
135°	727.7	730.3	732.9	735.5	738.0	741.1	744.9	748.6	752.3	756.1	762.5
137.5°	765.8	767.5	769.2	771.0	772.7	775.0	777.6	780.2	782.8	785.6	791.3
140°	790.6	791.6	792.7	793.8	794.9	796.5	798.7	800.9	803.1	805.4	810.5
142.5°	811.4	812.3	813.2	814.2	815.2	816.7	818.8	820.8	822.9	825.1	829.3
145°	843.0	842.8	842.7	842.5	842.4	843.6	846.4	849.1	851.8	854.5	857.1
147.5°	871.5	870.9	870.3	869.7	869.1	870.1	872.8	875.5	878.2	880.9	881.9
150°	890.0	888.9	887.8	886.7	885.4	886.3	888.8	891.3	893.9	896.5	897.5
152.5°	905.5	904.3	903.1	901.8	900.6	901.2	903.6	906.1	908.5	910.9	911.9
155°	928.3	926.9	925.3	923.9	922.5	922.7	924.6	926.6	928.5	930.4	931.4
157.5°	946.0	944.8	943.6	942.4	941.2	941.2	942.6	943.9	945.2	946.6	947.8
160°	956.4	955.4	954.5	953.5	952.6	952.6	953.5	954.5	955.4	956.4	957.5
162.5°	965.7	964.7	963.8	962.8	961.8	961.8	962.6	963.4	964.3	965.1	966.2
165°	978.2	977.1	976.2	975.2	974.2	974.0	974.5	975.0	975.4	975.9	977.0
167.5°	987.3	986.4	985.4	984.5	983.5	983.2	983.7	984.1	984.6	985.0	986.1
170°	992.6	991.6	990.7	989.7	988.8	988.4	988.8	989.1	989.4	989.7	990.8
172.5°	996.0	995.0	994.1	993.1	992.2	991.9	992.2	992.5	992.8	993.1	994.3
175°	1000.5	999.4	998.3	997.1	996.0	995.6	995.9	996.2	996.5	996.9	998.0
177.5°	1001.3	1000.4	999.5	998.6	997.6	997.2	997.3	997.5	997.6	997.7	998.7
180°	998.4	998.4	998.4	998.4	998.4	998.4	998.4	998.4	998.4	998.4	998.4



TEST NUMBER: P331351-840

CATALOG NUMBER: SA2XXDIP-C675D725U840-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	711.3	711.3	711.3	711.3	711.3	711.3	711.3	711.3
2.5°	709.0	709.9	710.8	711.1	710.7	710.4	710.0	709.7
5°	706.9	708.2	709.6	710.2	709.9	709.7	709.5	709.2
7.5°	703.5	705.2	706.8	707.5	707.3	707.0	706.8	706.6
10°	700.5	702.4	704.3	705.0	704.8	704.6	704.4	704.1
12.5°	695.6	697.4	699.3	700.0	699.8	699.6	699.4	699.1
15°	686.6	688.6	690.7	691.7	691.5	691.2	690.9	690.7
17.5°	675.0	677.2	679.3	680.4	680.4	680.4	680.4	680.4
20°	665.9	668.4	670.9	672.2	672.2	672.2	672.2	672.2
22.5°	656.0	658.5	661.0	662.5	662.8	663.2	663.6	663.9
25°	640.6	643.3	646.0	647.7	648.4	649.1	649.8	650.6
27.5°	623.5	626.9	630.5	632.4	632.9	633.4	633.9	634.4
30°	611.5	615.1	618.7	621.0	621.7	622.4	623.0	623.7
32.5°	598.5	602.8	606.9	609.7	611.0	612.2	613.4	614.6
35°	580.2	585.2	590.3	593.6	595.2	596.8	598.3	600.0
37.5°	561.3	566.8	572.5	576.1	577.8	579.5	581.2	582.9
40°	548.0	553.9	559.9	563.9	565.9	568.0	570.1	572.2
42.5°	535.0	541.6	548.1	552.4	554.4	556.5	558.6	560.6
45°	515.2	522.3	529.5	534.1	536.4	538.8	541.0	543.3
47.5°	494.6	502.1	509.5	514.4	516.9	519.5	522.0	524.5
50°	480.5	488.3	496.1	501.3	503.8	506.3	508.8	511.3
52.5°	465.2	473.2	481.2	486.6	489.2	491.9	494.6	497.4
55°	442.2	450.5	458.8	464.3	467.4	470.3	473.3	476.3
57.5°	418.0	426.9	435.8	441.7	444.7	447.8	450.8	453.8
60°	401.9	410.6	419.4	425.4	428.5	431.7	434.9	438.2
62.5°	384.9	394.2	403.4	409.6	412.5	415.6	418.6	421.6
65°	359.0	368.4	377.8	384.0	387.0	389.9	392.9	395.9
67.5°	332.8	342.2	351.7	358.1	361.1	364.3	367.4	370.5
70°	314.6	324.4	334.3	340.5	343.3	346.1	348.8	351.5
72.5°	296.9	306.5	316.2	322.7	326.0	329.3	332.5	335.9
75°	270.2	280.0	289.9	296.3	299.3	302.3	305.3	308.2
77.5°	244.2	254.0	263.8	270.2	273.5	276.7	279.8	283.1
80°	226.4	236.1	245.7	252.2	255.3	258.5	261.8	265.0
82.5°	210.0	219.5	229.2	235.5	238.5	241.6	244.6	247.6
85°	186.2	195.9	205.5	211.9	215.1	218.3	221.6	224.7
87.5°	169.6	179.0	188.5	194.8	197.8	200.8	203.8	206.8
90°	170.5	180.5	190.4	196.9	200.0	203.1	206.1	209.2
92.5°	164.2	173.6	183.0	189.1	192.1	195.1	198.0	201.0
95°	165.7	175.2	184.8	190.8	193.4	196.0	198.5	201.2
97.5°	165.6	174.7	183.9	189.9	192.8	195.7	198.5	201.5
100°	163.8	173.6	183.3	189.7	192.5	195.3	198.1	201.0
102.5°	159.6	169.6	179.5	186.0	188.9	191.9	194.9	197.8
105°	152.3	162.1	171.9	178.3	181.5	184.7	187.8	191.0
107.5°	153.7	159.6	165.5	170.1	173.2	176.3	179.6	182.7
110°	184.2	175.5	166.8	164.0	167.1	170.4	173.5	176.6



TEST NUMBER: P331351-840

CATALOG NUMBER: SA2XXDIP-C675D725U840-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	285.9	234.7	183.4	159.4	162.4	165.4	168.4	171.5
115°	372.6	305.2	237.7	199.5	190.5	181.5	172.4	163.4
117.5°	524.7	513.5	502.3	478.9	443.2	407.6	371.9	336.3
120°	594.6	603.0	611.4	605.9	586.7	567.6	548.5	529.3
122.5°	621.9	629.2	636.6	639.3	637.3	635.2	633.2	631.2
125°	660.0	667.4	674.7	679.6	682.2	684.7	687.3	689.8
127.5°	694.9	702.2	709.5	714.3	716.3	718.4	720.5	722.7
130°	717.0	724.3	731.5	736.0	737.6	739.3	741.0	742.7
132.5°	738.3	745.2	751.9	756.2	757.9	759.5	761.2	762.9
135°	768.9	775.4	781.8	785.8	787.3	788.8	790.3	791.8
137.5°	797.1	802.9	808.7	812.1	813.1	814.2	815.2	816.2
140°	815.6	820.7	825.8	828.6	829.2	829.8	830.3	830.9
142.5°	833.5	837.9	842.1	844.4	844.8	845.2	845.6	846.0
145°	859.6	862.1	864.5	866.0	866.4	866.7	867.1	867.4
147.5°	882.9	883.9	884.9	885.4	885.2	885.1	885.0	884.9
150°	898.4	899.4	900.3	900.4	899.6	898.8	898.0	897.2
152.5°	912.8	913.8	914.8	914.7	913.7	912.6	911.6	910.5
155°	932.4	933.3	934.3	934.1	932.8	931.6	930.3	929.0
157.5°	948.8	949.9	951.0	950.9	949.7	948.4	947.2	945.9
160°	958.4	959.4	960.3	960.2	959.1	958.0	956.8	955.7
162.5°	967.2	968.4	969.5	969.4	968.0	966.5	965.2	963.8
165°	978.2	979.4	980.5	980.5	979.4	978.2	977.0	975.9
167.5°	987.3	988.5	989.6	989.4	988.0	986.5	985.0	983.6
170°	991.9	993.0	994.2	994.0	992.6	991.1	989.7	988.3
172.5°	995.4	996.5	997.6	997.4	996.0	994.6	993.1	991.7
175°	999.2	1000.3	1001.4	1001.2	999.6	997.9	996.3	994.7
177.5°	999.6	1000.5	1001.4	1001.3	1000.1	999.0	997.7	996.6
180°	998.4	998.4	998.4	998.4	998.4	998.4	998.4	998.4

(END OF REPORT)