

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: P331354-935

Luminaire Tested: **SA2XXDIP-C675D725U935-4F0-1E-UDD-F**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331354-935
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-C675D725U935-4F0-1E-UDD-F
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 725 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

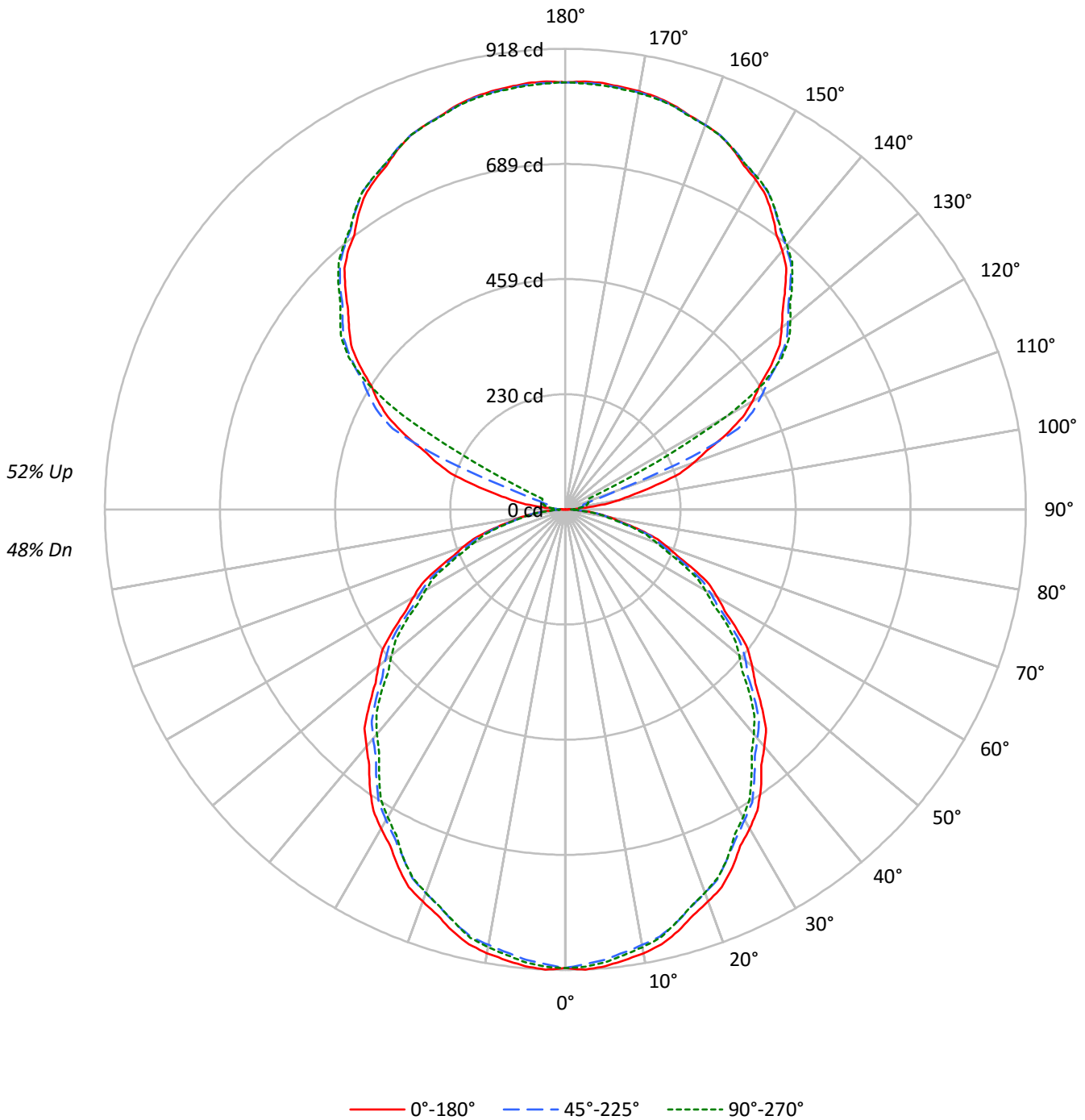
Lumens per Lamp: N/A
Luminaire Lumens: 4822.1 lumens
Efficiency: N/A
Efficacy: 105.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

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: P331354-935
CATALOG NUMBER: SA2XXDIP-C675D725U935-4F0-1E-UDD-F

Luminous Intensity Polar Plot





TEST NUMBER: P331354-935

CATALOG NUMBER: SA2XXDIP-C675D725U935-4F0-1E-UDD-F

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	107	107	107	107	98	98	98	98	82	82	82	68	68	68	55	55	55	48
1	97	93	89	86	89	86	82	79	72	70	68	60	58	56	48	47	46	41
2	89	81	75	70	81	75	70	65	63	59	56	52	50	47	42	40	39	34
3	81	71	64	58	74	66	60	54	56	51	47	46	43	40	38	35	33	29
4	74	63	55	49	68	58	52	46	50	44	40	41	37	34	34	31	28	25
5	68	56	48	42	62	52	45	40	44	39	35	37	33	30	30	27	25	22
6	63	51	42	37	57	47	40	34	40	34	30	34	29	26	27	24	22	19
7	58	46	38	32	53	42	35	30	36	31	27	30	26	23	25	22	19	17
8	54	41	34	28	49	38	32	27	33	28	24	28	24	20	23	20	17	15
9	50	38	30	25	46	35	28	24	30	25	21	26	21	18	21	18	16	14
10	47	35	27	23	43	32	26	21	28	23	19	24	20	17	20	17	14	12

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	14759	14759	14759
5°	14815	14603	14687
10°	14728	14454	14526
15°	14544	14265	14252
20°	14287	13984	13969
25°	14031	13639	13639
30°	13699	13323	13207
35°	13391	12942	12751
40°	13004	12560	12319
45°	12622	12184	11880
50°	12208	11788	11369
55°	11778	11333	10911
60°	11296	10785	10388
65°	10777	10243	9773
70°	10126	9583	9130
75°	9214	8827	8609
80°	8173	7922	7513
85°	6688	6354	5687



TEST NUMBER: P331354-935

CATALOG NUMBER: SA2XXDIP-C675D725U935-4F0-1E-UDD-F

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.0	1.8
10°-20°	241.9	5.0
20°-30°	355.5	7.4
30°-40°	412.9	8.6
40°-50°	412.5	8.6
50°-60°	359.7	7.5
60°-70°	266.0	5.5
70°-80°	150.6	3.1
80°-90°	42.6	0.9
90°-100°	28.4	0.6
100°-110°	104.1	2.2
110°-120°	278.3	5.8
120°-130°	459.4	9.5
130°-140°	488.6	10.1
140°-150°	454.1	9.4
150°-160°	365.1	7.6
160°-170°	235.3	4.9
170°-180°	81.0	1.7
0°-30°	683.3	14.2
0°-40°	1096.3	22.7
0°-60°	1868.5	38.7
0°-90°	2327.7	48.3
90°-120°	410.8	8.5
90°-150°	1813.0	37.6
90°-180°	2494.0	51.7
0°-180°	4822.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	914	914	914	914	914	
5°	914	910	901	907	906	87
15°	870	865	853	857	853	245
25°	788	780	766	767	766	362
35°	679	670	657	651	647	424
45°	553	546	534	524	520	426
55°	418	413	403	392	388	374
65°	282	277	268	260	256	279
75°	148	146	142	137	138	158
85°	36	35	34	32	31	41
90°	1	7	12	15	17	4
95°	40	21	24	27	26	49
105°	187	195	38	44	47	200
115°	354	365	380	108	50	349
125°	501	509	520	525	527	446
135°	620	629	635	641	640	478
145°	719	719	729	732	730	449
155°	791	787	793	796	792	365
165°	834	830	832	836	832	236
175°	853	849	850	854	848	81
180°	851	851	851	851	851	



TEST NUMBER: P331354-935

CATALOG NUMBER: SA2XXDIP-C675D725U935-4F0-1E-UDD-F

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	914.1	914.1	914.1	914.1	914.1	914.1	914.1	914.1	914.1	914.1	914.1
2.5°	918.3	917.6	916.8	916.0	915.2	914.0	912.2	910.5	908.8	907.1	908.6
5°	914.1	913.3	912.6	911.8	911.0	909.6	907.4	905.3	903.1	901.0	902.5
7.5°	906.0	904.8	903.6	902.4	901.2	899.5	897.3	895.1	892.9	890.7	892.3
10°	898.3	896.9	895.5	894.1	892.9	891.0	888.6	886.3	883.9	881.6	883.1
12.5°	887.8	886.6	885.3	884.1	882.9	881.1	878.7	876.4	874.1	871.8	872.9
15°	870.1	869.0	867.8	866.7	865.5	863.6	861.1	858.5	856.0	853.4	854.3
17.5°	847.7	846.4	845.3	844.1	843.0	841.1	838.5	835.9	833.4	830.8	831.7
20°	831.5	830.3	829.1	827.9	826.8	824.8	822.1	819.4	816.7	813.9	814.5
22.5°	815.3	813.6	812.0	810.4	808.7	806.7	804.1	801.5	798.9	796.3	796.4
25°	787.6	786.0	784.5	782.8	781.3	778.9	775.5	772.2	768.9	765.6	765.9
27.5°	755.9	754.5	753.1	751.7	750.3	748.3	745.6	743.0	740.4	737.8	737.2
30°	734.8	733.2	731.7	730.1	728.6	726.3	723.4	720.5	717.6	714.6	714.0
32.5°	712.3	711.0	709.8	708.5	707.3	705.2	702.1	699.0	695.9	692.8	691.7
35°	679.4	677.5	675.5	673.6	671.6	669.1	666.0	662.8	659.7	656.6	655.4
37.5°	642.3	640.6	638.9	637.1	635.5	633.0	629.9	626.8	623.7	620.5	619.1
40°	617.0	615.4	613.9	612.3	610.8	608.5	605.3	602.2	599.1	595.9	594.2
42.5°	592.5	590.8	589.3	587.7	586.2	583.8	580.7	577.6	574.5	571.4	569.4
45°	552.8	551.5	550.1	548.8	547.4	545.3	542.3	539.4	536.5	533.6	531.4
47.5°	513.5	512.2	510.9	509.6	508.3	506.2	503.1	500.1	497.1	494.0	491.7
50°	486.0	485.1	484.1	483.1	482.2	480.3	477.6	474.8	472.1	469.3	466.7
52.5°	459.3	458.1	456.8	455.5	454.2	452.3	449.7	447.1	444.5	442.0	439.7
55°	418.4	417.2	416.0	414.8	413.7	411.9	409.6	407.3	404.9	402.6	400.2
57.5°	377.2	376.3	375.4	374.4	373.5	371.8	369.2	366.6	364.0	361.4	359.1
60°	349.8	349.0	348.3	347.5	346.7	344.9	342.2	339.5	336.7	334.0	331.8
62.5°	323.1	321.8	320.6	319.3	318.1	316.4	314.4	312.2	310.1	308.0	306.0
65°	282.1	280.9	279.8	278.6	277.4	275.9	274.0	272.0	270.0	268.1	266.3
67.5°	240.5	239.5	238.6	237.6	236.7	235.4	233.6	231.9	230.1	228.3	227.0
70°	214.5	213.7	212.9	212.2	211.4	210.1	208.3	206.6	204.8	203.0	201.6
72.5°	187.8	186.9	186.1	185.4	184.6	183.7	182.5	181.4	180.3	179.1	177.8
75°	147.7	147.2	146.9	146.5	146.1	145.4	144.5	143.4	142.5	141.5	140.3
77.5°	111.8	111.2	110.5	109.8	109.2	108.7	108.2	107.8	107.5	107.0	106.5
80°	87.9	87.7	87.5	87.3	87.1	86.8	86.4	86.0	85.7	85.2	84.6
82.5°	65.4	65.3	65.3	65.3	65.3	65.1	64.8	64.7	64.4	64.1	63.5
85°	36.1	35.8	35.6	35.5	35.2	35.0	34.9	34.7	34.4	34.3	33.7
87.5°	12.7	12.7	12.7	12.7	12.7	12.7	12.6	12.5	12.4	12.3	12.0
90°	0.6	2.2	3.6	5.2	6.6	7.9	9.0	10.2	11.2	12.3	13.0
92.5°	12.4	12.3	12.1	12.1	11.9	12.1	12.7	13.2	13.8	14.3	14.6
95°	40.0	35.6	31.0	26.5	22.0	20.1	21.2	22.1	23.1	24.0	24.7
97.5°	79.5	66.7	54.0	41.2	28.5	23.2	25.5	27.7	30.0	32.1	32.7
100°	109.0	90.2	71.5	52.8	34.0	25.8	28.2	30.5	32.8	35.1	36.2
102.5°	141.5	137.6	133.6	129.7	125.6	113.9	94.5	75.0	55.5	36.1	37.5
105°	187.3	191.3	195.4	199.6	203.6	187.0	149.6	112.3	74.9	37.5	39.1
107.5°	239.4	242.6	246.0	249.3	252.6	231.9	187.0	142.2	97.4	52.6	51.1
110°	272.9	275.7	278.6	281.5	284.3	266.0	226.4	186.9	147.3	107.8	94.1



TEST NUMBER: P331354-935

CATALOG NUMBER: SA2XXDIP-C675D725U935-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	304.4	306.9	309.4	312.0	314.5	310.9	301.2	291.4	281.6	271.8	222.0
115°	354.1	356.5	358.8	361.1	363.4	366.4	369.7	373.2	376.6	380.0	316.7
117.5°	398.6	401.2	403.8	406.4	409.0	411.5	413.9	416.2	418.5	420.9	405.6
120°	431.1	433.2	435.2	437.3	439.4	441.6	444.1	446.5	449.0	451.4	453.1
122.5°	458.7	460.9	463.0	465.2	467.4	469.8	472.5	475.2	477.9	480.5	481.5
125°	500.8	502.5	504.3	506.1	507.8	510.1	512.6	515.2	517.8	520.5	521.4
127.5°	538.8	540.8	542.8	544.7	546.6	548.6	550.6	552.5	554.5	556.4	557.8
130°	562.9	565.2	567.3	569.5	571.7	573.5	575.1	576.5	578.1	579.5	581.1
132.5°	587.5	589.4	591.3	593.1	595.0	596.7	598.2	599.7	601.2	602.7	604.0
135°	619.6	621.8	624.0	626.2	628.4	630.1	631.3	632.5	633.8	635.0	636.4
137.5°	652.0	653.5	655.0	656.6	658.1	659.6	661.0	662.4	663.7	665.2	666.5
140°	673.2	674.2	675.4	676.5	677.5	678.9	680.4	681.9	683.4	684.9	686.1
142.5°	691.0	691.9	692.9	693.9	694.8	696.2	697.9	699.6	701.4	703.1	704.2
145°	718.8	718.6	718.5	718.3	718.2	719.3	721.6	723.9	726.3	728.6	729.6
147.5°	743.0	742.5	742.0	741.5	741.0	741.8	744.2	746.4	748.7	751.1	751.7
150°	758.8	757.9	756.9	756.0	754.9	755.6	757.8	759.9	762.2	764.3	765.2
152.5°	772.1	771.0	770.0	768.9	767.8	768.4	770.4	772.5	774.6	776.6	777.5
155°	791.4	790.2	788.9	787.7	786.5	786.7	788.3	790.0	791.6	793.2	794.1
157.5°	806.6	805.6	804.5	803.5	802.5	802.5	803.7	804.8	805.9	807.1	808.0
160°	815.5	814.6	813.8	813.0	812.2	812.2	813.0	813.8	814.6	815.5	816.3
162.5°	823.4	822.5	821.7	820.9	820.0	820.0	820.7	821.4	822.2	822.9	823.8
165°	834.0	833.1	832.3	831.5	830.6	830.4	830.9	831.3	831.6	832.1	833.0
167.5°	841.8	841.0	840.2	839.4	838.5	838.3	838.7	839.0	839.5	839.8	840.8
170°	846.3	845.4	844.6	843.8	843.0	842.7	843.0	843.3	843.5	843.8	844.7
172.5°	849.2	848.3	847.6	846.7	845.9	845.7	845.9	846.2	846.4	846.7	847.7
175°	853.0	852.0	851.1	850.2	849.2	848.9	849.1	849.4	849.6	850.0	850.9
177.5°	853.7	852.9	852.1	851.4	850.6	850.2	850.3	850.5	850.6	850.7	851.4
180°	851.2	851.2	851.2	851.2	851.2	851.2	851.2	851.2	851.2	851.2	851.2



TEST NUMBER: P331354-935

CATALOG NUMBER: SA2XXDIP-C675D725U935-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	914.1	914.1	914.1	914.1	914.1	914.1	914.1	914.1
2.5°	910.2	911.8	913.3	914.0	913.6	913.3	913.0	912.7
5°	904.0	905.6	907.1	907.8	907.4	907.0	906.6	906.2
7.5°	893.9	895.4	897.0	897.5	897.1	896.7	896.3	895.9
10°	884.7	886.3	887.9	888.3	887.8	887.2	886.6	886.0
12.5°	873.9	875.0	876.2	876.4	876.0	875.6	875.2	874.8
15°	855.1	855.8	856.6	856.5	855.5	854.5	853.6	852.6
17.5°	832.6	833.4	834.4	834.4	833.4	832.5	831.6	830.6
20°	815.1	815.7	816.2	816.1	815.4	814.6	813.8	813.0
22.5°	796.6	796.7	796.8	796.6	796.2	795.7	795.2	794.8
25°	766.4	766.7	767.2	767.2	766.7	766.4	765.9	765.6
27.5°	736.6	736.1	735.5	734.7	733.7	732.8	731.8	730.9
30°	713.4	712.8	712.2	711.5	710.8	710.0	709.2	708.4
32.5°	690.7	689.7	688.5	687.7	686.9	686.1	685.3	684.5
35°	654.3	653.1	651.9	650.8	649.9	648.8	647.9	646.9
37.5°	617.7	616.2	614.8	613.5	612.6	611.7	610.8	609.8
40°	592.5	590.6	588.9	587.6	586.9	586.1	585.3	584.5
42.5°	567.5	565.6	563.7	562.1	561.0	560.0	558.9	557.8
45°	529.3	527.1	525.0	523.5	522.7	521.9	521.2	520.3
47.5°	489.5	487.2	484.9	483.2	482.1	481.0	479.8	478.7
50°	463.9	461.2	458.4	456.6	455.6	454.6	453.7	452.6
52.5°	437.4	435.1	432.9	431.1	429.8	428.5	427.2	425.9
55°	397.9	395.5	393.2	391.5	390.5	389.6	388.6	387.6
57.5°	356.8	354.5	352.2	350.7	349.9	349.2	348.4	347.7
60°	329.7	327.5	325.4	324.1	323.5	322.9	322.3	321.7
62.5°	304.0	302.0	300.1	298.7	297.9	297.1	296.4	295.7
65°	264.6	262.8	261.1	259.7	258.7	257.7	256.8	255.8
67.5°	225.6	224.3	222.9	221.8	221.0	220.2	219.5	218.7
70°	200.3	199.0	197.6	196.5	195.7	194.9	194.2	193.4
72.5°	176.4	175.0	173.7	172.6	172.0	171.4	170.8	170.1
75°	139.1	138.0	136.8	136.5	136.8	137.2	137.6	138.0
77.5°	105.9	105.3	104.7	104.2	103.6	103.1	102.5	101.9
80°	84.1	83.5	82.9	82.4	82.1	81.6	81.3	80.8
82.5°	62.7	61.9	61.2	60.8	60.7	60.6	60.5	60.4
85°	33.1	32.5	31.9	31.5	31.3	31.2	31.0	30.7
87.5°	11.6	11.3	11.0	10.8	10.7	10.6	10.4	10.3
90°	13.7	14.4	15.1	15.5	15.8	16.1	16.4	16.6
92.5°	15.0	15.3	15.7	16.0	16.1	16.3	16.4	16.6
95°	25.4	26.1	26.8	27.0	26.9	26.8	26.6	26.5
97.5°	33.2	33.8	34.4	34.7	34.9	35.0	35.2	35.4
100°	37.3	38.4	39.5	40.2	40.5	40.7	41.0	41.2
102.5°	38.9	40.4	41.8	42.7	43.0	43.5	43.8	44.3
105°	40.6	42.1	43.6	44.6	45.2	45.7	46.2	46.8
107.5°	49.5	48.0	46.5	46.0	46.5	47.1	47.6	48.1
110°	80.4	66.7	53.0	46.5	47.0	47.5	48.1	48.6



TEST NUMBER: P331354-935

CATALOG NUMBER: SA2XXDIP-C675D725U935-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	172.0	122.1	72.2	47.4	47.9	48.3	48.7	49.2
115°	253.3	189.9	126.6	89.9	80.1	70.2	60.4	50.5
117.5°	390.3	374.9	359.6	335.7	303.3	271.0	238.6	206.2
120°	454.8	456.4	458.1	449.6	431.1	412.7	394.2	375.7
122.5°	482.5	483.5	484.5	483.2	479.6	476.0	472.4	468.8
125°	522.4	523.3	524.3	525.0	525.4	525.8	526.2	526.6
127.5°	559.2	560.6	562.0	562.7	562.8	562.9	563.0	563.1
130°	582.6	584.1	585.6	586.3	586.2	586.0	585.8	585.7
132.5°	605.3	606.6	607.9	608.5	608.3	608.2	608.0	607.9
135°	637.7	639.1	640.5	641.0	640.8	640.5	640.2	639.9
137.5°	667.9	669.2	670.5	671.0	670.5	670.0	669.6	669.1
140°	687.3	688.5	689.8	690.1	689.4	688.7	688.0	687.3
142.5°	705.3	706.5	707.6	707.8	707.1	706.5	705.8	705.1
145°	730.6	731.5	732.5	732.5	731.9	731.2	730.6	729.9
147.5°	752.4	753.2	753.9	754.0	753.4	752.8	752.3	751.7
150°	765.9	766.8	767.6	767.7	767.0	766.3	765.6	764.9
152.5°	778.3	779.1	780.0	779.9	779.0	778.1	777.2	776.3
155°	795.0	795.7	796.6	796.4	795.3	794.3	793.2	792.0
157.5°	808.9	809.9	810.8	810.7	809.7	808.6	807.5	806.5
160°	817.1	817.9	818.7	818.6	817.7	816.7	815.8	814.9
162.5°	824.7	825.6	826.6	826.5	825.3	824.1	822.9	821.7
165°	834.0	835.0	835.9	835.9	835.0	834.0	833.0	832.1
167.5°	841.8	842.7	843.7	843.5	842.3	841.1	839.8	838.6
170°	845.7	846.6	847.7	847.5	846.3	845.0	843.8	842.6
172.5°	848.7	849.6	850.6	850.4	849.2	848.0	846.7	845.5
175°	851.9	852.8	853.8	853.6	852.2	850.8	849.5	848.1
177.5°	852.2	853.0	853.8	853.7	852.6	851.7	850.7	849.7
180°	851.2	851.2	851.2	851.2	851.2	851.2	851.2	851.2

(END OF REPORT)