

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: P331690-927

Luminaire Tested: **SA2XXRDIP-C675D725U927-4F0-1E-UDD-F**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P331690-927  
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: SA2XXRDIP-C675D725U927-4F0-1E-UDD-F  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 675 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 725 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4134.9 lumens  
Efficiency: N/A  
Efficacy: 90.1 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: General Diffuse

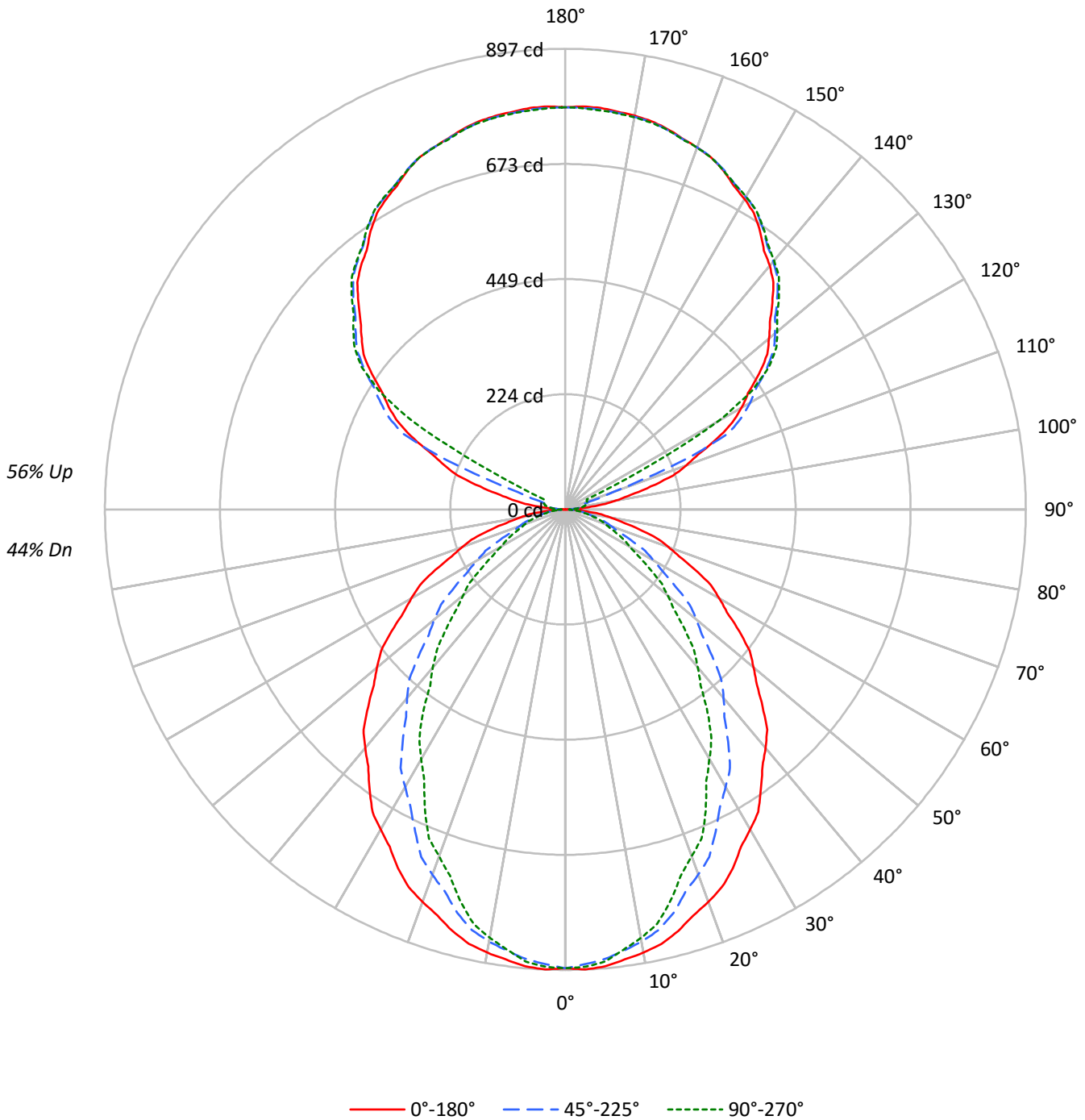
Input Watts (W): 45.9  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P331690-927

CATALOG NUMBER: SA2XXRDIP-C675D725U927-4F0-1E-UDD-F

### Luminous Intensity Polar Plot





TEST NUMBER: P331690-927

CATALOG NUMBER: SA2XXRDIP-C675D725U927-4F0-1E-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	50	30	10	0	
RCR																						
0	106	106	106	106	97	97	97	97	80	80	80	65	65	65	51	51	51	44				44
1	97	93	89	86	89	85	82	79	71	69	67	58	56	55	46	45	44				38	
2	89	82	76	71	81	75	70	66	63	59	56	51	49	47	41	39	38				33	
3	81	72	65	59	74	66	60	55	56	51	47	46	43	40	37	34	33				28	
4	74	64	56	51	68	59	52	47	50	45	41	41	37	35	33	30	28				25	
5	68	57	49	44	63	53	46	41	45	39	35	37	33	30	30	27	25				22	
6	63	51	44	38	58	48	41	36	40	35	31	34	30	27	27	24	22				19	
7	58	47	39	33	54	43	36	31	37	31	28	31	27	24	25	22	20				17	
8	54	42	35	30	50	39	33	28	34	28	25	28	24	21	23	20	18				16	
9	51	39	31	27	46	36	29	25	31	26	22	26	22	19	21	18	16				14	
10	47	36	29	24	43	33	27	23	28	23	20	24	20	17	20	17	15				13	

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	14428	14428	14428
5°	14483	14248	14326
10°	14372	14014	13895
15°	14206	13600	13207
20°	13979	13005	12352
25°	13744	12332	11526
30°	13420	11639	10465
35°	13102	10886	9532
40°	12783	10108	8454
45°	12408	9232	7478
50°	12024	8349	6521
55°	11634	7398	5599
60°	11176	6397	4647
65°	10659	5375	4233
70°	10041	4428	3895
75°	9283	4036	3631
80°	8201	3608	3310
85°	6447	2853	2853



TEST NUMBER: P331690-927

CATALOG NUMBER: SA2XXRDIP-C675D725U927-4F0-1E-UDD-F

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	83.6	2.0
10°-20°	229.7	5.6
20°-30°	322.5	7.8
30°-40°	351.7	8.5
40°-50°	323.4	7.8
50°-60°	254.0	6.1
60°-70°	165.6	4.0
70°-80°	85.4	2.1
80°-90°	24.1	0.6
90°-100°	26.1	0.6
100°-110°	95.8	2.3
110°-120°	256.1	6.2
120°-130°	422.7	10.2
130°-140°	449.6	10.9
140°-150°	417.8	10.1
150°-160°	335.9	8.1
160°-170°	216.5	5.2
170°-180°	74.5	1.8
0°-30°	635.8	15.4
0°-40°	987.5	23.9
0°-60°	1564.8	37.8
0°-90°	1839.9	44.5
90°-120°	378.0	9.1
90°-150°	1668.1	40.3
90°-180°	2295.0	55.5
0°-180°	4134.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	894	894	894	894	894	
5°	894	889	879	886	884	85
15°	850	840	814	799	790	239
25°	772	744	692	660	647	355
35°	665	622	552	503	484	416
45°	543	488	404	349	328	419
55°	413	349	263	216	199	369
65°	279	213	141	115	111	277
75°	149	94	65	59	58	158
85°	35	19	15	15	15	41
90°	1	7	11	14	15	3
95°	37	19	22	25	24	45
105°	172	180	34	41	43	184
115°	326	336	350	100	46	321
125°	461	468	479	483	484	411
135°	570	579	584	590	589	440
145°	661	661	670	674	672	413
155°	728	724	730	733	729	335
165°	767	764	766	769	766	217
175°	785	781	782	785	780	75
180°	783	783	783	783	783	



TEST NUMBER: P331690-927

CATALOG NUMBER: SA2XXRDIP-C675D725U927-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	893.6	893.6	893.6	893.6	893.6	893.6	893.6	893.6	893.6	893.6	893.6
2.5°	896.8	896.1	895.4	894.7	894.0	892.8	891.2	889.6	888.1	886.5	888.0
5°	893.6	892.7	891.8	890.9	890.0	888.4	886.1	883.8	881.4	879.1	880.7
7.5°	884.4	883.3	882.2	881.1	880.0	878.0	875.3	872.6	869.8	867.1	867.5
10°	876.6	875.4	874.1	872.8	871.6	869.2	865.5	862.0	858.4	854.8	854.3
12.5°	866.9	865.4	863.8	862.3	860.7	857.7	853.1	848.5	843.8	839.2	838.3
15°	849.9	848.0	846.0	844.0	842.0	838.0	831.9	825.8	819.7	813.6	810.2
17.5°	829.1	826.1	823.1	820.0	817.0	811.6	803.7	795.9	788.1	780.2	776.2
20°	813.6	809.9	806.4	802.8	799.2	792.9	783.9	774.9	766.0	756.9	752.4
22.5°	796.7	792.7	788.7	784.7	780.6	773.6	763.4	753.3	743.1	733.0	727.2
25°	771.5	765.7	760.0	754.2	748.5	739.7	727.9	716.0	704.1	692.2	684.8
27.5°	741.1	734.8	728.6	722.3	716.1	706.2	692.9	679.5	666.1	652.8	644.2
30°	719.8	712.9	706.1	699.3	692.4	681.8	667.4	653.1	638.7	624.3	615.1
32.5°	699.0	691.0	683.1	675.1	667.1	655.8	641.1	626.5	611.8	597.1	586.7
35°	664.7	655.6	646.4	637.2	628.1	615.6	599.8	584.0	568.2	552.3	541.0
37.5°	630.5	620.4	610.3	600.2	590.2	576.7	559.9	543.0	526.2	509.3	496.9
40°	606.5	595.7	584.9	574.2	563.4	549.3	531.9	514.4	497.0	479.6	466.8
42.5°	581.9	570.6	559.2	547.9	536.5	521.8	503.8	485.8	467.8	449.8	436.6
45°	543.4	531.4	519.4	507.3	495.3	479.8	461.0	442.1	423.2	404.3	391.6
47.5°	505.9	493.1	480.4	467.6	454.9	438.8	419.3	399.8	380.3	360.8	348.2
50°	478.7	466.0	453.2	440.5	427.7	411.5	391.7	371.9	352.1	332.4	320.0
52.5°	452.3	438.9	425.6	412.3	398.9	382.5	363.2	343.9	324.6	305.2	293.3
55°	413.3	399.3	385.2	371.2	357.2	340.5	321.1	301.7	282.3	262.8	252.1
57.5°	373.3	358.9	344.5	330.2	315.8	299.3	280.6	262.0	243.3	224.7	214.8
60°	346.1	331.8	317.3	303.0	288.6	272.2	253.7	235.1	216.7	198.1	188.9
62.5°	319.6	305.2	290.8	276.5	262.1	246.1	228.5	210.8	193.1	175.5	166.8
65°	279.0	264.4	249.9	235.4	220.8	205.4	189.3	173.1	156.9	140.7	134.6
67.5°	239.9	225.4	211.0	196.5	182.0	167.5	153.0	138.5	123.9	109.3	106.5
70°	212.7	198.7	184.7	170.6	156.6	143.4	131.0	118.6	106.2	93.8	92.0
72.5°	186.8	173.3	159.9	146.5	133.0	121.4	111.4	101.4	91.5	81.5	80.0
75°	148.8	136.3	123.7	111.1	98.5	89.1	83.0	76.9	70.8	64.7	63.5
77.5°	111.5	100.4	89.4	78.3	67.3	60.3	57.4	54.4	51.5	48.6	47.8
80°	88.2	79.0	69.8	60.7	51.5	46.0	44.2	42.4	40.6	38.8	38.1
82.5°	66.8	59.7	52.5	45.3	38.2	34.0	32.8	31.5	30.3	29.2	28.7
85°	34.8	31.0	27.3	23.4	19.6	17.5	17.0	16.5	15.9	15.4	15.4
87.5°	10.5	9.6	8.7	7.8	7.0	6.7	6.8	7.1	7.2	7.4	7.4
90°	0.6	2.0	3.3	4.8	6.1	7.3	8.3	9.3	10.3	11.3	12.0
92.5°	11.4	11.3	11.2	11.1	10.9	11.2	11.6	12.1	12.7	13.2	13.5
95°	36.8	32.7	28.5	24.4	20.2	18.5	19.5	20.4	21.2	22.1	22.7
97.5°	73.1	61.4	49.7	37.9	26.2	21.4	23.4	25.5	27.6	29.5	30.1
100°	100.3	83.0	65.8	48.6	31.3	23.8	25.9	28.0	30.2	32.3	33.3
102.5°	130.2	126.6	122.9	119.3	115.6	104.8	86.9	69.0	51.1	33.2	34.5
105°	172.3	176.0	179.8	183.6	187.4	172.1	137.7	103.3	68.9	34.5	36.0
107.5°	220.2	223.2	226.3	229.3	232.4	213.3	172.1	130.9	89.6	48.4	47.0
110°	251.0	253.7	256.4	259.0	261.6	244.7	208.3	172.0	135.5	99.2	86.6



TEST NUMBER: P331690-927

CATALOG NUMBER: SA2XXRDIP-C675D725U927-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	280.0	282.4	284.7	287.1	289.4	286.1	277.1	268.1	259.1	250.1	204.2
115°	325.8	328.0	330.1	332.2	334.4	337.1	340.2	343.3	346.5	349.7	291.4
117.5°	366.8	369.2	371.5	373.9	376.3	378.6	380.8	382.9	385.1	387.3	373.2
120°	396.6	398.5	400.4	402.3	404.3	406.3	408.6	410.8	413.1	415.3	416.8
122.5°	422.1	424.1	426.0	428.0	430.0	432.2	434.7	437.2	439.7	442.1	443.0
125°	460.7	462.3	464.0	465.6	467.2	469.3	471.7	474.0	476.4	478.9	479.7
127.5°	495.7	497.6	499.4	501.1	503.0	504.8	506.6	508.3	510.2	511.9	513.3
130°	517.9	520.0	522.0	523.9	526.0	527.7	529.1	530.4	531.9	533.2	534.6
132.5°	540.6	542.3	544.1	545.7	547.5	549.0	550.4	551.8	553.2	554.5	555.7
135°	570.1	572.1	574.1	576.2	578.1	579.7	580.8	581.9	583.1	584.2	585.5
137.5°	599.9	601.3	602.7	604.1	605.5	606.9	608.2	609.4	610.7	612.0	613.2
140°	619.4	620.4	621.4	622.4	623.4	624.6	626.0	627.4	628.8	630.2	631.3
142.5°	635.7	636.6	637.5	638.4	639.3	640.6	642.1	643.7	645.3	646.9	647.9
145°	661.3	661.2	661.1	660.9	660.8	661.8	663.9	666.1	668.2	670.3	671.3
147.5°	683.7	683.2	682.7	682.2	681.8	682.5	684.7	686.7	688.9	691.0	691.7
150°	698.2	697.3	696.4	695.5	694.6	695.2	697.2	699.2	701.2	703.2	704.0
152.5°	710.3	709.4	708.4	707.4	706.5	706.9	708.8	710.7	712.6	714.5	715.3
155°	728.2	727.1	725.9	724.8	723.7	723.8	725.3	726.8	728.3	729.8	730.6
157.5°	742.1	741.2	740.2	739.3	738.3	738.3	739.4	740.5	741.5	742.6	743.5
160°	750.3	749.5	748.8	748.0	747.3	747.3	748.0	748.8	749.5	750.3	751.1
162.5°	757.6	756.8	756.1	755.3	754.5	754.5	755.1	755.7	756.5	757.1	758.0
165°	767.3	766.5	765.8	765.0	764.2	764.1	764.5	764.9	765.2	765.6	766.4
167.5°	774.5	773.8	773.0	772.3	771.5	771.3	771.7	772.0	772.4	772.7	773.6
170°	778.6	777.8	777.1	776.3	775.6	775.3	775.6	775.9	776.1	776.3	777.2
172.5°	781.3	780.5	779.8	779.0	778.3	778.1	778.3	778.6	778.8	779.0	780.0
175°	784.8	783.9	783.1	782.2	781.3	781.0	781.3	781.5	781.7	782.0	782.9
177.5°	785.4	784.7	784.0	783.3	782.6	782.3	782.4	782.5	782.6	782.7	783.4
180°	783.2	783.2	783.2	783.2	783.2	783.2	783.2	783.2	783.2	783.2	783.2



TEST NUMBER: P331690-927

CATALOG NUMBER: SA2XXRDIP-C675D725U927-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	893.6	893.6	893.6	893.6	893.6	893.6	893.6	893.6
2.5°	889.4	890.8	892.2	892.8	892.6	892.2	892.0	891.7
5°	882.3	883.9	885.5	886.1	885.5	884.9	884.5	883.9
7.5°	868.0	868.5	868.9	868.7	867.8	866.9	865.9	865.0
10°	853.7	853.2	852.6	851.8	850.7	849.7	848.6	847.5
12.5°	837.3	836.4	835.4	834.0	832.2	830.4	828.6	826.8
15°	806.8	803.3	799.9	797.3	795.5	793.7	791.9	790.1
17.5°	772.1	768.0	764.0	760.4	757.3	754.2	751.1	748.1
20°	748.0	743.5	738.9	734.7	730.8	726.8	722.9	718.9
22.5°	721.4	715.7	709.9	705.5	702.5	699.6	696.6	693.7
25°	677.5	670.1	662.7	657.7	655.1	652.4	649.7	647.0
27.5°	635.6	627.0	618.5	612.0	607.7	603.4	599.1	594.8
30°	606.0	596.8	587.6	580.7	575.8	570.9	566.1	561.3
32.5°	576.2	565.8	555.3	547.8	543.2	538.7	534.1	529.6
35°	529.7	518.4	507.1	499.4	495.4	491.5	487.6	483.6
37.5°	484.3	471.9	459.5	450.9	446.4	441.9	437.4	432.8
40°	454.0	441.2	428.5	419.8	415.1	410.4	405.8	401.1
42.5°	423.4	410.2	397.0	388.2	383.7	379.1	374.6	370.0
45°	378.8	366.1	353.3	344.8	340.5	336.1	331.8	327.5
47.5°	335.5	322.8	310.1	301.8	297.9	294.0	290.0	286.1
50°	307.6	295.2	282.8	274.6	270.9	267.1	263.4	259.6
52.5°	281.3	269.3	257.3	249.6	246.1	242.6	239.2	235.7
55°	241.3	230.4	219.7	212.6	209.2	205.7	202.3	198.9
57.5°	204.9	195.0	185.1	178.7	175.9	173.0	170.1	167.2
60°	179.8	170.6	161.4	155.4	152.6	149.7	146.8	143.9
62.5°	158.0	149.2	140.5	135.3	133.6	131.9	130.2	128.4
65°	128.5	122.4	116.3	113.0	112.4	111.9	111.3	110.8
67.5°	103.7	100.9	98.2	96.4	95.9	95.3	94.7	94.1
70°	90.2	88.4	86.6	85.4	84.6	83.9	83.2	82.5
72.5°	78.5	77.0	75.5	74.5	74.1	73.7	73.2	72.8
75°	62.2	60.9	59.7	58.9	58.8	58.6	58.4	58.2
77.5°	47.1	46.3	45.6	45.2	44.8	44.6	44.3	44.0
80°	37.4	36.7	36.0	35.6	35.6	35.6	35.6	35.6
82.5°	28.3	27.8	27.4	27.2	27.2	27.2	27.2	27.2
85°	15.4	15.4	15.4	15.4	15.4	15.4	15.4	15.4
87.5°	7.4	7.4	7.4	7.4	7.4	7.5	7.5	7.6
90°	12.6	13.2	13.9	14.3	14.6	14.8	15.1	15.3
92.5°	13.8	14.1	14.4	14.7	14.8	15.0	15.1	15.3
95°	23.4	24.0	24.6	24.9	24.7	24.6	24.5	24.4
97.5°	30.6	31.1	31.6	31.9	32.1	32.2	32.4	32.6
100°	34.3	35.3	36.4	37.0	37.2	37.5	37.7	37.9
102.5°	35.8	37.2	38.4	39.3	39.6	40.0	40.3	40.7
105°	37.3	38.7	40.1	41.0	41.6	42.1	42.5	43.1
107.5°	45.6	44.1	42.8	42.3	42.8	43.3	43.8	44.3
110°	74.0	61.4	48.8	42.8	43.3	43.7	44.3	44.8





TEST NUMBER: P331690-927

CATALOG NUMBER: SA2XXRDIP-C675D725U927-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	158.3	112.3	66.4	43.6	44.0	44.4	44.8	45.2
115°	233.1	174.8	116.5	82.7	73.7	64.6	55.5	46.5
117.5°	359.1	344.9	330.8	308.9	279.1	249.3	219.5	189.7
120°	418.4	419.9	421.4	413.7	396.6	379.7	362.7	345.7
122.5°	443.9	444.8	445.8	444.6	441.2	437.9	434.7	431.3
125°	480.6	481.5	482.4	483.0	483.4	483.8	484.1	484.5
127.5°	514.5	515.8	517.1	517.8	517.8	517.9	518.0	518.1
130°	536.0	537.4	538.8	539.4	539.3	539.2	539.0	538.9
132.5°	556.9	558.1	559.3	559.8	559.7	559.6	559.4	559.3
135°	586.8	588.0	589.3	589.8	589.5	589.3	589.0	588.7
137.5°	614.5	615.7	617.0	617.3	617.0	616.5	616.1	615.6
140°	632.4	633.5	634.7	634.9	634.3	633.7	633.0	632.4
142.5°	649.0	650.0	651.0	651.3	650.6	650.0	649.4	648.7
145°	672.2	673.0	673.9	674.0	673.4	672.8	672.2	671.5
147.5°	692.3	693.0	693.6	693.7	693.2	692.6	692.1	691.6
150°	704.7	705.5	706.2	706.3	705.7	705.0	704.4	703.8
152.5°	716.1	716.8	717.6	717.6	716.8	715.9	715.1	714.2
155°	731.4	732.1	732.9	732.8	731.7	730.8	729.8	728.7
157.5°	744.3	745.1	746.0	745.9	745.0	743.9	743.0	742.0
160°	751.8	752.6	753.3	753.2	752.3	751.5	750.6	749.7
162.5°	758.8	759.6	760.5	760.4	759.3	758.2	757.2	756.1
165°	767.3	768.3	769.1	769.1	768.3	767.3	766.4	765.6
167.5°	774.5	775.4	776.3	776.1	775.0	773.9	772.7	771.6
170°	778.1	779.0	779.9	779.7	778.6	777.4	776.3	775.2
172.5°	780.9	781.7	782.6	782.4	781.3	780.2	779.0	777.9
175°	783.8	784.7	785.5	785.4	784.1	782.8	781.6	780.3
177.5°	784.1	784.8	785.5	785.4	784.5	783.6	782.7	781.8
180°	783.2	783.2	783.2	783.2	783.2	783.2	783.2	783.2

(END OF REPORT)