

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: P331396-935

Luminaire Tested: **SA2XXDIP-C865D725U935-4F0-1E-UDD-D**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P331396-935  
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-C865D725U935-4F0-1E-UDD-D  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 865 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 725 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

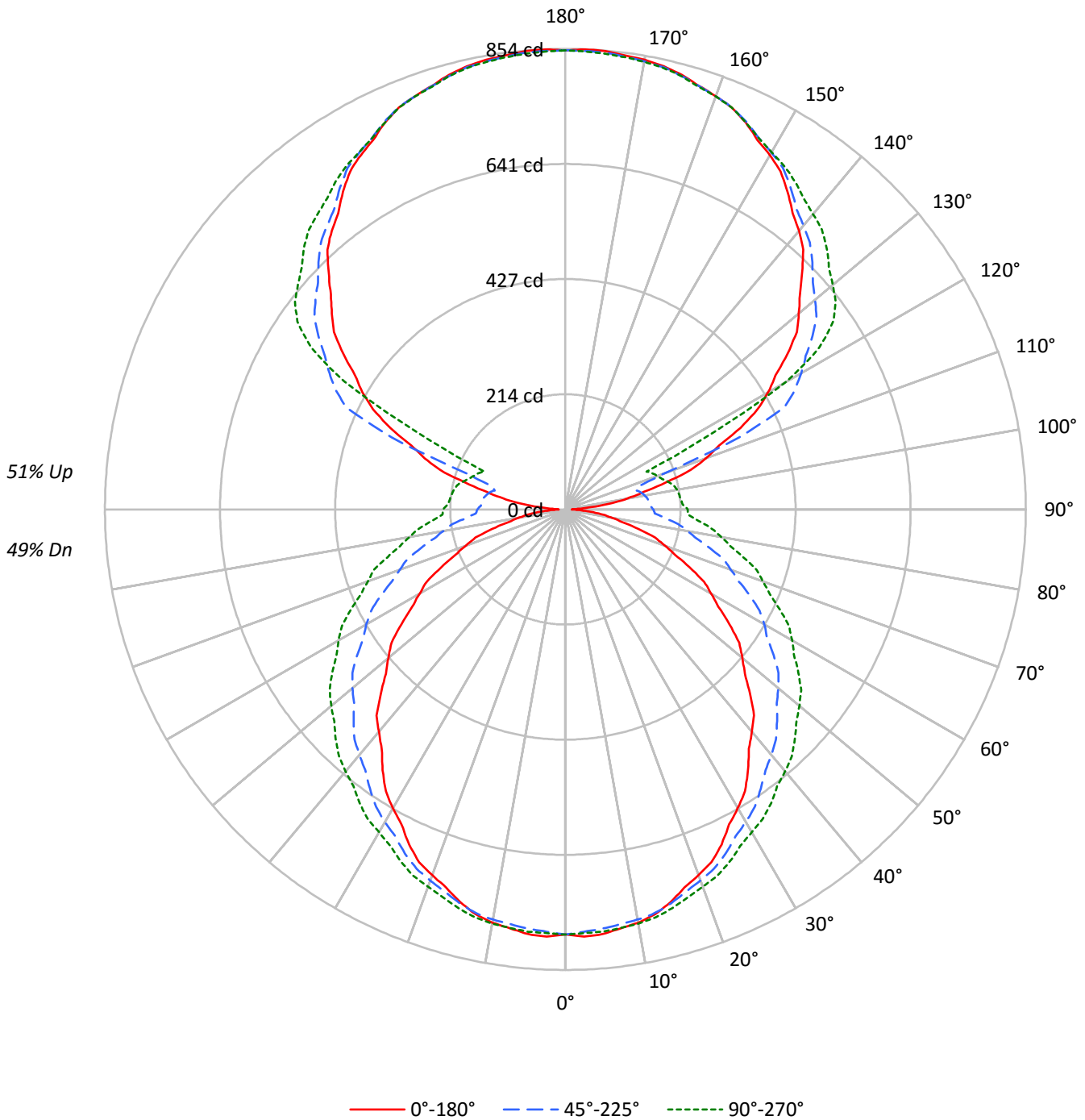
Lumens per Lamp: N/A  
Luminaire Lumens: 5504.0 lumens  
Efficiency: N/A  
Efficacy: 101.2 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')  
CIE Type: General Diffuse

Input Watts (W): 54.4  
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: P331396-935  
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### Luminous Intensity Polar Plot





TEST NUMBER: P331396-935

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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20									20									20									20									
RC	80									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	107	107	107	107	98	98	98	98	83	83	83	68	68	68	55	55	55	49																			
1	96	91	87	83	88	84	80	76	70	67	65	58	56	54	46	45	43	38																			
2	87	79	72	66	79	72	67	62	61	56	52	50	47	44	40	37	35	31																			
3	79	69	61	55	72	63	56	51	53	48	43	44	40	36	35	32	29	25																			
4	72	60	52	46	66	56	48	43	47	41	37	38	34	31	31	28	25	21																			
5	66	54	45	39	60	49	42	36	42	36	31	34	30	26	28	24	22	18																			
6	61	48	40	33	55	44	37	31	37	31	27	31	26	23	25	21	19	16																			
7	56	43	35	29	51	40	33	27	34	28	24	28	23	20	23	19	17	14																			
8	52	39	31	26	47	36	29	24	31	25	21	26	21	18	21	17	15	12																			
9	48	36	28	23	44	33	26	21	28	23	19	24	19	16	19	16	13	11																			
10	45	33	25	20	41	30	24	19	26	20	17	22	17	14	18	14	12	10																			

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

	0°	45°	90°
0°	12728	12728	12728
5°	12790	12252	12205
10°	12710	11890	11756
15°	12535	11506	11284
20°	12312	11097	10828
25°	12095	10701	10415
30°	11786	10293	10000
35°	11474	9900	9708
40°	11147	9566	9415
45°	10835	9267	9165
50°	10500	8995	8920
55°	10150	8703	8668
60°	9721	8403	8403
65°	9278	8047	8088
70°	8774	7666	7748
75°	8132	7293	7435
80°	7126	6912	7117
85°	6164	6582	6872



TEST NUMBER: P331396-935

CATALOG NUMBER: SA2XXDIP-C865D725U935-4F0-1E-UDD-D

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	74.7	1.4
10°-20°	214.2	3.9
20°-30°	324.6	5.9
30°-40°	395.4	7.2
40°-50°	425.3	7.7
50°-60°	413.1	7.5
60°-70°	360.7	6.6
70°-80°	277.7	5.0
80°-90°	188.4	3.4
90°-100°	156.8	2.8
100°-110°	197.9	3.6
110°-120°	340.2	6.2
120°-130°	494.0	9.0
130°-140°	503.1	9.1
140°-150°	456.7	8.3
150°-160°	365.1	6.6
160°-170°	235.3	4.3
170°-180°	81.0	1.5
0°-30°	613.5	11.1
0°-40°	1008.9	18.3
0°-60°	1847.2	33.6
0°-90°	2674.0	48.6
90°-120°	694.9	12.6
90°-150°	2148.6	39.0
90°-180°	2830.0	51.4
0°-180°	5504.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	788	788	788	788	788	
5°	791	787	780	787	786	75
15°	754	756	756	766	766	212
25°	686	694	704	717	721	315
35°	591	610	632	656	665	369
45°	484	516	555	589	602	374
55°	371	413	472	512	528	332
65°	254	310	377	422	439	252
75°	140	205	278	325	342	149
85°	41	112	185	231	249	44
90°	12	85	163	210	227	10
95°	49	85	155	200	215	56
105°	193	236	136	181	198	207
115°	359	384	449	210	166	353
125°	503	513	559	593	607	449
135°	621	631	648	676	686	480
145°	719	719	729	739	742	450
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: P331396-935  
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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	788.3	788.3	788.3	788.3	788.3	788.3	788.3	788.3	788.3	788.3	788.3
2.5°	792.9	792.3	791.7	791.1	790.5	789.5	788.0	786.6	785.1	783.8	784.8
5°	790.6	789.9	789.1	788.3	787.6	786.4	784.9	783.3	781.9	780.3	781.9
7.5°	783.5	783.0	782.5	782.0	781.5	780.7	779.5	778.3	777.1	776.0	777.8
10°	778.1	777.6	777.1	776.5	776.0	775.4	774.6	773.9	773.1	772.3	774.4
12.5°	768.9	769.0	769.1	769.2	769.3	769.0	768.5	767.9	767.4	766.8	768.9
15°	754.1	754.6	755.1	755.6	756.0	756.3	756.3	756.3	756.3	756.3	758.6
17.5°	734.9	735.9	737.0	738.0	739.1	740.0	740.9	741.7	742.5	743.3	745.7
20°	722.0	723.3	724.6	725.9	727.1	728.3	729.3	730.3	731.3	732.4	735.1
22.5°	708.3	709.8	711.3	712.7	714.2	715.7	717.1	718.5	720.0	721.3	724.2
25°	685.5	687.3	689.1	690.9	692.6	694.7	696.9	699.2	701.5	703.8	706.8
27.5°	658.1	661.0	663.8	666.8	669.7	672.4	675.1	677.9	680.5	683.2	687.1
30°	639.8	643.1	646.4	649.7	653.0	656.3	659.6	662.9	666.2	669.5	673.6
32.5°	619.7	623.4	627.1	630.9	634.6	638.3	642.2	646.2	650.1	653.9	658.7
35°	590.6	595.0	599.3	603.6	608.0	612.5	617.3	622.2	627.0	631.8	637.4
37.5°	559.1	564.1	569.1	574.0	579.0	584.6	590.9	597.2	603.4	609.7	615.9
40°	538.1	543.7	549.3	554.9	560.4	566.7	573.5	580.4	587.3	594.1	600.7
42.5°	518.0	523.6	529.2	534.8	540.4	547.1	554.9	562.8	570.7	578.6	585.7
45°	484.4	491.3	498.1	505.0	511.9	519.7	528.6	537.5	546.4	555.3	563.1
47.5°	451.3	458.7	466.2	473.7	481.1	490.1	500.5	510.9	521.3	531.8	539.9
50°	428.4	436.3	444.2	452.0	459.9	469.6	481.0	492.4	503.9	515.3	523.9
52.5°	406.5	414.7	423.1	431.4	439.6	449.8	461.8	473.8	485.9	497.9	506.7
55°	371.3	380.5	389.6	398.7	407.9	419.0	432.2	445.5	458.7	471.8	481.0
57.5°	336.6	346.9	357.2	367.5	377.8	389.7	403.1	416.6	430.1	443.5	453.4
60°	311.9	322.8	333.7	344.7	355.6	368.2	382.7	397.2	411.6	426.2	435.8
62.5°	290.0	301.3	312.6	323.9	335.3	348.2	362.7	377.1	391.6	406.0	416.3
65°	253.7	266.0	278.5	290.9	303.4	317.1	332.1	347.1	362.1	377.0	387.4
67.5°	220.2	233.2	246.2	259.2	272.2	286.5	301.8	317.1	332.4	347.8	358.3
70°	196.5	209.7	222.9	236.1	249.3	263.8	279.6	295.2	311.0	326.7	337.7
72.5°	174.6	188.2	201.8	215.4	229.0	243.7	259.8	275.7	291.6	307.5	318.3
75°	140.5	154.7	168.9	183.2	197.4	212.7	228.9	245.1	261.4	277.6	288.5
77.5°	107.6	122.5	137.4	152.2	167.1	182.8	199.3	215.9	232.3	248.8	259.7
80°	85.7	101.2	116.7	132.2	147.7	163.6	180.1	196.7	213.1	229.6	240.3
82.5°	67.4	82.7	98.0	113.2	128.5	144.6	161.3	178.0	194.7	211.4	222.1
85°	41.2	56.9	72.6	88.3	104.1	120.1	136.3	152.6	168.8	185.1	195.8
87.5°	22.6	38.0	53.4	68.8	84.2	100.2	116.7	133.1	149.6	166.1	176.6
90°	12.1	28.2	44.5	60.7	77.0	93.8	111.1	128.5	145.8	163.2	174.0
92.5°	23.0	36.5	50.1	63.7	77.2	92.1	108.3	124.5	140.7	156.9	167.2
95°	49.2	56.6	64.0	71.5	78.9	90.7	106.9	123.0	139.2	155.4	165.7
97.5°	87.5	85.3	83.3	81.1	79.0	86.4	103.1	120.0	136.9	153.7	163.7
100°	117.0	107.6	98.3	88.9	79.6	83.2	99.7	116.2	132.9	149.4	159.9
102.5°	148.6	153.3	157.8	162.5	167.0	166.5	160.9	155.2	149.6	144.0	154.5
105°	193.0	204.4	215.9	227.4	238.8	232.5	208.3	184.2	160.0	135.9	146.2
107.5°	244.8	254.0	263.2	272.4	281.6	270.2	238.0	205.8	173.7	141.5	148.5
110°	277.4	285.3	293.3	301.3	309.2	299.6	272.5	245.4	218.3	191.2	185.6



TEST NUMBER: P331396-935

CATALOG NUMBER: SA2XXDIP-C865D725U935-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	308.9	315.7	322.5	329.4	336.2	340.6	342.7	344.7	346.8	348.9	307.0
115°	358.7	363.9	368.9	374.1	379.2	389.2	404.0	418.9	433.7	448.6	392.8
117.5°	402.0	406.5	410.9	415.3	419.7	428.4	441.3	454.3	467.2	480.1	472.3
120°	434.5	437.6	440.7	443.8	446.9	454.7	467.3	479.9	492.5	505.1	513.9
122.5°	462.2	464.7	467.3	469.8	472.4	479.8	492.1	504.3	516.5	528.7	536.7
125°	503.0	504.8	506.6	508.3	510.1	516.3	527.1	537.9	548.5	559.3	567.1
127.5°	541.1	542.8	544.5	546.2	547.9	553.0	561.5	570.1	578.5	587.0	594.7
130°	565.2	567.1	569.1	571.0	573.0	577.4	584.2	591.0	597.9	604.7	612.3
132.5°	589.9	591.4	593.1	594.7	596.3	599.9	605.5	611.1	616.7	622.3	629.6
135°	620.8	622.9	625.1	627.3	629.5	632.5	636.3	640.0	643.8	647.6	654.3
137.5°	653.2	654.6	656.1	657.5	659.1	661.1	663.6	666.1	668.6	671.1	677.1
140°	674.3	675.2	676.0	676.8	677.7	679.2	681.1	683.1	685.2	687.2	692.5
142.5°	692.1	692.8	693.5	694.2	695.0	696.3	698.1	699.9	701.7	703.6	707.9
145°	718.8	718.6	718.5	718.3	718.2	719.3	721.6	723.9	726.3	728.6	731.1
147.5°	743.0	742.5	742.0	741.5	741.0	741.8	744.2	746.4	748.7	751.1	751.9
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: P331396-935

CATALOG NUMBER: SA2XXDIP-C865D725U935-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	788.3	788.3	788.3	788.3	788.3	788.3	788.3	788.3
2.5°	785.7	786.8	787.8	788.2	787.7	787.3	786.9	786.5
5°	783.3	784.9	786.4	787.0	786.8	786.5	786.3	786.0
7.5°	779.6	781.4	783.3	784.1	783.9	783.6	783.3	783.1
10°	776.4	778.4	780.5	781.4	781.1	780.8	780.6	780.3
12.5°	770.9	772.9	775.0	775.8	775.6	775.3	775.1	774.8
15°	760.9	763.2	765.5	766.5	766.2	765.9	765.7	765.5
17.5°	748.1	750.4	752.9	754.1	754.1	754.1	754.1	754.1
20°	738.0	740.7	743.5	744.9	744.9	744.9	744.9	744.9
22.5°	726.9	729.8	732.5	734.2	734.5	734.9	735.4	735.8
25°	709.9	712.9	716.0	717.9	718.6	719.4	720.1	720.9
27.5°	691.0	694.8	698.6	700.9	701.5	702.0	702.6	703.1
30°	677.6	681.7	685.8	688.2	688.9	689.7	690.4	691.2
32.5°	663.3	668.0	672.6	675.7	677.0	678.4	679.8	681.1
35°	643.0	648.6	654.2	657.8	659.6	661.4	663.1	665.0
37.5°	622.0	628.2	634.4	638.4	640.3	642.2	644.1	646.0
40°	607.3	613.9	620.5	624.9	627.2	629.5	631.8	634.1
42.5°	593.0	600.2	607.4	612.2	614.4	616.7	619.0	621.3
45°	571.0	578.9	586.8	591.9	594.5	597.0	599.6	602.1
47.5°	548.2	556.4	564.6	570.2	572.9	575.8	578.5	581.3
50°	532.5	541.1	549.8	555.5	558.3	561.1	563.9	566.7
52.5°	515.6	524.4	533.2	539.2	542.2	545.2	548.1	551.1
55°	490.2	499.3	508.4	514.6	517.9	521.2	524.5	527.8
57.5°	463.2	473.0	482.9	489.6	492.8	496.2	499.6	502.9
60°	445.5	455.1	464.8	471.3	474.9	478.5	482.0	485.6
62.5°	426.5	436.8	447.0	453.9	457.2	460.5	463.9	467.3
65°	397.9	408.3	418.7	425.5	428.8	432.1	435.4	438.7
67.5°	368.8	379.3	389.9	396.8	400.3	403.7	407.2	410.6
70°	348.6	359.5	370.4	377.4	380.5	383.5	386.6	389.6
72.5°	329.0	339.7	350.4	357.6	361.3	364.9	368.6	372.2
75°	299.5	310.4	321.3	328.4	331.7	335.0	338.3	341.6
77.5°	270.6	281.5	292.3	299.5	303.1	306.6	310.2	313.7
80°	251.0	261.7	272.3	279.4	282.9	286.5	290.1	293.6
82.5°	232.7	243.3	254.0	261.1	264.4	267.7	271.0	274.4
85°	206.4	217.1	227.7	234.9	238.4	241.9	245.5	249.1
87.5°	187.1	197.5	208.0	215.0	218.3	221.5	224.9	228.2
90°	184.8	195.6	206.5	213.5	216.9	220.2	223.5	226.9
92.5°	177.5	187.8	198.1	204.8	208.1	211.3	214.5	217.7
95°	176.1	186.4	196.7	203.4	206.3	209.1	212.1	215.0
97.5°	173.6	183.6	193.5	200.0	203.2	206.4	209.5	212.7
100°	170.3	180.8	191.3	198.1	201.1	204.2	207.3	210.3
102.5°	165.1	175.8	186.4	193.3	196.5	199.7	202.9	206.0
105°	156.6	167.0	177.4	184.3	187.6	191.0	194.2	197.6
107.5°	155.5	162.5	169.4	174.6	178.0	181.3	184.7	188.0
110°	180.0	174.5	168.9	167.8	171.2	174.5	177.9	181.2





TEST NUMBER: P331396-935

CATALOG NUMBER: SA2XXDIP-C865D725U935-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	265.3	223.4	181.7	162.4	165.6	168.8	172.0	175.3
115°	337.1	281.3	225.6	194.2	187.1	180.0	173.0	165.9
117.5°	464.4	456.7	448.8	430.1	400.3	370.4	340.6	310.8
120°	522.6	531.4	540.2	536.7	521.0	505.3	489.7	474.0
122.5°	544.5	552.4	560.3	563.6	562.5	561.3	560.1	558.9
125°	574.9	582.7	590.6	595.8	598.5	601.2	603.9	606.6
127.5°	602.4	610.1	617.8	622.8	625.1	627.4	629.7	632.1
130°	619.9	627.5	635.1	639.8	641.7	643.6	645.5	647.4
132.5°	636.7	643.9	651.1	655.7	657.5	659.4	661.3	663.2
135°	661.0	667.7	674.3	678.6	680.4	682.1	683.9	685.6
137.5°	683.1	689.1	695.2	698.8	700.1	701.3	702.6	703.9
140°	697.8	703.1	708.3	711.4	712.2	713.1	713.9	714.8
142.5°	712.3	716.7	721.1	723.6	724.2	724.9	725.5	726.1
145°	733.6	736.1	738.6	740.0	740.6	741.2	741.8	742.4
147.5°	752.9	753.8	754.7	755.2	755.2	755.3	755.3	755.3
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)