

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: P331968-927

Luminaire Tested: **S123DIP-S775D585U927-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331968-927  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-9,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S123DIP-S775D585U927-4F0-1E-UDD-D1  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 775 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 585 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

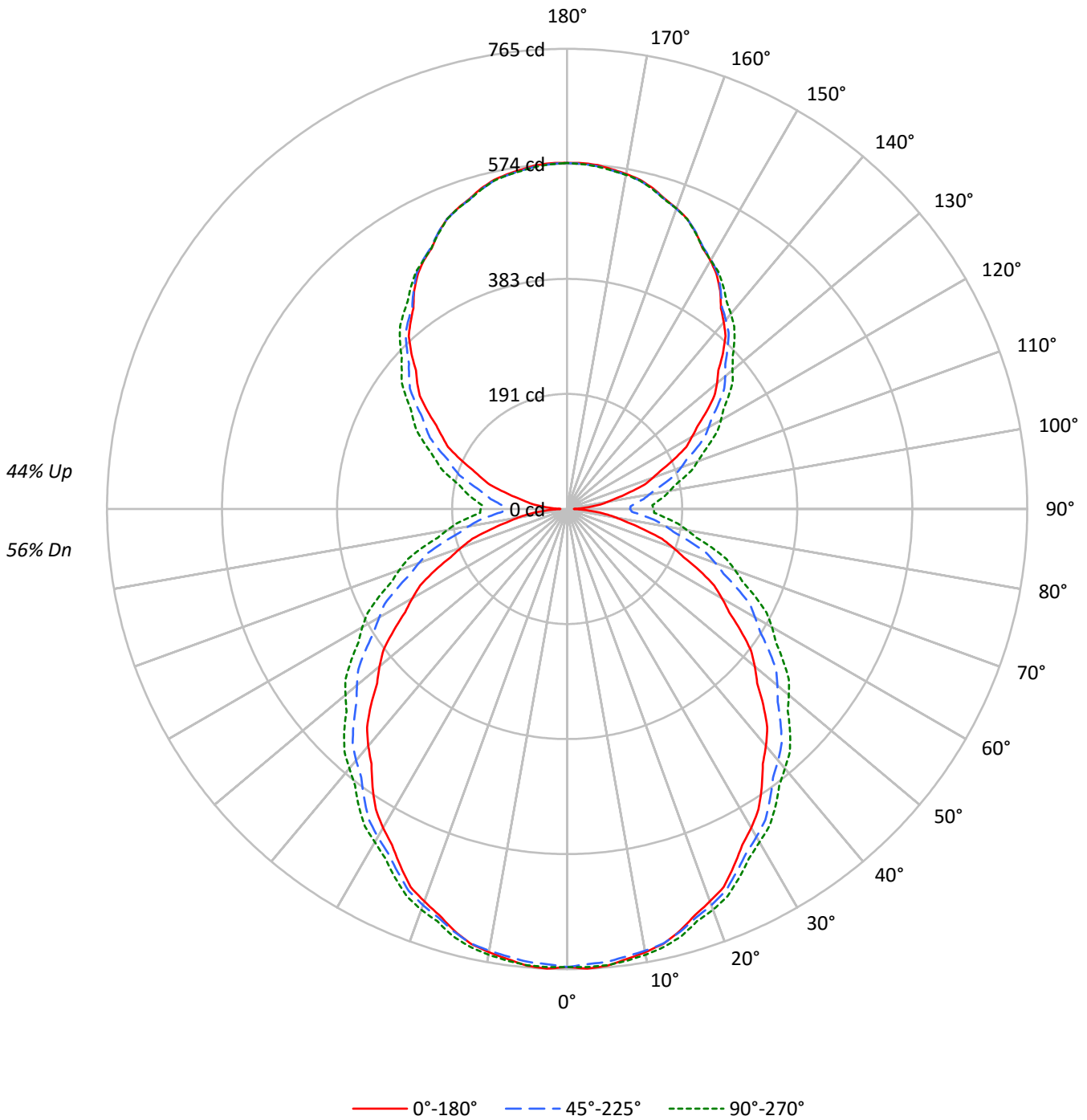
Lumens per Lamp: N/A  
Luminaire Lumens: 4154.2 lumens  
Efficiency: N/A  
Efficacy: 103.1 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37  
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')  
CIE Type: General Diffuse  
  
Input Watts (W): 40.3  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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: P331968-927

CATALOG NUMBER: S123DIP-S775D585U927-4F0-1E-UDD-D1

### Luminous Intensity Polar Plot





TEST NUMBER: P331968-927

CATALOG NUMBER: S123DIP-S775D585U927-4F0-1E-UDD-D1

**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	109	109	109	109	101	101	101	101	87	87	87	74	74	74	62	62	62	56
1	98	93	89	85	91	87	83	79	74	72	69	63	61	59	53	51	50	45
2	89	81	74	68	82	75	69	64	65	60	56	55	52	49	46	43	41	37
3	81	71	63	56	75	66	59	53	57	51	47	48	44	41	40	37	35	31
4	74	62	54	47	68	58	51	45	50	44	40	43	38	34	36	32	30	26
5	68	55	47	40	62	52	44	38	45	39	34	38	33	30	32	28	26	22
6	62	50	41	35	58	46	39	33	40	34	29	34	30	26	29	25	22	19
7	57	45	36	31	53	42	34	29	36	30	26	31	26	23	27	23	20	17
8	53	41	33	27	49	38	31	26	33	27	23	29	24	20	24	21	18	15
9	50	37	29	24	46	35	28	23	30	25	20	26	22	18	22	19	16	14
10	46	34	26	22	43	32	25	20	28	22	18	24	20	16	21	17	14	12

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

	0°	45°	90°
0°	8196	8196	8196
5°	8222	7990	7994
10°	8148	7806	7766
15°	8043	7597	7518
20°	7893	7358	7245
25°	7708	7084	6957
30°	7517	6836	6666
35°	7305	6575	6434
40°	7102	6337	6184
45°	6877	6109	5986
50°	6655	5883	5766
55°	6409	5652	5569
60°	6171	5417	5366
65°	5924	5168	5126
70°	5555	4887	4879
75°	5090	4566	4628
80°	4551	4249	4341
85°	4050	4032	4175



TEST NUMBER: P331968-927

CATALOG NUMBER: S123DIP-S775D585U927-4F0-1E-UDD-D1

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	72.2	1.7
10°-20°	205.8	5.0
20°-30°	307.8	7.4
30°-40°	367.5	8.8
40°-50°	384.5	9.3
50°-60°	360.9	8.7
60°-70°	301.4	7.3
70°-80°	215.6	5.2
80°-90°	130.3	3.1
90°-100°	118.2	2.8
100°-110°	171.5	4.1
110°-120°	230.4	5.5
120°-130°	273.6	6.6
130°-140°	292.2	7.0
140°-150°	279.4	6.7
150°-160°	233.4	5.6
160°-170°	155.4	3.7
170°-180°	54.4	1.3
0°-30°	585.7	14.1
0°-40°	953.3	22.9
0°-60°	1698.6	40.9
0°-90°	2346.0	56.5
90°-120°	520.0	12.5
90°-150°	1365.1	32.9
90°-180°	1808.0	43.5
0°-180°	4154.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	761	761	761	761	761	
5°	762	760	756	762	761	72
15°	726	728	728	735	735	204
25°	655	663	666	676	677	302
35°	564	577	588	600	604	353
45°	461	481	502	517	524	356
55°	352	379	409	430	438	315
65°	243	276	312	336	345	240
75°	132	171	212	239	250	141
85°	41	82	126	153	163	43
90°	11	57	105	133	144	9
95°	36	72	116	142	151	37
105°	108	130	169	191	200	116
115°	196	208	236	256	263	194
125°	284	286	308	323	328	253
135°	366	369	377	389	393	282
145°	443	443	445	451	452	277
155°	506	507	507	508	506	233
165°	552	550	550	553	550	155
175°	574	572	572	574	572	54
180°	575	575	575	575	575	



TEST NUMBER: P331968-927

CATALOG NUMBER: S123DIP-S775D585U927-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	761.4	761.4	761.4	761.4	761.4	761.4	761.4	761.4	761.4	761.4	761.4
2.5°	764.8	764.3	763.9	763.4	763.0	762.2	761.0	759.9	758.7	757.5	758.7
5°	762.3	761.9	761.5	761.2	760.8	760.1	759.0	757.9	756.8	755.7	757.2
7.5°	754.8	754.9	754.9	755.0	755.1	754.6	753.5	752.5	751.4	750.4	752.2
10°	748.2	748.5	748.9	749.3	749.6	749.4	748.5	747.6	746.6	745.7	747.6
12.5°	740.2	740.8	741.2	741.8	742.3	742.3	741.6	741.0	740.4	739.7	741.4
15°	725.8	726.4	726.9	727.5	728.0	728.2	728.0	727.9	727.6	727.5	729.3
17.5°	707.6	708.7	709.8	710.8	711.9	712.5	712.4	712.3	712.3	712.2	713.8
20°	694.3	695.4	696.5	697.6	698.7	699.4	699.8	700.2	700.5	700.9	702.6
22.5°	680.3	681.4	682.5	683.7	684.8	685.6	686.1	686.6	687.1	687.6	689.8
25°	655.3	657.1	658.9	660.8	662.7	663.8	664.4	665.0	665.5	666.1	668.4
27.5°	630.1	632.2	634.3	636.4	638.5	640.1	641.3	642.5	643.6	644.8	646.9
30°	612.1	614.6	617.0	619.3	621.7	623.7	625.1	626.6	628.1	629.5	631.8
32.5°	592.2	594.9	597.6	600.3	603.0	605.3	607.2	609.2	611.1	613.0	615.4
35°	564.0	567.0	570.0	572.9	575.8	578.5	580.9	583.3	585.7	588.1	590.9
37.5°	534.2	537.5	540.8	544.2	547.5	550.6	553.6	556.5	559.4	562.4	565.5
40°	514.3	517.6	520.9	524.3	527.5	531.1	534.7	538.4	542.1	545.8	548.9
42.5°	492.3	496.5	500.5	504.5	508.6	512.5	516.3	520.2	524.0	527.9	531.3
45°	461.2	465.6	470.0	474.4	478.9	483.4	488.0	492.6	497.3	501.8	505.3
47.5°	428.5	433.6	438.6	443.5	448.5	453.7	459.0	464.2	469.5	474.8	478.7
50°	407.3	412.4	417.6	422.8	427.9	433.3	439.1	444.8	450.5	456.2	460.4
52.5°	384.7	390.1	395.6	401.1	406.5	412.4	418.7	425.0	431.3	437.6	442.0
55°	351.7	357.7	363.8	369.9	376.0	382.4	389.0	395.7	402.3	408.9	413.9
57.5°	319.5	325.8	332.2	338.5	344.9	351.6	358.9	366.2	373.4	380.7	385.7
60°	297.0	303.6	310.2	316.9	323.5	330.6	338.2	345.7	353.2	360.8	366.0
62.5°	275.7	282.5	289.3	296.0	302.9	310.2	318.2	326.2	334.2	342.2	347.4
65°	243.0	250.3	257.4	264.6	271.8	279.4	287.6	295.6	303.8	311.9	317.4
67.5°	209.8	217.5	225.1	232.7	240.3	248.3	256.6	264.8	273.1	281.4	287.4
70°	186.6	194.6	202.5	210.4	218.3	226.7	235.6	244.4	253.3	262.1	268.0
72.5°	165.4	173.3	181.3	189.2	197.1	205.7	214.8	223.9	233.1	242.2	248.3
75°	131.9	140.5	149.2	157.9	166.5	175.5	184.7	193.9	203.1	212.4	218.4
77.5°	102.7	111.5	120.2	128.9	137.6	146.6	156.0	165.2	174.5	183.8	190.2
80°	82.1	91.2	100.2	109.2	118.3	127.5	137.1	146.7	156.3	165.9	172.1
82.5°	64.2	73.4	82.5	91.7	100.9	110.4	120.1	129.8	139.6	149.3	155.6
85°	40.6	49.8	59.1	68.3	77.5	87.0	96.8	106.5	116.3	126.1	132.4
87.5°	22.2	31.5	40.9	50.3	59.7	69.2	78.8	88.5	98.2	107.8	114.2
90°	11.2	21.3	31.3	41.4	51.4	61.8	72.5	83.2	93.9	104.6	111.2
92.5°	21.1	29.9	38.7	47.5	56.4	65.8	75.8	85.8	95.8	105.8	112.3
95°	35.8	43.6	51.6	59.5	67.3	76.2	86.0	95.9	105.8	115.6	121.7
97.5°	55.5	62.5	69.5	76.5	83.5	91.7	100.8	110.0	119.2	128.5	134.4
100°	68.9	75.4	81.9	88.4	94.9	102.7	111.6	120.6	129.6	138.6	144.3
102.5°	84.5	90.2	95.9	101.6	107.2	114.5	123.5	132.5	141.5	150.5	156.0
105°	108.3	113.0	117.6	122.2	126.8	133.6	142.4	151.2	160.0	168.8	174.0
107.5°	135.1	139.0	142.9	146.8	150.7	156.5	164.5	172.3	180.2	188.1	193.4
110°	151.9	155.3	158.8	162.4	165.9	171.4	179.0	186.6	194.2	201.8	206.9



TEST NUMBER: P331968-927

CATALOG NUMBER: S123DIP-S775D585U927-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	169.9	172.8	175.6	178.5	181.3	186.2	193.4	200.5	207.6	214.8	219.9
115°	196.2	198.7	201.2	203.7	206.2	210.7	217.1	223.6	230.0	236.5	241.0
117.5°	223.3	224.9	226.4	228.0	229.6	233.4	239.3	245.3	251.3	257.2	261.6
120°	239.6	241.1	242.7	244.2	245.7	249.3	254.8	260.5	266.0	271.6	275.8
122.5°	257.4	258.3	259.2	260.2	261.0	264.3	269.8	275.3	280.8	286.4	290.2
125°	283.5	283.8	284.2	284.5	284.7	287.5	292.6	297.8	302.9	308.1	311.5
127.5°	308.5	309.0	309.4	309.8	310.3	312.7	316.9	321.1	325.3	329.5	332.6
130°	325.1	325.7	326.4	326.9	327.6	329.6	333.0	336.4	339.8	343.1	346.3
132.5°	341.1	341.8	342.6	343.4	344.1	345.9	348.6	351.3	354.1	356.8	359.7
135°	366.3	366.7	367.2	367.6	368.0	369.2	371.1	373.0	374.9	376.8	379.8
137.5°	389.7	390.0	390.3	390.7	391.0	392.0	393.3	394.7	396.2	397.5	400.1
140°	405.2	405.8	406.2	406.7	407.3	407.8	408.4	409.2	409.8	410.4	413.1
142.5°	420.1	420.4	420.8	421.1	421.4	421.8	422.1	422.4	422.7	422.9	425.3
145°	443.2	443.2	443.2	443.2	443.2	443.4	443.7	444.0	444.3	444.7	446.0
147.5°	462.6	463.0	463.3	463.7	464.1	464.4	464.7	464.9	465.2	465.5	466.0
150°	476.7	476.9	477.1	477.3	477.5	477.7	477.9	478.1	478.3	478.5	478.5
152.5°	488.3	488.5	488.9	489.1	489.4	489.6	489.7	489.8	490.0	490.0	490.2
155°	506.5	506.5	506.5	506.5	506.5	506.6	506.7	506.8	506.9	507.0	507.4
157.5°	522.0	522.0	521.8	521.7	521.6	521.6	521.7	521.7	521.8	521.9	522.3
160°	531.8	531.6	531.4	531.2	531.0	530.9	530.9	530.9	530.9	530.9	531.4
162.5°	540.5	540.2	540.0	539.6	539.4	539.3	539.4	539.5	539.6	539.6	540.1
165°	551.7	551.4	551.1	550.8	550.5	550.3	550.3	550.3	550.3	550.3	551.0
167.5°	560.6	560.2	559.8	559.4	559.0	558.9	559.0	559.0	559.1	559.2	559.8
170°	565.7	565.3	564.9	564.5	564.1	563.9	563.9	563.9	563.9	563.9	564.6
172.5°	569.7	569.3	568.9	568.5	568.1	567.9	567.9	567.9	567.9	567.9	568.5
175°	573.9	573.5	573.1	572.7	572.3	572.0	572.0	572.0	572.0	572.0	572.7
177.5°	575.6	575.3	575.0	574.6	574.3	574.1	574.1	574.1	574.1	574.1	574.6
180°	575.2	575.2	575.2	575.2	575.2	575.2	575.2	575.2	575.2	575.2	575.2



TEST NUMBER: P331968-927

CATALOG NUMBER: S123DIP-S775D585U927-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	761.4	761.4	761.4	761.4	761.4	761.4	761.4	761.4
2.5°	759.9	761.0	762.2	762.7	762.6	762.4	762.2	762.2
5°	758.6	760.1	761.5	762.2	762.0	761.8	761.7	761.4
7.5°	754.0	755.9	757.7	758.5	758.3	758.1	757.9	757.6
10°	749.4	751.2	753.0	753.8	753.4	753.0	752.7	752.3
12.5°	743.1	744.8	746.5	747.2	746.8	746.5	746.1	745.7
15°	731.1	733.0	734.8	735.6	735.5	735.3	735.1	734.9
17.5°	715.5	717.2	718.8	719.5	719.3	719.0	718.7	718.5
20°	704.3	705.9	707.6	708.4	708.7	708.8	709.0	709.2
22.5°	691.8	694.0	696.0	697.0	697.0	696.8	696.7	696.6
25°	670.9	673.3	675.7	676.8	676.8	676.8	676.8	676.8
27.5°	649.0	651.0	653.1	654.2	654.3	654.5	654.7	654.8
30°	634.0	636.2	638.4	639.5	639.5	639.5	639.5	639.5
32.5°	617.7	620.0	622.4	623.8	624.2	624.7	625.1	625.6
35°	593.7	596.4	599.1	600.9	601.7	602.4	603.1	603.9
37.5°	568.6	571.8	574.9	576.8	577.3	578.0	578.5	579.2
40°	552.1	555.2	558.3	560.2	561.0	561.7	562.4	563.2
42.5°	534.7	538.1	541.6	543.8	544.9	545.9	546.9	548.0
45°	508.8	512.3	515.9	518.3	519.8	521.3	522.8	524.3
47.5°	482.7	486.6	490.6	493.1	494.2	495.4	496.5	497.6
50°	464.7	468.9	473.2	475.9	477.2	478.5	479.8	481.1
52.5°	446.4	450.8	455.2	458.2	459.8	461.4	463.0	464.5
55°	418.9	423.9	428.8	432.1	433.6	435.0	436.5	438.0
57.5°	390.8	395.8	400.8	404.2	405.9	407.7	409.3	411.1
60°	371.1	376.3	381.4	385.1	387.1	389.1	391.2	393.2
62.5°	352.6	357.7	362.9	366.4	368.3	370.2	372.1	373.9
65°	323.0	328.4	334.0	337.7	339.5	341.4	343.3	345.1
67.5°	293.4	299.5	305.5	309.3	310.9	312.4	314.0	315.5
70°	273.9	279.8	285.7	289.5	291.4	293.3	295.1	297.0
72.5°	254.3	260.3	266.4	270.4	272.2	274.0	275.8	277.7
75°	224.5	230.6	236.7	240.8	243.0	245.3	247.5	249.7
77.5°	196.6	203.0	209.5	213.5	215.2	216.9	218.6	220.3
80°	178.4	184.7	191.0	195.0	196.9	198.7	200.6	202.4
82.5°	161.8	168.1	174.4	178.4	180.3	182.1	183.9	185.8
85°	138.6	144.9	151.1	155.2	157.0	158.9	160.7	162.6
87.5°	120.6	126.9	133.2	137.4	139.3	141.1	143.0	144.9
90°	117.9	124.6	131.3	135.6	137.7	139.7	141.7	143.8
92.5°	118.7	125.1	131.5	135.5	137.1	138.7	140.3	141.9
95°	127.8	133.9	140.1	144.0	145.8	147.7	149.6	151.4
97.5°	140.4	146.3	152.3	156.1	158.0	159.8	161.6	163.3
100°	149.9	155.5	161.2	165.0	167.1	169.1	171.2	173.2
102.5°	161.5	167.0	172.5	176.2	177.9	179.7	181.6	183.4
105°	179.2	184.3	189.5	193.0	194.9	196.7	198.6	200.4
107.5°	198.6	203.8	209.1	212.5	214.0	215.5	217.0	218.5
110°	212.1	217.3	222.5	225.8	227.0	228.3	229.6	230.8





TEST NUMBER: P331968-927

CATALOG NUMBER: S123DIP-S775D585U927-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	225.0	230.1	235.3	238.6	240.2	241.8	243.4	244.9
115°	245.5	250.0	254.5	257.5	258.9	260.2	261.7	263.0
117.5°	265.9	270.3	274.6	277.4	278.6	279.7	280.9	282.1
120°	279.9	284.0	288.2	290.8	291.8	292.9	294.1	295.2
122.5°	294.1	297.9	301.7	304.1	305.1	306.1	307.1	308.2
125°	315.0	318.5	321.9	324.1	325.0	325.9	326.8	327.6
127.5°	335.6	338.7	341.8	343.7	344.5	345.3	346.1	346.9
130°	349.4	352.4	355.5	357.3	357.7	358.1	358.5	358.9
132.5°	362.6	365.4	368.3	370.1	370.8	371.5	372.2	373.0
135°	382.7	385.6	388.5	390.3	391.1	391.8	392.5	393.2
137.5°	402.5	405.0	407.5	409.0	409.6	410.1	410.7	411.2
140°	415.7	418.4	421.1	422.6	422.8	422.9	423.2	423.4
142.5°	427.7	430.1	432.5	433.8	434.2	434.6	435.0	435.3
145°	447.3	448.8	450.1	451.0	451.3	451.6	452.0	452.3
147.5°	466.4	466.8	467.3	467.5	467.5	467.6	467.7	467.8
150°	478.5	478.5	478.5	478.4	478.2	477.9	477.7	477.4
152.5°	490.4	490.6	490.8	490.6	490.1	489.6	489.3	488.8
155°	507.8	508.2	508.6	508.4	507.7	507.0	506.4	505.6
157.5°	522.8	523.2	523.6	523.5	522.9	522.4	521.8	521.3
160°	532.0	532.4	532.9	533.0	532.6	532.2	531.8	531.4
162.5°	540.6	541.1	541.6	541.5	540.9	540.3	539.6	539.0
165°	551.6	552.2	552.8	552.7	552.0	551.3	550.6	549.9
167.5°	560.5	561.1	561.7	561.7	561.1	560.5	559.8	559.2
170°	565.3	566.0	566.7	566.7	566.0	565.3	564.6	563.9
172.5°	569.1	569.7	570.4	570.4	569.7	568.9	568.2	567.5
175°	573.2	573.9	574.5	574.4	573.7	573.0	572.3	571.6
177.5°	575.1	575.6	576.1	576.0	575.4	574.9	574.3	573.8
180°	575.2	575.2	575.2	575.2	575.2	575.2	575.2	575.2

(END OF REPORT)