

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: P331922-935

Luminaire Tested: **S123DIP-S560D585U935-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331922-935
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-5,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S560D585U935-4F0-1E-UDD-D
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 560 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 585 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4052.1 lumens
Efficiency: N/A
Efficacy: 123.5 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

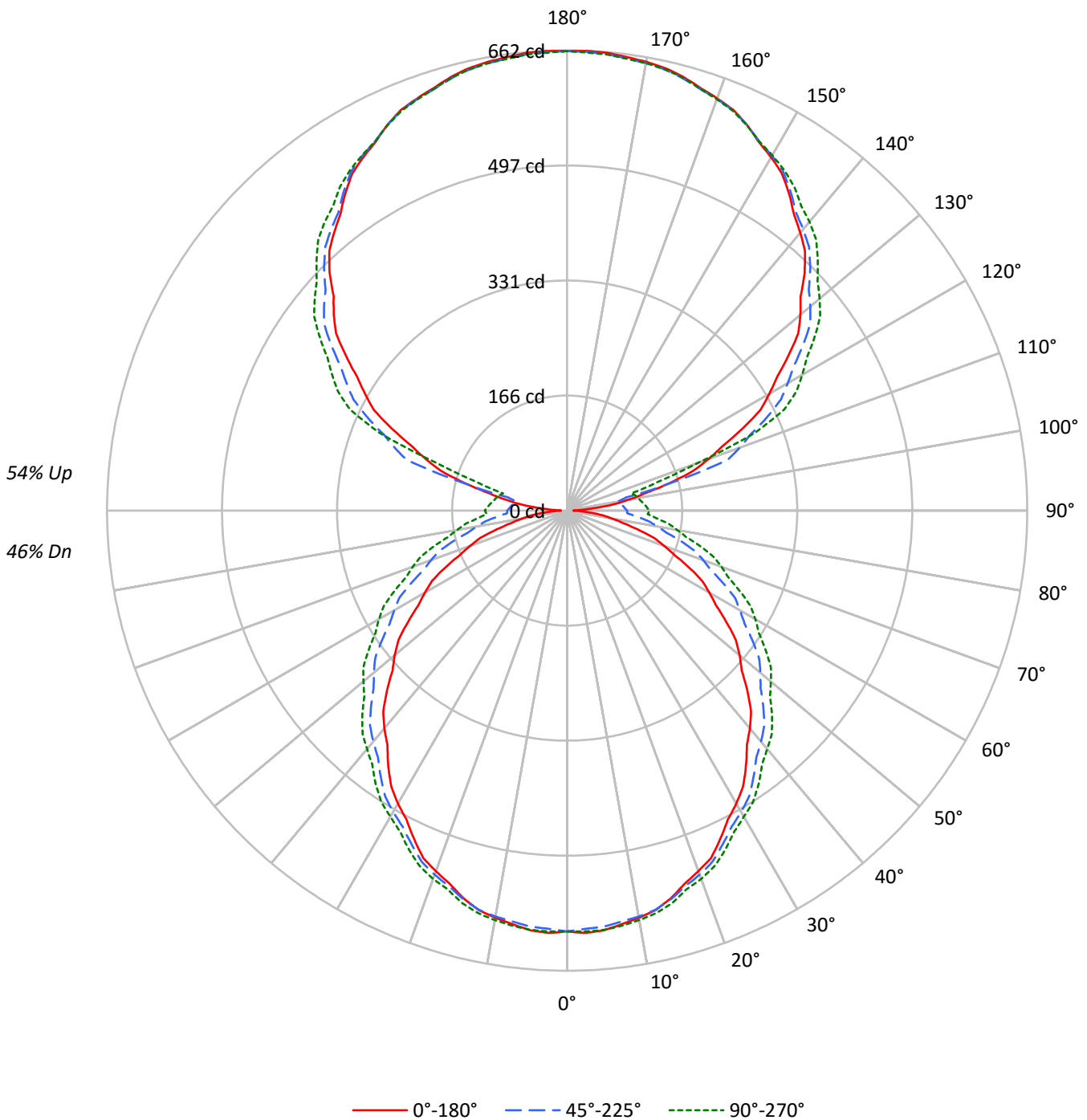
Input Watts (W): 32.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331922-935

CATALOG NUMBER: S123DIP-S560D585U935-4F0-1E-UDD-D

Luminous Intensity Polar Plot





TEST NUMBER: P331922-935

CATALOG NUMBER: S123DIP-S560D585U935-4F0-1E-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	106	106	106	106	97	97	97	97	81	81	81	66	66	66	52	52	52	46
1	96	91	87	83	88	84	80	77	70	67	65	57	55	53	45	44	42	37
2	87	79	73	67	79	73	67	62	60	56	53	49	46	44	39	37	35	30
3	79	69	62	55	72	64	57	51	53	48	44	43	40	36	34	32	29	25
4	72	61	53	47	66	56	49	43	47	41	37	38	34	31	30	27	25	21
5	66	54	46	40	60	50	43	37	42	36	32	34	30	27	27	24	22	18
6	61	48	40	34	55	45	37	32	38	32	28	31	27	23	25	21	19	16
7	56	44	36	30	51	40	33	28	34	28	24	28	24	20	22	19	17	14
8	52	40	32	26	48	37	30	25	31	25	21	26	21	18	21	17	15	12
9	48	36	28	23	44	33	27	22	28	23	19	24	19	16	19	16	13	11
10	45	33	26	21	41	31	24	20	26	21	17	22	18	15	18	14	12	10

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6518	6518	6518
5°	6537	6352	6357
10°	6480	6207	6175
15°	6395	6040	5978
20°	6277	5850	5760
25°	6129	5632	5532
30°	5977	5436	5300
35°	5809	5228	5116
40°	5647	5038	4917
45°	5468	4857	4759
50°	5291	4678	4584
55°	5097	4494	4428
60°	4906	4308	4266
65°	4710	4109	4076
70°	4418	3885	3878
75°	4048	3629	3679
80°	3620	3378	3451
85°	3222	3204	3317



TEST NUMBER: P331922-935

CATALOG NUMBER: S123DIP-S560D585U935-4F0-1E-UDD-D

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	57.4	1.4
10°-20°	163.6	4.0
20°-30°	244.7	6.0
30°-40°	292.2	7.2
40°-50°	305.8	7.5
50°-60°	286.9	7.1
60°-70°	239.6	5.9
70°-80°	171.5	4.2
80°-90°	104.1	2.6
90°-100°	88.2	2.2
100°-110°	161.7	4.0
110°-120°	306.6	7.6
120°-130°	368.3	9.1
130°-140°	382.4	9.4
140°-150°	351.7	8.7
150°-160°	282.4	7.0
160°-170°	182.2	4.5
170°-180°	62.8	1.5
0°-30°	465.7	11.5
0°-40°	758.0	18.7
0°-60°	1350.7	33.3
0°-90°	1865.9	46.0
90°-120°	556.4	13.7
90°-150°	1658.9	40.9
90°-180°	2186.0	53.9
0°-180°	4052.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	606	606	606	606	606	
5°	606	605	601	606	606	57
15°	577	579	578	585	584	162
25°	521	527	530	538	538	240
35°	448	459	468	477	480	280
45°	367	383	399	411	417	283
55°	280	302	325	342	348	250
65°	193	219	248	267	274	191
75°	105	136	169	190	198	112
85°	32	65	100	122	129	34
90°	9	46	86	110	118	7
95°	37	45	80	103	111	43
105°	152	171	157	93	96	160
115°	278	290	317	337	345	274
125°	389	394	414	428	434	347
135°	483	486	495	507	510	372
145°	557	559	560	566	569	348
155°	612	612	612	614	611	282
165°	646	644	644	647	644	182
175°	661	659	659	662	658	63
180°	661	661	661	661	661	



TEST NUMBER: P331922-935

CATALOG NUMBER: S123DIP-S560D585U935-4F0-1E-UDD-D

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	605.5	605.5	605.5	605.5	605.5	605.5	605.5	605.5	605.5	605.5	605.5
2.5°	608.1	607.8	607.4	607.0	606.7	606.1	605.1	604.2	603.2	602.3	603.2
5°	606.1	605.8	605.5	605.3	604.9	604.3	603.5	602.6	601.8	600.8	602.0
7.5°	600.2	600.2	600.3	600.4	600.5	600.0	599.2	598.3	597.4	596.6	598.1
10°	595.0	595.2	595.5	595.8	596.1	595.9	595.1	594.4	593.7	593.0	594.4
12.5°	588.6	589.0	589.4	589.8	590.2	590.2	589.7	589.2	588.7	588.1	589.5
15°	577.1	577.6	578.0	578.4	578.9	579.0	578.9	578.7	578.6	578.4	579.9
17.5°	562.6	563.4	564.4	565.2	566.1	566.5	566.5	566.4	566.4	566.3	567.6
20°	552.1	552.9	553.8	554.7	555.5	556.1	556.5	556.7	557.0	557.3	558.6
22.5°	541.0	541.8	542.7	543.6	544.5	545.1	545.5	546.0	546.4	546.7	548.5
25°	521.1	522.5	524.0	525.5	526.9	527.9	528.3	528.7	529.2	529.6	531.5
27.5°	501.0	502.7	504.4	506.0	507.6	508.9	509.9	510.8	511.8	512.7	514.4
30°	486.7	488.6	490.5	492.5	494.4	495.9	497.1	498.3	499.4	500.6	502.4
32.5°	470.9	473.0	475.2	477.3	479.5	481.3	482.8	484.3	485.9	487.4	489.3
35°	448.5	450.8	453.1	455.6	457.9	460.0	461.9	463.8	465.7	467.6	469.8
37.5°	424.7	427.4	430.0	432.7	435.3	437.8	440.1	442.5	444.8	447.2	449.7
40°	408.9	411.6	414.2	416.8	419.5	422.2	425.2	428.1	431.0	433.9	436.4
42.5°	391.5	394.8	398.0	401.1	404.4	407.5	410.6	413.6	416.7	419.7	422.5
45°	366.7	370.2	373.8	377.3	380.7	384.4	388.1	391.7	395.4	399.0	401.8
47.5°	340.7	344.7	348.7	352.7	356.6	360.8	365.0	369.1	373.3	377.5	380.6
50°	323.8	328.0	332.0	336.1	340.3	344.6	349.1	353.7	358.2	362.7	366.1
52.5°	305.9	310.2	314.6	318.9	323.2	328.0	332.9	337.9	342.9	348.0	351.5
55°	279.7	284.5	289.3	294.1	299.0	304.0	309.4	314.6	319.9	325.1	329.1
57.5°	254.1	259.1	264.2	269.1	274.2	279.7	285.4	291.2	297.0	302.7	306.7
60°	236.1	241.4	246.7	251.9	257.2	262.9	268.9	274.9	280.9	286.9	291.0
62.5°	219.2	224.6	230.1	235.4	240.8	246.7	253.0	259.4	265.8	272.2	276.2
65°	193.2	199.0	204.7	210.4	216.1	222.2	228.7	235.1	241.5	248.0	252.4
67.5°	166.9	173.0	179.0	185.0	191.1	197.4	204.1	210.6	217.1	223.7	228.5
70°	148.4	154.7	161.0	167.3	173.6	180.3	187.3	194.3	201.4	208.4	213.1
72.5°	131.5	137.8	144.1	150.4	156.7	163.5	170.7	178.1	185.3	192.6	197.4
75°	104.9	111.8	118.6	125.5	132.4	139.6	146.9	154.2	161.5	168.8	173.7
77.5°	81.6	88.6	95.6	102.5	109.4	116.6	124.0	131.4	138.8	146.2	151.3
80°	65.3	72.5	79.6	86.9	94.0	101.4	109.0	116.7	124.3	131.9	136.9
82.5°	51.1	58.4	65.6	72.9	80.2	87.7	95.5	103.2	111.0	118.7	123.7
85°	32.3	39.6	47.0	54.3	61.6	69.1	77.0	84.7	92.5	100.2	105.2
87.5°	17.7	25.1	32.7	40.2	47.7	55.4	63.1	70.9	78.6	86.4	91.4
90°	9.0	17.3	25.6	33.9	42.2	50.7	59.7	68.5	77.4	86.3	91.7
92.5°	17.2	23.3	29.5	35.7	41.8	49.2	57.6	66.0	74.5	82.9	88.4
95°	37.2	38.5	39.7	40.9	42.2	47.0	55.4	63.7	72.2	80.5	85.8
97.5°	66.6	69.8	73.0	76.1	79.3	80.3	79.4	78.4	77.3	76.4	81.6
100°	88.9	95.8	102.6	109.5	116.4	114.7	104.4	94.1	83.9	73.6	78.7
102.5°	114.3	120.1	125.9	131.7	137.5	134.4	122.4	110.5	98.5	86.5	88.0
105°	151.6	156.4	161.1	165.7	170.5	171.1	167.6	164.0	160.5	157.0	141.8
107.5°	190.3	194.2	198.2	202.2	206.1	211.8	219.4	226.9	234.5	241.9	231.7
110°	216.1	219.6	223.1	226.6	230.1	235.4	242.5	249.5	256.7	263.7	263.9



TEST NUMBER: P331922-935

CATALOG NUMBER: S123DIP-S560D585U935-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	241.3	244.2	247.2	250.1	253.0	258.0	264.8	271.6	278.4	285.2	289.0
115°	277.8	280.3	282.7	285.1	287.5	291.8	298.1	304.3	310.6	316.8	321.4
117.5°	313.7	315.6	317.5	319.4	321.3	324.9	330.5	335.9	341.3	346.8	351.1
120°	335.6	337.3	339.0	340.7	342.4	345.9	351.0	356.2	361.4	366.5	370.7
122.5°	358.3	359.6	360.8	362.0	363.2	366.3	371.3	376.3	381.3	386.3	390.2
125°	388.9	389.9	390.7	391.6	392.4	395.2	399.9	404.6	409.3	414.0	417.2
127.5°	419.2	419.9	420.7	421.4	422.1	424.5	428.5	432.6	436.6	440.7	443.9
130°	438.1	438.8	439.5	440.2	440.9	443.0	446.3	449.7	453.1	456.5	459.7
132.5°	455.6	456.4	457.3	458.1	459.0	460.7	463.5	466.1	468.8	471.5	474.6
135°	483.1	483.5	484.1	484.6	485.1	486.4	488.4	490.5	492.5	494.6	497.6
137.5°	506.5	507.2	507.9	508.7	509.4	510.3	511.4	512.6	513.8	514.9	517.7
140°	521.7	522.4	523.0	523.7	524.3	525.0	525.8	526.6	527.4	528.1	530.7
142.5°	536.2	536.7	537.3	537.9	538.4	538.8	539.2	539.7	540.1	540.5	542.9
145°	556.6	557.2	557.8	558.4	559.0	559.5	559.6	559.9	560.1	560.3	561.7
147.5°	575.1	575.6	576.1	576.5	577.0	577.4	577.6	577.8	578.1	578.3	578.9
150°	586.9	587.2	587.5	587.8	588.1	588.4	588.7	588.8	589.1	589.3	589.5
152.5°	597.4	597.6	597.7	597.9	598.1	598.2	598.3	598.5	598.6	598.7	599.1
155°	612.3	612.2	611.9	611.7	611.5	611.5	611.6	611.7	611.7	611.9	612.4
157.5°	624.0	624.0	623.9	623.9	623.9	623.8	623.7	623.6	623.5	623.4	624.1
160°	631.0	630.9	630.9	630.7	630.6	630.5	630.3	630.3	630.2	630.1	630.7
162.5°	637.7	637.4	637.1	636.9	636.5	636.4	636.3	636.2	636.0	635.9	636.7
165°	645.8	645.4	645.1	644.8	644.5	644.2	644.1	644.0	643.9	643.8	644.7
167.5°	652.0	651.6	651.2	650.7	650.3	650.1	650.1	650.1	650.1	650.1	651.0
170°	655.6	655.1	654.7	654.3	653.8	653.6	653.6	653.6	653.6	653.6	654.5
172.5°	658.0	657.5	656.9	656.3	655.8	655.7	655.7	655.8	655.9	656.0	656.9
175°	661.0	660.5	659.9	659.4	658.8	658.6	658.7	658.8	658.9	659.0	659.8
177.5°	661.8	661.3	660.9	660.5	660.0	659.9	660.0	660.0	660.1	660.2	660.9
180°	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0



TEST NUMBER: P331922-935

CATALOG NUMBER: S123DIP-S560D585U935-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	605.5	605.5	605.5	605.5	605.5	605.5	605.5	605.5
2.5°	604.2	605.1	606.1	606.5	606.3	606.2	606.1	606.0
5°	603.2	604.3	605.5	606.1	605.9	605.7	605.6	605.5
7.5°	599.5	601.0	602.5	603.1	603.0	602.8	602.6	602.4
10°	595.9	597.4	598.8	599.3	599.1	598.8	598.5	598.2
12.5°	590.9	592.2	593.6	594.1	593.8	593.5	593.2	593.0
15°	581.3	582.8	584.3	585.0	584.8	584.6	584.5	584.4
17.5°	568.9	570.2	571.5	572.1	571.9	571.7	571.5	571.3
20°	560.0	561.3	562.6	563.4	563.4	563.6	563.8	563.9
22.5°	550.1	551.8	553.5	554.2	554.1	554.1	554.0	553.9
25°	533.4	535.4	537.3	538.2	538.2	538.2	538.2	538.2
27.5°	516.0	517.6	519.3	520.2	520.3	520.4	520.6	520.6
30°	504.1	505.8	507.6	508.5	508.5	508.5	508.5	508.5
32.5°	491.1	493.0	494.9	496.0	496.4	496.7	497.1	497.4
35°	472.0	474.2	476.4	477.8	478.4	479.0	479.6	480.2
37.5°	452.1	454.6	457.1	458.7	459.1	459.5	460.0	460.5
40°	438.9	441.4	443.9	445.5	446.1	446.7	447.2	447.8
42.5°	425.2	427.9	430.7	432.4	433.3	434.0	434.9	435.7
45°	404.6	407.3	410.2	412.2	413.3	414.5	415.7	416.8
47.5°	383.8	386.9	390.0	392.1	393.0	393.9	394.9	395.7
50°	369.5	372.9	376.3	378.4	379.4	380.5	381.5	382.5
52.5°	355.0	358.4	362.0	364.3	365.6	366.8	368.1	369.4
55°	333.0	337.0	341.0	343.5	344.7	345.9	347.1	348.3
57.5°	310.7	314.7	318.7	321.3	322.7	324.1	325.5	326.8
60°	295.2	299.2	303.3	306.2	307.8	309.4	311.0	312.6
62.5°	280.3	284.5	288.5	291.4	292.8	294.3	295.8	297.3
65°	256.8	261.1	265.6	268.5	270.0	271.5	272.9	274.4
67.5°	233.3	238.2	243.0	246.0	247.2	248.4	249.7	250.9
70°	217.8	222.5	227.2	230.2	231.7	233.2	234.6	236.1
72.5°	202.2	207.0	211.8	215.0	216.5	217.9	219.4	220.8
75°	178.5	183.4	188.2	191.5	193.2	195.0	196.7	198.5
77.5°	156.4	161.4	166.5	169.8	171.2	172.5	173.8	175.2
80°	141.9	146.9	151.9	155.1	156.5	158.0	159.5	160.9
82.5°	128.7	133.6	138.6	141.9	143.4	144.8	146.3	147.7
85°	110.2	115.2	120.2	123.4	124.8	126.3	127.8	129.2
87.5°	96.5	101.6	106.7	109.9	111.5	113.0	114.5	116.0
90°	97.1	102.5	108.0	111.6	113.2	114.9	116.6	118.3
92.5°	94.0	99.5	105.1	108.7	110.1	111.6	113.1	114.6
95°	91.1	96.4	101.8	105.1	106.6	108.1	109.5	111.0
97.5°	86.9	92.0	97.3	100.7	102.3	103.8	105.5	107.0
100°	83.9	88.9	94.1	97.5	99.0	100.6	102.1	103.8
102.5°	89.4	90.8	92.2	93.8	95.4	97.1	98.8	100.4
105°	126.6	111.4	96.2	89.3	90.8	92.4	93.9	95.5
107.5°	221.5	211.3	201.0	189.2	176.0	162.7	149.5	136.2
110°	264.1	264.3	264.5	257.4	243.0	228.5	214.1	199.7



TEST NUMBER: P331922-935

CATALOG NUMBER: S123DIP-S560D585U935-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	292.8	296.5	300.3	301.2	299.2	297.1	295.2	293.2
115°	326.1	330.6	335.3	338.4	340.0	341.6	343.2	344.8
117.5°	355.5	359.9	364.2	367.0	368.2	369.5	370.7	372.0
120°	375.1	379.3	383.5	386.2	387.2	388.2	389.3	390.3
122.5°	394.0	397.9	401.7	404.2	405.4	406.5	407.6	408.7
125°	420.6	423.9	427.1	429.4	430.7	431.9	433.2	434.4
127.5°	447.1	450.4	453.7	455.6	456.4	457.2	458.0	458.8
130°	463.0	466.1	469.3	471.3	472.0	472.6	473.3	474.0
132.5°	477.8	480.9	484.0	485.9	486.6	487.2	487.9	488.6
135°	500.5	503.4	506.4	508.1	508.5	508.9	509.4	509.7
137.5°	520.6	523.4	526.2	527.9	528.4	528.9	529.4	529.9
140°	533.4	536.0	538.6	540.2	540.7	541.2	541.7	542.3
142.5°	545.1	547.4	549.7	551.1	551.6	552.0	552.4	552.8
145°	563.1	564.5	565.8	566.9	567.5	568.0	568.6	569.2
147.5°	579.5	580.0	580.6	580.8	580.9	580.9	580.9	581.0
150°	589.7	590.0	590.1	590.2	590.2	590.2	590.1	590.1
152.5°	599.5	599.9	600.3	600.3	599.9	599.3	598.9	598.5
155°	612.9	613.5	614.1	614.0	613.4	612.7	612.1	611.4
157.5°	624.7	625.3	626.0	625.9	625.0	624.2	623.4	622.5
160°	631.4	632.0	632.7	632.6	631.9	631.1	630.3	629.6
162.5°	637.4	638.2	638.9	638.9	638.3	637.6	636.9	636.3
165°	645.6	646.4	647.3	647.4	646.6	645.8	645.1	644.3
167.5°	651.9	652.7	653.6	653.6	652.7	651.9	651.0	650.1
170°	655.4	656.3	657.1	657.1	656.3	655.4	654.5	653.6
172.5°	657.7	658.6	659.4	659.4	658.5	657.5	656.5	655.6
175°	660.6	661.3	662.1	662.0	661.2	660.3	659.4	658.5
177.5°	661.6	662.3	663.0	662.9	662.0	661.2	660.3	659.4
180°	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0

(END OF REPORT)