

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: P331931

Luminaire Tested: **S123DIP-S560D805U835-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331931
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-S560D805U835-4F0-1E-UDD-D
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 560 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 805 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5575.0 lumens
Efficiency: N/A
Efficacy: 145.2 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: Semi-Indirect

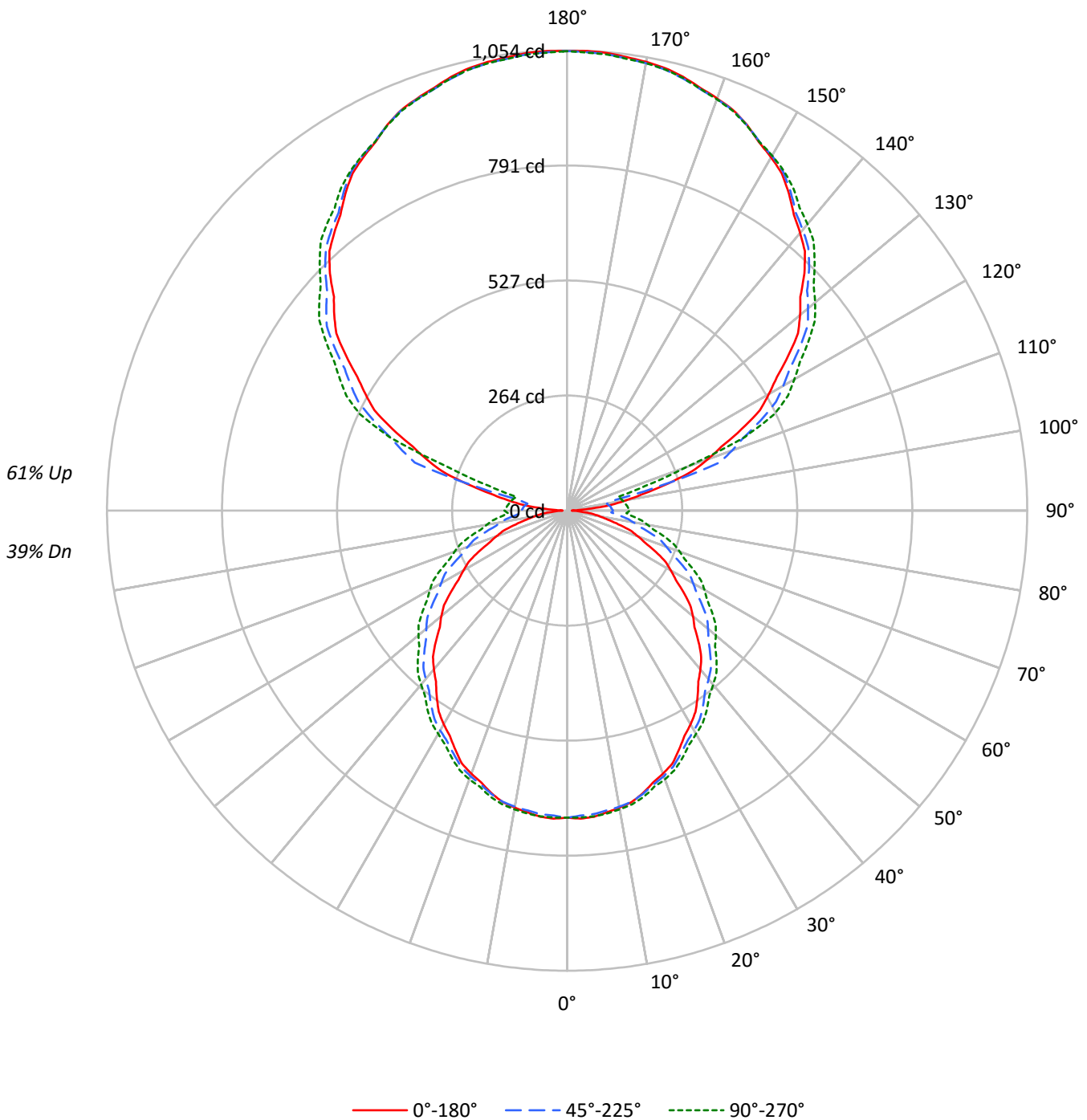
Input Watts (W): 38.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331931

CATALOG NUMBER: S123DIP-S560D805U835-4F0-1E-UDD-D

Luminous Intensity Polar Plot





TEST NUMBER: P331931

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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	104	104	104	104	95	95	95	95	77	77	77	61	61	61	46	46	46	39
1	94	90	86	82	86	82	78	75	66	64	62	52	51	49	39	38	37	31
2	86	78	72	66	77	71	65	61	58	54	50	45	43	40	34	32	31	25
3	78	68	61	55	70	62	56	50	51	46	42	40	36	34	30	28	26	21
4	71	60	52	46	64	55	48	42	45	39	35	35	32	29	27	24	22	18
5	65	53	45	39	59	49	42	36	40	34	30	32	28	25	24	21	19	15
6	60	48	40	34	54	44	36	31	36	30	26	28	24	21	22	19	17	13
7	55	43	35	29	50	39	32	27	32	27	23	26	22	19	20	17	15	12
8	51	39	31	26	46	36	29	24	29	24	20	24	20	17	18	15	13	11
9	48	35	28	23	43	32	26	21	27	22	18	22	18	15	17	14	12	9
10	44	32	25	20	40	30	23	19	25	20	16	20	16	13	15	13	11	9

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7569	7569	7569
5°	7593	7378	7383
10°	7525	7209	7173
15°	7428	7016	6943
20°	7289	6795	6690
25°	7119	6541	6425
30°	6943	6313	6156
35°	6746	6072	5942
40°	6558	5852	5711
45°	6351	5641	5527
50°	6145	5433	5325
55°	5919	5219	5143
60°	5697	5003	4956
65°	5471	4772	4733
70°	5132	4514	4504
75°	4700	4216	4274
80°	4202	3924	4008
85°	3741	3722	3854



TEST NUMBER: P331931

CATALOG NUMBER: S123DIP-S560D805U835-4F0-1E-UDD-D

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.7	1.2
10°-20°	190.0	3.4
20°-30°	284.2	5.1
30°-40°	339.4	6.1
40°-50°	355.1	6.4
50°-60°	333.2	6.0
60°-70°	278.3	5.0
70°-80°	199.1	3.6
80°-90°	121.7	2.2
90°-100°	112.8	2.0
100°-110°	237.1	4.3
110°-120°	474.5	8.5
120°-130°	578.6	10.4
130°-140°	605.3	10.9
140°-150°	559.2	10.0
150°-160°	449.5	8.1
160°-170°	290.1	5.2
170°-180°	100.0	1.8
0°-30°	540.9	9.7
0°-40°	880.3	15.8
0°-60°	1568.7	28.1
0°-90°	2167.9	38.9
90°-120°	824.4	14.8
90°-150°	2567.5	46.1
90°-180°	3407.0	61.1
0°-180°	5575.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	703	703	703	703	703	
5°	704	702	698	704	703	67
15°	670	672	672	679	679	189
25°	605	613	615	625	625	279
35°	521	533	543	554	558	326
45°	426	444	463	478	484	328
55°	325	350	378	398	404	291
65°	224	255	288	310	319	222
75°	122	158	196	220	231	130
85°	38	76	116	141	150	39
90°	11	56	105	133	144	9
95°	56	57	100	128	137	66
105°	239	262	229	119	120	253
115°	441	456	489	515	525	435
125°	618	626	650	667	674	552
135°	768	773	784	799	802	591
145°	886	890	892	900	903	554
155°	975	973	974	978	973	449
165°	1028	1026	1025	1031	1026	290
175°	1052	1049	1049	1054	1048	100
180°	1052	1052	1052	1052	1052	



TEST NUMBER: P331931

CATALOG NUMBER: S123DIP-S560D805U835-4F0-1E-UDD-D

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	703.2	703.2	703.2	703.2	703.2	703.2	703.2	703.2	703.2	703.2	703.2
2.5°	706.3	705.9	705.5	705.0	704.6	703.9	702.8	701.7	700.6	699.5	700.6
5°	704.0	703.6	703.3	703.0	702.6	701.9	700.9	699.9	698.9	697.8	699.2
7.5°	697.1	697.1	697.2	697.3	697.4	696.9	695.9	694.9	693.9	692.9	694.6
10°	691.0	691.3	691.6	692.0	692.3	692.1	691.2	690.4	689.5	688.7	690.4
12.5°	683.6	684.1	684.6	685.0	685.5	685.5	684.9	684.3	683.7	683.1	684.7
15°	670.3	670.8	671.3	671.8	672.3	672.5	672.3	672.1	672.0	671.8	673.5
17.5°	653.4	654.4	655.5	656.5	657.5	658.0	657.9	657.8	657.8	657.7	659.2
20°	641.2	642.2	643.2	644.2	645.2	645.9	646.3	646.6	646.9	647.3	648.8
22.5°	628.3	629.3	630.3	631.4	632.4	633.1	633.6	634.1	634.6	635.0	637.0
25°	605.2	606.9	608.6	610.3	612.0	613.1	613.6	614.1	614.6	615.1	617.3
27.5°	581.9	583.8	585.8	587.7	589.6	591.1	592.2	593.3	594.4	595.5	597.4
30°	565.3	567.5	569.7	572.0	574.2	576.0	577.3	578.7	580.0	581.4	583.5
32.5°	546.9	549.4	551.9	554.4	556.9	559.0	560.8	562.5	564.3	566.1	568.3
35°	520.9	523.6	526.3	529.1	531.8	534.3	536.5	538.7	540.9	543.1	545.7
37.5°	493.3	496.4	499.4	502.5	505.6	508.5	511.2	513.9	516.6	519.4	522.3
40°	474.9	478.0	481.1	484.1	487.2	490.4	493.8	497.2	500.6	504.0	506.9
42.5°	454.7	458.5	462.2	465.9	469.7	473.3	476.9	480.4	484.0	487.5	490.7
45°	425.9	430.0	434.1	438.2	442.2	446.4	450.7	454.9	459.2	463.4	466.7
47.5°	395.7	400.4	405.0	409.6	414.2	419.0	423.9	428.7	433.6	438.5	442.1
50°	376.1	380.9	385.6	390.4	395.2	400.2	405.5	410.8	416.0	421.3	425.2
52.5°	355.3	360.3	365.4	370.4	375.4	380.9	386.7	392.5	398.3	404.2	408.2
55°	324.8	330.4	336.0	341.6	347.3	353.1	359.3	365.4	371.5	377.6	382.2
57.5°	295.1	300.9	306.8	312.6	318.5	324.8	331.5	338.2	344.9	351.6	356.2
60°	274.2	280.4	286.5	292.6	298.7	305.3	312.3	319.3	326.2	333.2	338.0
62.5°	254.6	260.9	267.2	273.4	279.7	286.5	293.9	301.3	308.7	316.1	320.8
65°	224.4	231.1	237.7	244.4	251.0	258.1	265.6	273.0	280.5	288.0	293.1
67.5°	193.8	200.9	207.9	214.9	222.0	229.3	237.0	244.6	252.2	259.8	265.4
70°	172.4	179.7	187.0	194.3	201.6	209.4	217.5	225.7	233.9	242.1	247.5
72.5°	152.7	160.1	167.4	174.7	182.0	189.9	198.3	206.8	215.2	223.7	229.3
75°	121.8	129.8	137.8	145.8	153.8	162.1	170.6	179.1	187.6	196.1	201.7
77.5°	94.8	102.9	111.0	119.0	127.1	135.4	144.0	152.6	161.2	169.8	175.7
80°	75.8	84.2	92.5	100.9	109.2	117.8	126.6	135.5	144.4	153.2	159.0
82.5°	59.3	67.8	76.2	84.7	93.2	101.9	110.9	119.9	128.9	137.9	143.7
85°	37.5	46.0	54.6	63.1	71.6	80.3	89.4	98.4	107.4	116.4	122.2
87.5°	20.5	29.4	38.2	47.0	55.8	64.8	73.9	83.1	92.2	101.3	107.3
90°	10.7	20.8	30.9	41.0	51.1	61.6	72.5	83.4	94.4	105.3	111.8
92.5°	23.9	30.9	38.0	45.0	52.0	60.7	70.9	81.2	91.4	101.7	108.4
95°	56.1	55.6	55.1	54.7	54.2	59.1	69.3	79.6	89.8	100.1	106.6
97.5°	103.4	106.2	108.9	111.7	114.5	113.7	109.1	104.6	100.0	95.5	102.0
100°	139.0	147.9	156.9	165.8	174.7	169.5	150.3	131.0	111.7	92.4	98.8
102.5°	179.7	187.1	194.5	201.9	209.3	202.0	180.1	158.2	136.3	114.4	114.9
105°	239.1	245.1	251.1	257.1	263.1	261.9	253.6	245.3	237.0	228.7	202.7
107.5°	301.0	306.0	311.0	316.0	321.0	328.3	337.7	347.1	356.5	365.9	347.9
110°	342.3	346.8	351.2	355.7	360.1	366.7	375.5	384.2	392.9	401.6	400.3



TEST NUMBER: P331931

CATALOG NUMBER: S123DIP-S560D805U835-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	382.4	386.1	389.9	393.7	397.4	403.5	412.0	420.4	428.9	437.3	441.7
115°	440.9	443.9	447.0	450.1	453.2	458.6	466.3	474.0	481.7	489.3	495.2
117.5°	498.1	500.6	503.2	505.7	508.3	512.8	519.4	525.9	532.5	539.0	544.5
120°	533.1	535.5	538.0	540.4	542.8	547.1	553.2	559.3	565.5	571.6	576.9
122.5°	569.4	571.1	572.9	574.6	576.3	580.2	586.2	592.2	598.2	604.2	608.9
125°	618.4	619.7	621.1	622.5	623.9	627.4	633.1	638.7	644.3	649.9	653.9
127.5°	666.5	667.7	668.9	670.2	671.4	674.5	679.4	684.3	689.2	694.1	698.1
130°	696.5	697.8	699.0	700.2	701.4	704.1	708.2	712.3	716.4	720.5	724.4
132.5°	724.7	726.0	727.4	728.8	730.1	732.4	735.7	739.0	742.3	745.5	749.3
135°	768.5	769.3	770.2	771.1	772.0	773.7	776.2	778.8	781.4	784.0	787.5
137.5°	805.8	807.0	808.2	809.4	810.6	811.9	813.3	814.8	816.2	817.6	821.2
140°	830.2	831.3	832.3	833.4	834.4	835.5	836.5	837.5	838.6	839.6	842.8
142.5°	853.4	854.3	855.2	856.1	857.0	857.8	858.4	859.0	859.7	860.3	863.1
145°	885.8	886.8	887.8	888.9	889.9	890.6	891.0	891.3	891.7	892.0	893.7
147.5°	915.5	916.3	917.1	917.9	918.7	919.3	919.6	919.9	920.3	920.6	921.4
150°	934.2	934.8	935.3	935.8	936.3	936.8	937.1	937.5	937.8	938.2	938.5
152.5°	951.1	951.4	951.6	951.9	952.1	952.3	952.5	952.7	953.0	953.2	953.8
155°	974.9	974.6	974.2	973.9	973.5	973.4	973.6	973.8	973.9	974.1	975.0
157.5°	993.3	993.3	993.3	993.2	993.2	993.1	992.9	992.8	992.6	992.4	993.5
160°	1004.6	1004.4	1004.3	1004.1	1003.9	1003.7	1003.6	1003.4	1003.2	1003.0	1004.1
162.5°	1015.2	1014.8	1014.3	1013.9	1013.4	1013.1	1012.9	1012.8	1012.6	1012.4	1013.6
165°	1028.1	1027.5	1027.0	1026.5	1026.0	1025.6	1025.5	1025.3	1025.1	1024.9	1026.3
167.5°	1038.1	1037.4	1036.7	1036.0	1035.3	1034.9	1034.9	1034.9	1034.9	1034.9	1036.3
170°	1043.7	1043.0	1042.3	1041.6	1040.9	1040.6	1040.6	1040.6	1040.6	1040.6	1042.0
172.5°	1047.4	1046.6	1045.8	1044.9	1044.1	1043.8	1043.9	1044.0	1044.2	1044.3	1045.7
175°	1052.3	1051.4	1050.6	1049.7	1048.8	1048.5	1048.6	1048.8	1049.0	1049.2	1050.4
177.5°	1053.5	1052.9	1052.2	1051.5	1050.8	1050.5	1050.6	1050.8	1050.9	1051.0	1052.2
180°	1052.3	1052.3	1052.3	1052.3	1052.3	1052.3	1052.3	1052.3	1052.3	1052.3	1052.3



TEST NUMBER: P331931

CATALOG NUMBER: S123DIP-S560D805U835-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	703.2	703.2	703.2	703.2	703.2	703.2	703.2	703.2
2.5°	701.7	702.8	703.9	704.4	704.2	704.1	704.0	703.8
5°	700.6	701.9	703.3	703.9	703.7	703.5	703.4	703.2
7.5°	696.3	698.0	699.8	700.5	700.3	700.1	699.9	699.7
10°	692.1	693.8	695.5	696.1	695.8	695.5	695.1	694.8
12.5°	686.3	687.8	689.4	690.0	689.7	689.3	689.0	688.7
15°	675.2	676.9	678.6	679.4	679.2	679.0	678.9	678.7
17.5°	660.8	662.3	663.8	664.5	664.2	664.0	663.8	663.5
20°	650.4	651.9	653.4	654.3	654.4	654.6	654.8	654.9
22.5°	638.9	640.9	642.8	643.7	643.6	643.5	643.4	643.3
25°	619.5	621.8	624.0	625.1	625.1	625.1	625.1	625.1
27.5°	599.3	601.2	603.1	604.2	604.3	604.4	604.6	604.7
30°	585.5	587.5	589.6	590.6	590.6	590.6	590.6	590.6
32.5°	570.4	572.6	574.8	576.1	576.5	576.9	577.3	577.7
35°	548.2	550.8	553.3	554.9	555.6	556.3	557.0	557.7
37.5°	525.1	528.0	530.9	532.7	533.2	533.7	534.3	534.8
40°	509.8	512.7	515.6	517.4	518.1	518.8	519.4	520.1
42.5°	493.8	497.0	500.2	502.2	503.2	504.1	505.1	506.0
45°	469.9	473.1	476.4	478.7	480.0	481.4	482.8	484.1
47.5°	445.8	449.4	453.0	455.4	456.4	457.5	458.6	459.6
50°	429.1	433.1	437.0	439.5	440.7	441.9	443.1	444.3
52.5°	412.3	416.3	420.4	423.1	424.6	426.0	427.5	429.0
55°	386.8	391.4	396.0	399.0	400.4	401.7	403.1	404.5
57.5°	360.9	365.5	370.1	373.2	374.8	376.4	378.0	379.6
60°	342.8	347.5	352.3	355.6	357.5	359.3	361.2	363.1
62.5°	325.6	330.4	335.1	338.4	340.1	341.8	343.6	345.3
65°	298.2	303.3	308.5	311.9	313.6	315.3	317.0	318.7
67.5°	271.0	276.6	282.2	285.7	287.1	288.5	290.0	291.4
70°	253.0	258.4	263.9	267.4	269.1	270.8	272.5	274.2
72.5°	234.8	240.4	246.0	249.7	251.4	253.1	254.8	256.5
75°	207.3	213.0	218.6	222.4	224.4	226.5	228.5	230.6
77.5°	181.6	187.5	193.4	197.2	198.8	200.3	201.9	203.5
80°	164.8	170.6	176.4	180.1	181.8	183.5	185.2	186.9
82.5°	149.5	155.2	161.0	164.8	166.5	168.2	169.9	171.6
85°	128.0	133.8	139.6	143.3	145.0	146.7	148.4	150.1
87.5°	113.2	119.1	125.1	128.9	130.7	132.4	134.2	136.0
90°	118.3	124.8	131.3	135.5	137.6	139.6	141.7	143.7
92.5°	115.2	122.0	128.7	133.0	134.8	136.5	138.3	140.1
95°	113.1	119.6	126.0	130.1	131.8	133.5	135.2	137.0
97.5°	108.4	114.9	121.3	125.5	127.4	129.3	131.1	133.0
100°	105.1	111.4	117.7	121.8	123.7	125.6	127.5	129.4
102.5°	115.4	115.9	116.4	117.6	119.6	121.7	123.7	125.7
105°	176.7	150.7	124.7	112.7	114.6	116.4	118.3	120.2
107.5°	329.9	311.9	293.9	274.1	252.4	230.8	209.1	187.4
110°	399.0	397.7	396.4	384.0	360.5	337.0	313.5	290.1



TEST NUMBER: P331931

CATALOG NUMBER: S123DIP-S560D805U835-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	446.1	450.5	454.9	455.2	451.5	447.7	444.0	440.2
115°	501.0	506.8	512.6	516.6	518.6	520.7	522.8	524.8
117.5°	549.9	555.3	560.8	564.2	565.7	567.2	568.6	570.1
120°	582.2	587.5	592.8	596.1	597.3	598.5	599.7	600.8
122.5°	613.7	618.5	623.2	626.2	627.6	628.9	630.2	631.6
125°	657.8	661.7	665.6	668.4	669.9	671.4	673.0	674.5
127.5°	702.0	705.9	709.8	712.2	713.0	713.8	714.6	715.5
130°	728.3	732.3	736.2	738.5	739.2	739.8	740.5	741.2
132.5°	753.1	756.9	760.7	763.0	763.6	764.3	765.0	765.6
135°	791.1	794.7	798.3	800.2	800.6	800.9	801.2	801.6
137.5°	824.7	828.2	831.7	833.8	834.3	834.8	835.3	835.8
140°	846.1	849.3	852.6	854.5	855.0	855.5	856.0	856.5
142.5°	865.9	868.8	871.6	873.2	873.6	874.0	874.3	874.7
145°	895.4	897.2	898.9	900.1	900.7	901.4	902.1	902.8
147.5°	922.2	922.9	923.7	924.0	923.8	923.6	923.4	923.2
150°	938.8	939.2	939.5	939.6	939.4	939.3	939.1	938.9
152.5°	954.4	955.0	955.7	955.6	954.9	954.2	953.4	952.7
155°	975.9	976.7	977.6	977.5	976.5	975.4	974.4	973.3
157.5°	994.5	995.5	996.6	996.4	995.1	993.7	992.4	991.0
160°	1005.1	1006.2	1007.2	1007.1	1005.9	1004.7	1003.5	1002.3
162.5°	1014.8	1016.0	1017.1	1017.2	1016.1	1015.0	1014.0	1012.9
165°	1027.7	1029.1	1030.5	1030.6	1029.4	1028.1	1026.9	1025.7
167.5°	1037.7	1039.1	1040.5	1040.5	1039.1	1037.7	1036.3	1034.9
170°	1043.3	1044.7	1046.1	1046.1	1044.7	1043.3	1042.0	1040.6
172.5°	1047.1	1048.5	1049.9	1049.8	1048.3	1046.8	1045.2	1043.7
175°	1051.6	1052.8	1054.0	1053.9	1052.6	1051.2	1049.8	1048.4
177.5°	1053.3	1054.4	1055.5	1055.4	1054.0	1052.6	1051.2	1049.8
180°	1052.3	1052.3	1052.3	1052.3	1052.3	1052.3	1052.3	1052.3

(END OF REPORT)