

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: P331886

Luminaire Tested: **S123DIP-S340D805U835-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331886
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-S340D805U835-4F0-1E-UDD-D
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 340 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: 4649.4 lumens
Efficiency: N/A
Efficacy: 149.0 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

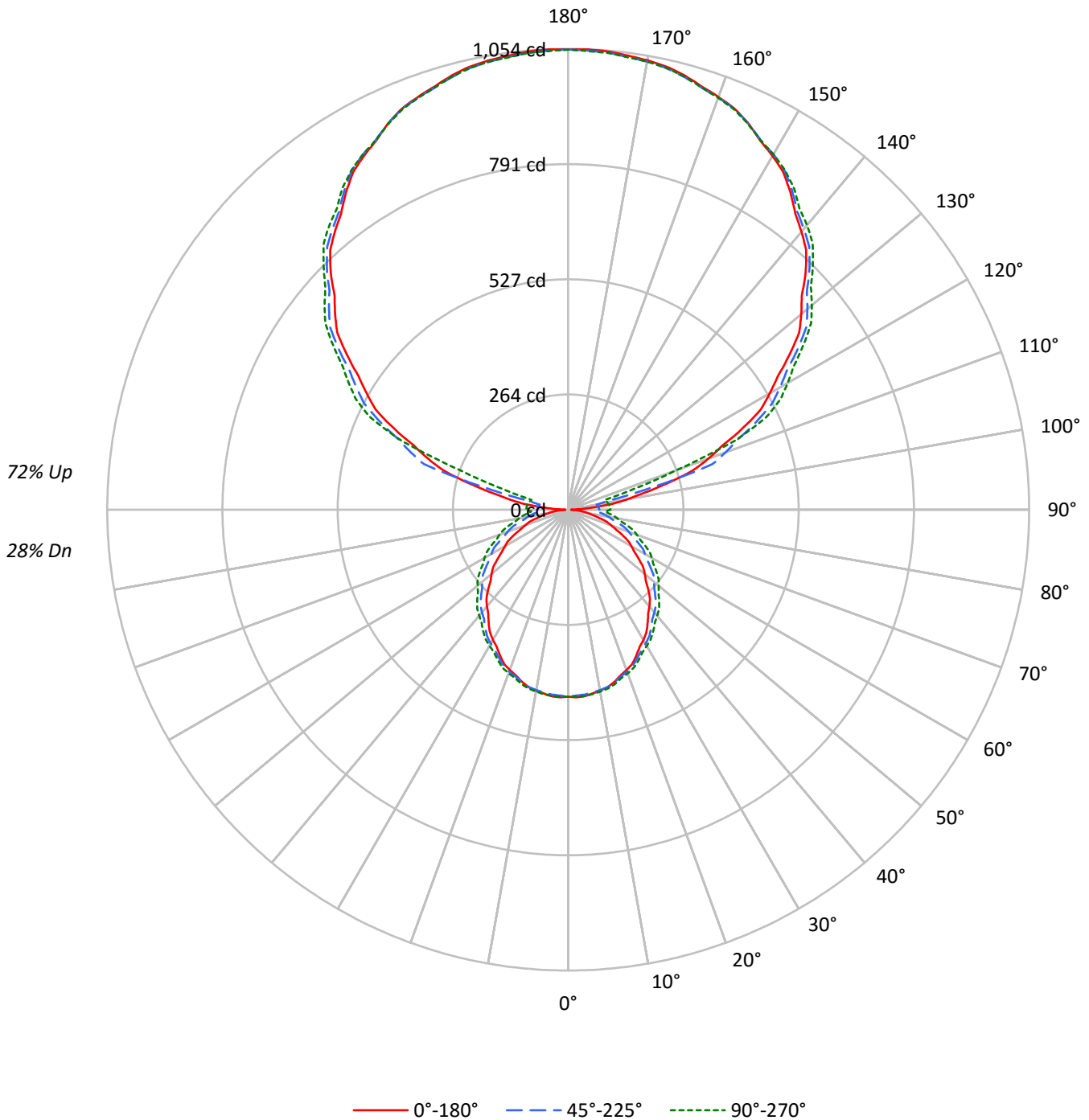
Input Watts (W): 31.2
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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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	102	102	102	102	91	91	91	91	71	71	71	53	53	53	36	36	36	28
1	92	88	84	80	82	79	75	72	61	59	57	46	44	43	31	30	29	23
2	84	76	70	65	75	68	63	59	53	50	47	40	37	35	27	26	24	18
3	76	67	60	54	68	60	54	49	47	43	39	35	32	29	24	22	20	15
4	70	59	51	45	62	53	46	41	41	37	33	31	28	25	21	19	17	13
5	64	52	44	38	57	47	40	35	37	32	28	28	24	21	19	17	15	11
6	59	47	39	33	52	42	35	30	33	28	24	25	21	19	17	15	13	10
7	54	42	34	29	48	38	31	26	30	25	21	22	19	16	16	13	12	9
8	50	38	30	25	45	34	28	23	27	22	19	20	17	14	14	12	10	8
9	46	34	27	22	41	31	25	20	25	20	17	19	15	13	13	11	9	7
10	43	31	24	20	39	28	22	18	23	18	15	17	14	12	12	10	8	6

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4604	4604	4604
5°	4618	4488	4490
10°	4577	4385	4363
15°	4518	4267	4223
20°	4434	4133	4070
25°	4330	3980	3908
30°	4224	3841	3744
35°	4103	3694	3614
40°	3990	3560	3474
45°	3864	3432	3362
50°	3739	3305	3239
55°	3601	3175	3128
60°	3466	3044	3015
65°	3328	2903	2878
70°	3120	2744	2740
75°	2859	2565	2600
80°	2556	2387	2438
85°	2274	2264	2344



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	40.5	0.9
10°-20°	115.6	2.5
20°-30°	172.9	3.7
30°-40°	206.5	4.4
40°-50°	216.0	4.6
50°-60°	202.7	4.4
60°-70°	169.3	3.6
70°-80°	121.1	2.6
80°-90°	75.2	1.6
90°-100°	83.6	1.8
100°-110°	215.6	4.6
110°-120°	460.2	9.9
120°-130°	570.4	12.3
130°-140°	601.6	12.9
140°-150°	558.5	12.0
150°-160°	449.5	9.7
160°-170°	290.1	6.2
170°-180°	100.0	2.2
0°-30°	329.0	7.1
0°-40°	535.5	11.5
0°-60°	954.2	20.5
0°-90°	1319.8	28.4
90°-120°	759.4	16.3
90°-150°	2489.9	53.6
90°-180°	3330.0	71.6
0°-180°	4649.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	428	428	428	428	428	
5°	428	427	424	428	428	41
15°	408	409	409	413	413	115
25°	368	373	374	380	380	170
35°	317	324	330	337	339	198
45°	259	270	282	290	294	200
55°	198	213	230	242	246	177
65°	136	155	175	189	194	135
75°	74	96	119	134	140	79
85°	23	46	71	86	91	24
90°	7	38	71	90	97	6
95°	53	41	70	89	95	63
105°	237	253	206	88	87	251
115°	439	450	473	492	499	434
125°	618	624	640	651	656	551
135°	768	772	780	790	791	591
145°	886	890	892	897	899	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	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	427.7	427.7	427.7	427.7	427.7	427.7	427.7	427.7	427.7	427.7	427.7
2.5°	429.6	429.4	429.1	428.9	428.6	428.2	427.5	426.8	426.2	425.5	426.2
5°	428.2	428.0	427.8	427.6	427.4	427.0	426.3	425.7	425.1	424.5	425.3
7.5°	424.0	424.1	424.1	424.1	424.2	423.9	423.3	422.7	422.1	421.5	422.5
10°	420.3	420.5	420.7	420.9	421.1	421.0	420.4	419.9	419.4	418.9	419.9
12.5°	415.8	416.1	416.4	416.7	417.0	416.9	416.6	416.2	415.9	415.5	416.5
15°	407.7	408.0	408.3	408.6	408.9	409.1	408.9	408.8	408.7	408.6	409.7
17.5°	397.5	398.1	398.7	399.3	399.9	400.2	400.2	400.1	400.1	400.1	401.0
20°	390.0	390.6	391.2	391.9	392.5	392.9	393.1	393.3	393.5	393.7	394.7
22.5°	382.2	382.8	383.4	384.0	384.7	385.1	385.4	385.7	386.0	386.3	387.5
25°	368.1	369.1	370.2	371.2	372.2	372.9	373.2	373.5	373.8	374.2	375.5
27.5°	353.9	355.1	356.3	357.5	358.7	359.6	360.2	360.9	361.6	362.2	363.4
30°	343.9	345.2	346.6	347.9	349.3	350.3	351.2	352.0	352.8	353.7	354.9
32.5°	332.7	334.2	335.7	337.2	338.7	340.0	341.1	342.2	343.3	344.3	345.7
35°	316.8	318.5	320.2	321.8	323.5	325.0	326.3	327.7	329.0	330.4	331.9
37.5°	300.1	301.9	303.8	305.7	307.5	309.3	310.9	312.6	314.3	315.9	317.7
40°	288.9	290.8	292.6	294.5	296.3	298.3	300.4	302.5	304.5	306.6	308.4
42.5°	276.6	278.9	281.1	283.4	285.7	287.9	290.1	292.2	294.4	296.5	298.5
45°	259.1	261.6	264.0	266.5	269.0	271.5	274.1	276.7	279.3	281.9	283.9
47.5°	240.7	243.5	246.3	249.2	252.0	254.9	257.8	260.8	263.7	266.7	268.9
50°	228.8	231.7	234.6	237.5	240.4	243.4	246.6	249.9	253.1	256.3	258.7
52.5°	216.1	219.2	222.2	225.3	228.4	231.7	235.2	238.8	242.3	245.8	248.3
55°	197.6	201.0	204.4	207.8	211.2	214.8	218.5	222.3	226.0	229.7	232.5
57.5°	179.5	183.0	186.6	190.2	193.7	197.6	201.6	205.7	209.8	213.9	216.7
60°	166.8	170.5	174.3	178.0	181.7	185.7	190.0	194.2	198.4	202.7	205.6
62.5°	154.9	158.7	162.5	166.3	170.1	174.3	178.8	183.3	187.8	192.3	195.1
65°	136.5	140.6	144.6	148.6	152.7	157.0	161.5	166.1	170.6	175.2	178.3
67.5°	117.9	122.2	126.5	130.7	135.0	139.5	144.1	148.8	153.4	158.1	161.4
70°	104.8	109.3	113.7	118.2	122.6	127.4	132.3	137.3	142.3	147.2	150.6
72.5°	92.9	97.4	101.8	106.3	110.7	115.5	120.6	125.8	130.9	136.1	139.5
75°	74.1	79.0	83.8	88.7	93.6	98.6	103.8	108.9	114.1	119.3	122.7
77.5°	57.7	62.6	67.5	72.4	77.3	82.4	87.6	92.8	98.0	103.3	106.9
80°	46.1	51.2	56.3	61.4	66.4	71.7	77.0	82.4	87.8	93.2	96.7
82.5°	36.1	41.2	46.4	51.5	56.7	62.0	67.5	72.9	78.4	83.9	87.4
85°	22.8	28.0	33.2	38.4	43.5	48.9	54.4	59.8	65.3	70.8	74.3
87.5°	12.6	18.1	23.6	29.1	34.6	40.2	45.9	51.6	57.4	63.1	66.8
90°	6.8	13.7	20.5	27.3	34.1	41.3	48.8	56.3	63.9	71.4	75.6
92.5°	20.2	24.3	28.4	32.5	36.6	42.1	49.0	55.9	62.8	69.7	74.2
95°	52.8	49.7	46.6	43.6	40.5	42.4	49.4	56.4	63.4	70.4	74.8
97.5°	100.4	100.9	101.3	101.8	102.2	98.6	90.9	83.3	75.6	67.9	72.4
100°	136.3	143.1	149.9	156.7	163.5	155.7	133.4	111.0	88.7	66.3	70.7
102.5°	177.2	182.7	188.2	193.7	199.2	189.4	164.5	139.6	114.7	89.7	88.4
105°	236.7	241.1	245.5	249.9	254.3	250.9	239.7	228.5	217.3	206.2	178.3
107.5°	299.0	302.6	306.3	309.9	313.6	318.7	325.4	332.1	338.8	345.5	325.7
110°	340.5	343.8	347.0	350.3	353.5	358.2	364.3	370.3	376.4	382.4	379.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	380.6	383.3	386.1	388.9	391.7	396.0	401.9	407.8	413.7	419.6	422.3
115°	439.4	441.6	443.9	446.2	448.5	452.3	457.6	462.9	468.2	473.4	477.7
117.5°	496.6	498.7	500.7	502.8	504.9	508.0	512.3	516.6	520.9	525.2	529.1
120°	531.9	534.0	536.1	538.2	540.2	543.3	547.2	551.1	555.1	559.0	562.8
122.5°	568.2	569.8	571.3	572.9	574.4	577.1	581.1	585.0	588.9	592.8	596.1
125°	617.5	618.8	620.2	621.6	623.0	625.6	629.3	633.0	636.6	640.3	642.9
127.5°	665.6	666.9	668.2	669.5	670.8	673.1	676.4	679.7	683.0	686.3	688.9
130°	695.6	696.9	698.2	699.5	700.8	702.8	705.6	708.3	711.1	713.9	716.5
132.5°	724.0	725.4	726.8	728.1	729.5	731.3	733.5	735.7	737.9	740.1	742.7
135°	767.9	768.8	769.8	770.7	771.6	773.0	774.8	776.7	778.5	780.3	782.7
137.5°	805.3	806.5	807.8	809.0	810.3	811.4	812.4	813.4	814.5	815.5	818.0
140°	829.9	831.0	832.0	833.1	834.1	835.1	835.9	836.7	837.6	838.4	840.6
142.5°	853.1	854.1	855.0	856.0	856.9	857.7	858.3	858.9	859.5	860.0	862.0
145°	885.5	886.6	887.7	888.8	889.9	890.6	891.0	891.3	891.7	892.0	893.2
147.5°	915.5	916.3	917.1	917.9	918.7	919.3	919.6	919.9	920.3	920.6	921.2
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



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	427.7	427.7	427.7	427.7	427.7	427.7	427.7	427.7
2.5°	426.8	427.5	428.2	428.4	428.4	428.3	428.2	428.1
5°	426.1	427.0	427.8	428.2	428.1	427.9	427.8	427.7
7.5°	423.6	424.6	425.6	426.1	426.0	425.8	425.7	425.6
10°	421.0	422.0	423.0	423.4	423.2	423.0	422.8	422.6
12.5°	417.4	418.4	419.3	419.7	419.5	419.3	419.1	418.9
15°	410.7	411.7	412.8	413.2	413.1	413.0	412.9	412.8
17.5°	401.9	402.9	403.8	404.2	404.0	403.9	403.8	403.6
20°	395.6	396.5	397.5	398.0	398.1	398.2	398.3	398.4
22.5°	388.6	389.8	391.0	391.6	391.5	391.4	391.4	391.3
25°	376.8	378.2	379.5	380.2	380.2	380.2	380.2	380.2
27.5°	364.5	365.7	366.9	367.5	367.6	367.7	367.7	367.8
30°	356.1	357.4	358.6	359.2	359.2	359.2	359.2	359.2
32.5°	347.0	348.3	349.6	350.4	350.7	350.9	351.2	351.4
35°	333.5	335.0	336.6	337.6	338.0	338.4	338.8	339.2
37.5°	319.4	321.2	323.0	324.0	324.3	324.7	325.0	325.3
40°	310.1	311.9	313.6	314.7	315.1	315.6	316.0	316.4
42.5°	300.4	302.3	304.2	305.5	306.1	306.6	307.2	307.8
45°	285.8	287.8	289.8	291.2	292.0	292.8	293.7	294.5
47.5°	271.1	273.4	275.6	277.0	277.6	278.3	278.9	279.6
50°	261.0	263.4	265.8	267.4	268.1	268.8	269.5	270.3
52.5°	250.8	253.2	255.7	257.4	258.3	259.2	260.0	260.9
55°	235.3	238.1	240.9	242.7	243.5	244.4	245.2	246.0
57.5°	219.5	222.3	225.1	227.0	228.0	229.0	230.0	230.9
60°	208.5	211.4	214.3	216.3	217.4	218.6	219.7	220.9
62.5°	198.0	200.9	203.8	205.8	206.9	207.9	209.0	210.1
65°	181.4	184.5	187.6	189.7	190.7	191.8	192.8	193.8
67.5°	164.8	168.2	171.6	173.8	174.6	175.5	176.4	177.2
70°	153.9	157.2	160.5	162.7	163.7	164.7	165.8	166.8
72.5°	142.8	146.2	149.6	151.9	152.9	153.9	155.0	156.0
75°	126.1	129.5	133.0	135.3	136.5	137.8	139.0	140.3
77.5°	110.5	114.1	117.7	119.9	120.9	121.9	122.8	123.8
80°	100.2	103.8	107.3	109.5	110.6	111.6	112.7	113.7
82.5°	90.9	94.4	98.0	100.2	101.3	102.3	103.3	104.4
85°	77.9	81.4	84.9	87.2	88.2	89.3	90.3	91.3
87.5°	70.4	74.1	77.8	80.1	81.2	82.3	83.4	84.6
90°	79.8	84.1	88.3	91.1	92.5	93.8	95.2	96.6
92.5°	78.8	83.3	87.9	90.7	91.9	93.1	94.2	95.4
95°	79.2	83.6	88.1	90.8	91.8	92.9	93.9	94.9
97.5°	76.9	81.4	85.8	88.7	89.9	91.1	92.3	93.5
100°	75.1	79.5	83.9	86.7	87.9	89.1	90.3	91.5
102.5°	87.0	85.6	84.2	84.2	85.5	86.9	88.2	89.6
105°	150.5	122.6	94.8	81.5	82.7	84.0	85.3	86.6
107.5°	305.9	286.2	266.4	245.4	223.1	200.8	178.6	156.3
110°	376.3	373.3	370.2	356.7	332.7	308.7	284.7	260.7



TEST NUMBER: P331886

CATALOG NUMBER: S123DIP-S340D805U835-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	425.0	427.7	430.4	429.6	425.3	420.9	416.6	412.3
115°	481.9	486.1	490.3	493.2	494.7	496.3	497.8	499.3
117.5°	532.9	536.8	540.6	543.0	544.0	544.9	545.9	546.8
120°	566.6	570.3	574.1	576.3	577.1	577.8	578.5	579.2
122.5°	599.3	602.6	605.9	607.9	608.8	609.7	610.5	611.4
125°	645.4	647.9	650.4	652.2	653.3	654.4	655.4	656.5
127.5°	691.5	694.2	696.8	698.2	698.6	699.0	699.3	699.7
130°	719.2	721.9	724.5	726.0	726.3	726.5	726.8	727.1
132.5°	745.3	747.9	750.5	751.9	752.1	752.3	752.5	752.7
135°	785.1	787.5	789.9	791.1	791.1	791.1	791.1	791.1
137.5°	820.4	822.9	825.4	826.7	826.9	827.0	827.2	827.4
140°	842.9	845.1	847.4	848.6	848.8	848.9	849.1	849.3
142.5°	863.9	865.9	867.8	868.8	868.8	868.9	868.9	868.9
145°	894.4	895.6	896.7	897.5	897.9	898.4	898.8	899.2
147.5°	921.8	922.4	923.0	923.1	922.7	922.3	921.8	921.4
150°	938.8	939.2	939.5	939.6	939.2	938.9	938.6	938.3
152.5°	954.4	955.0	955.7	955.6	954.8	954.1	953.3	952.6
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)