

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: P331891

Luminaire Tested: **S123DIP-S340D805U835-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331891
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-17,
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-F4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 340 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 805 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4318.8 lumens
Efficiency: N/A
Efficacy: 138.4 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.31
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: Semi-Indirect

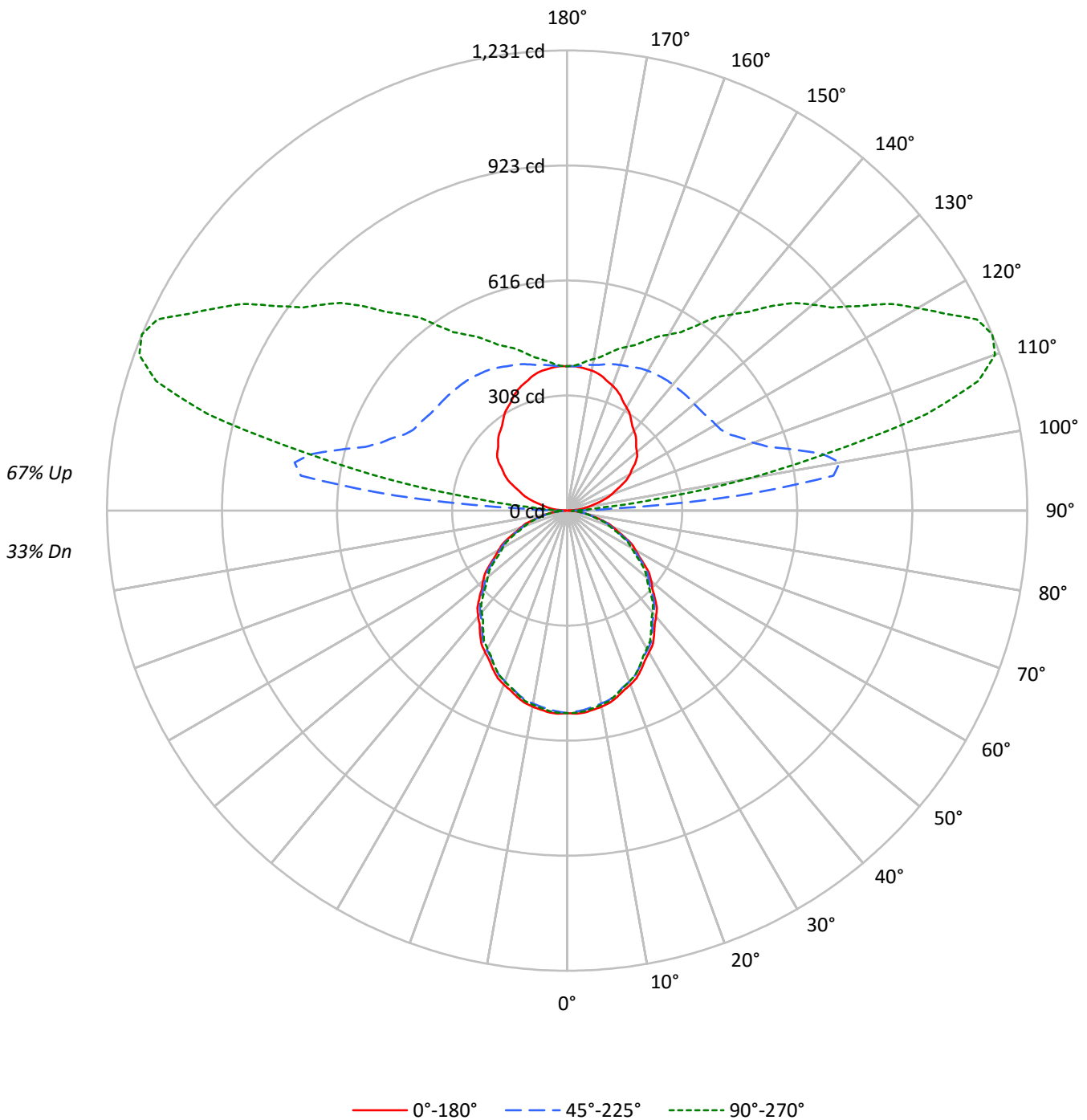
Input Watts (W): 31.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331891

CATALOG NUMBER: S123DIP-S340D805U835-4F0-1E-UDD-F4

Luminous Intensity Polar Plot





TEST NUMBER: P331891

CATALOG NUMBER: S123DIP-S340D805U835-4F0-1E-UDD-F4

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	103	103	103	103	93	93	93	93	74	74	74	56	56	56	40	40	40	33
1	94	90	86	82	84	81	78	75	64	62	60	49	48	47	35	35	34	27
2	85	78	72	67	77	71	66	61	56	53	50	43	41	39	31	30	28	23
3	78	69	62	56	70	62	56	51	50	45	42	38	35	33	28	26	24	19
4	71	61	53	47	64	55	48	43	44	39	36	34	31	28	25	23	21	17
5	65	54	46	40	58	49	42	37	39	34	30	30	27	24	22	20	18	14
6	60	48	40	35	54	44	37	32	35	30	26	27	24	21	20	18	16	13
7	55	43	36	30	50	39	33	28	32	27	23	25	21	19	18	16	14	11
8	51	39	32	27	46	36	29	25	29	24	21	23	19	17	17	14	13	10
9	48	36	28	24	43	33	26	22	27	22	18	21	17	15	15	13	11	9
10	44	33	26	21	40	30	24	19	24	20	16	19	16	13	14	12	10	8

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5833	5833	5833
5°	5861	5780	5820
10°	5821	5729	5766
15°	5753	5665	5675
20°	5674	5573	5577
25°	5567	5462	5451
30°	5450	5340	5299
35°	5327	5210	5143
40°	5199	5067	4990
45°	5057	4937	4816
50°	4915	4776	4642
55°	4731	4609	4468
60°	4545	4413	4273
65°	4378	4200	4070
70°	4135	3959	3783
75°	3780	3643	3489
80°	3409	3267	3236
85°	2989	2878	2766



TEST NUMBER: P331891

CATALOG NUMBER: S123DIP-S340D805U835-4F0-1E-UDD-F4

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	51.0	1.2
10°-20°	144.1	3.3
20°-30°	212.9	4.9
30°-40°	248.7	5.8
40°-50°	250.0	5.8
50°-60°	219.6	5.1
60°-70°	163.6	3.8
70°-80°	93.2	2.2
80°-90°	29.8	0.7
90°-100°	214.9	5.0
100°-110°	608.6	14.1
110°-120°	598.7	13.9
120°-130°	477.5	11.1
130°-140°	376.5	8.7
140°-150°	281.0	6.5
150°-160°	195.9	4.5
160°-170°	115.1	2.7
170°-180°	37.4	0.9
0°-30°	408.1	9.4
0°-40°	656.8	15.2
0°-60°	1126.5	26.1
0°-90°	1413.1	32.7
90°-120°	1422.2	32.9
90°-150°	2557.3	59.2
90°-180°	2906.0	67.3
0°-180°	4318.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	542	542	542	542	542	
5°	542	540	535	539	539	51
15°	516	514	508	512	509	145
25°	469	466	460	460	459	216
35°	405	402	396	394	391	254
45°	332	330	324	319	316	256
55°	252	251	246	241	238	226
65°	172	170	165	161	160	170
75°	91	89	88	85	84	97
85°	24	23	23	22	22	27
90°	2	9	20	22	23	3
95°	27	86	464	135	91	29
105°	91	134	629	1099	994	96
115°	160	200	481	1054	1210	159
125°	223	263	449	813	954	198
135°	261	312	442	670	773	202
145°	298	341	437	549	604	187
155°	338	365	423	481	501	156
165°	370	380	405	430	437	104
175°	385	386	389	394	393	37
180°	386	386	386	386	386	



TEST NUMBER: P331891

CATALOG NUMBER: S123DIP-S340D805U835-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	541.9	541.9	541.9	541.9	541.9	541.9	541.9	541.9	541.9	541.9	541.9
2.5°	543.8	543.4	543.1	542.8	542.4	541.8	540.9	540.0	539.1	538.2	539.0
5°	542.4	541.8	541.3	540.8	540.3	539.5	538.3	537.2	536.0	534.9	535.9
7.5°	537.1	536.5	536.0	535.5	535.0	534.1	533.0	531.8	530.6	529.4	530.3
10°	532.6	532.1	531.5	531.0	530.5	529.6	528.2	526.9	525.5	524.2	525.1
12.5°	526.6	526.2	525.7	525.3	524.9	524.0	522.8	521.5	520.2	519.0	519.7
15°	516.3	515.9	515.4	515.0	514.6	513.7	512.4	511.0	509.7	508.4	509.2
17.5°	504.2	503.7	503.2	502.6	502.1	501.2	499.8	498.5	497.1	495.8	496.3
20°	495.3	494.7	494.1	493.4	492.8	491.8	490.5	489.1	487.8	486.5	486.9
22.5°	485.2	484.6	484.0	483.4	482.8	481.8	480.4	479.1	477.7	476.4	476.7
25°	468.7	468.1	467.5	466.9	466.3	465.3	463.9	462.6	461.2	459.9	460.0
27.5°	451.1	450.5	449.9	449.3	448.7	447.7	446.3	444.8	443.4	441.9	442.0
30°	438.5	437.9	437.4	436.9	436.4	435.4	434.0	432.5	431.1	429.6	429.6
32.5°	425.8	425.1	424.4	423.7	423.1	422.1	421.0	419.9	418.8	417.7	417.1
35°	405.4	404.8	404.1	403.5	402.9	401.9	400.6	399.2	397.9	396.5	395.9
37.5°	384.5	383.7	382.9	382.1	381.4	380.3	378.9	377.5	376.2	374.8	374.1
40°	370.0	369.3	368.7	368.1	367.5	366.4	365.0	363.5	362.1	360.6	359.8
42.5°	355.4	354.7	354.0	353.3	352.6	351.5	350.1	348.6	347.2	345.7	344.9
45°	332.2	331.8	331.4	331.0	330.6	329.7	328.3	327.0	325.6	324.3	323.1
47.5°	309.2	308.6	308.0	307.4	306.8	305.9	304.6	303.3	302.1	300.8	299.6
50°	293.5	293.0	292.5	292.0	291.5	290.5	289.2	287.9	286.5	285.2	284.0
52.5°	277.1	276.8	276.4	276.1	275.7	274.8	273.4	272.0	270.6	269.1	268.2
55°	252.1	252.0	251.9	251.8	251.7	250.9	249.6	248.2	246.9	245.6	244.4
57.5°	228.2	227.9	227.5	227.2	226.8	226.1	225.0	223.9	222.9	221.8	220.8
60°	211.1	211.0	210.9	210.8	210.7	210.0	208.7	207.5	206.3	205.0	204.1
62.5°	195.8	195.5	195.3	195.0	194.7	194.0	192.7	191.5	190.2	189.0	188.1
65°	171.9	171.4	170.9	170.4	169.9	169.1	168.1	167.0	166.0	164.9	164.1
67.5°	146.7	146.2	145.8	145.3	144.9	144.2	143.5	142.7	141.9	141.1	140.4
70°	131.4	130.8	130.2	129.5	128.9	128.3	127.7	127.0	126.4	125.8	125.1
72.5°	115.4	114.9	114.5	114.0	113.5	113.0	112.3	111.6	110.9	110.2	109.5
75°	90.9	90.4	90.0	89.6	89.2	88.8	88.5	88.2	87.9	87.6	87.1
77.5°	69.1	68.9	68.7	68.5	68.2	67.9	67.6	67.2	66.8	66.4	66.1
80°	55.0	54.7	54.4	54.1	53.7	53.5	53.3	53.1	52.9	52.7	52.5
82.5°	41.2	41.1	41.1	41.0	40.9	40.9	40.8	40.8	40.8	40.7	40.5
85°	24.2	24.0	23.8	23.6	23.4	23.3	23.3	23.3	23.3	23.3	23.1
87.5°	10.0	10.1	10.1	10.4	10.4	10.6	11.0	11.3	11.7	12.1	11.9
90°	1.6	3.1	4.7	7.0	8.6	10.2	12.5	14.9	17.2	19.5	18.8
92.5°	9.7	14.4	21.0	27.1	33.6	45.2	65.7	99.3	132.3	120.2	90.7
95°	26.6	28.9	37.5	50.8	71.1	101.6	168.1	284.6	412.8	463.6	376.1
97.5°	45.3	46.1	52.9	64.4	84.4	117.4	180.9	312.3	526.0	718.5	768.7
100°	57.9	58.6	64.1	75.1	93.8	124.3	179.0	294.7	500.4	740.4	894.4
102.5°	71.0	72.4	77.2	87.6	104.5	132.4	181.5	279.7	462.8	699.7	900.7
105°	90.7	93.0	97.7	107.1	122.0	146.2	188.4	268.9	416.7	628.6	853.0
107.5°	111.6	114.0	118.5	127.7	141.7	164.2	201.2	268.2	387.3	565.7	769.5
110°	126.7	129.0	132.9	141.5	154.8	176.7	211.9	271.3	376.1	530.1	716.9



TEST NUMBER: P331891

CATALOG NUMBER: S123DIP-S340D805U835-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	140.4	142.8	146.7	155.3	168.6	189.8	222.5	277.5	369.8	506.3	671.3
115°	160.3	163.4	168.1	175.9	189.2	210.3	240.0	287.7	367.5	480.8	616.1
117.5°	180.1	183.7	187.6	194.8	209.7	229.2	258.6	301.2	368.9	465.8	582.8
120°	193.9	196.2	200.1	208.0	222.8	242.4	270.5	311.2	371.4	458.9	565.3
122.5°	205.8	208.1	212.0	220.5	234.7	255.5	283.0	320.5	375.7	454.6	550.9
125°	222.8	224.4	229.1	237.7	252.5	273.6	301.0	335.4	382.3	448.8	532.4
127.5°	235.8	238.1	243.9	252.7	269.1	290.2	316.6	347.6	389.8	446.0	516.2
130°	243.9	246.3	253.3	262.7	279.1	300.2	326.0	355.7	394.8	444.1	507.4
132.5°	250.2	253.2	260.8	272.1	288.5	309.0	334.1	363.2	398.6	443.4	499.3
135°	261.1	264.3	272.9	284.6	301.0	322.1	346.3	372.9	404.2	442.5	488.6
137.5°	271.4	274.7	283.2	295.7	311.9	331.5	354.8	380.1	408.0	440.8	479.4
140°	278.3	282.2	290.1	302.6	318.2	337.7	360.4	383.9	410.5	440.2	473.8
142.5°	285.8	289.1	297.6	308.8	324.5	342.7	364.8	387.6	412.3	438.9	468.8
145°	297.9	300.2	307.3	319.0	332.3	350.3	370.6	391.7	413.6	437.0	462.1
147.5°	310.1	311.5	318.4	328.5	341.3	356.7	375.3	394.2	413.6	434.1	455.5
150°	318.2	319.0	325.2	335.4	346.3	360.4	378.4	394.8	413.6	431.6	451.1
152.5°	326.3	326.5	332.7	341.7	351.3	364.8	380.3	396.1	411.7	428.4	446.1
155°	338.5	338.5	343.2	351.0	359.6	370.6	383.9	396.4	409.7	423.0	438.6
157.5°	348.2	348.8	352.6	359.5	366.8	375.3	385.9	397.2	407.0	418.1	430.2
160°	355.7	355.7	358.9	365.1	370.6	378.4	387.8	397.2	405.8	414.4	424.5
162.5°	361.4	361.4	363.9	368.9	373.7	380.3	388.4	396.5	403.3	410.6	418.9
165°	369.8	369.0	370.6	374.5	377.6	383.1	389.3	394.8	399.5	405.0	411.2
167.5°	376.2	375.3	376.1	379.0	381.2	384.7	389.2	393.6	395.8	399.4	403.9
170°	380.0	378.4	379.2	381.5	383.1	384.7	388.6	391.7	393.3	395.6	399.5
172.5°	382.5	381.5	381.7	383.4	384.3	385.3	388.6	391.1	391.4	392.5	395.1
175°	385.4	384.7	383.9	385.4	385.4	386.2	387.8	389.3	388.6	388.6	390.1
177.5°	386.8	386.2	385.6	386.2	386.2	386.2	386.8	388.1	386.8	386.2	386.8
180°	386.2	386.2	386.2	386.2	386.2	386.2	386.2	386.2	386.2	386.2	386.2



TEST NUMBER: P331891

CATALOG NUMBER: S123DIP-S340D805U835-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	541.9	541.9	541.9	541.9	541.9	541.9	541.9	541.9
2.5°	539.8	540.7	541.5	541.9	541.8	541.7	541.6	541.5
5°	537.0	538.0	539.1	539.5	539.3	539.1	538.8	538.6
7.5°	531.3	532.2	533.1	533.5	533.4	533.3	533.2	533.0
10°	526.1	527.0	527.9	528.3	528.1	527.9	527.7	527.5
12.5°	520.3	521.0	521.7	522.0	521.9	521.7	521.6	521.5
15°	510.0	510.8	511.7	511.8	511.1	510.5	509.9	509.3
17.5°	496.9	497.5	498.1	498.3	498.0	497.8	497.6	497.4
20°	487.3	487.7	488.1	488.2	487.8	487.5	487.2	486.9
22.5°	477.0	477.4	477.7	477.7	477.3	476.9	476.5	476.1
25°	460.1	460.2	460.3	460.2	459.9	459.6	459.3	459.0
27.5°	442.1	442.2	442.2	442.1	441.7	441.3	440.9	440.5
30°	429.6	429.6	429.6	429.2	428.5	427.8	427.1	426.3
32.5°	416.5	415.9	415.4	414.9	414.5	414.1	413.7	413.3
35°	395.3	394.7	394.0	393.5	393.0	392.4	391.9	391.4
37.5°	373.3	372.6	371.8	371.3	371.0	370.6	370.3	370.0
40°	359.0	358.2	357.3	356.7	356.3	355.9	355.5	355.1
42.5°	344.1	343.2	342.4	341.8	341.4	341.0	340.6	340.1
45°	321.8	320.6	319.3	318.5	317.9	317.4	316.9	316.4
47.5°	298.4	297.2	295.9	295.1	294.6	294.2	293.7	293.3
50°	282.9	281.7	280.6	279.7	279.1	278.5	277.9	277.2
52.5°	267.2	266.2	265.2	264.4	263.8	263.2	262.6	262.0
55°	243.3	242.1	241.0	240.2	239.7	239.1	238.6	238.1
57.5°	219.8	218.7	217.7	216.9	216.3	215.7	215.1	214.5
60°	203.2	202.2	201.3	200.6	200.0	199.5	199.0	198.5
62.5°	187.1	186.2	185.3	184.6	184.3	183.9	183.6	183.2
65°	163.3	162.5	161.6	161.1	160.8	160.4	160.1	159.8
67.5°	139.6	138.9	138.2	137.6	137.2	136.7	136.3	135.9
70°	124.4	123.6	122.9	122.3	121.8	121.3	120.7	120.2
72.5°	108.9	108.2	107.6	107.1	106.9	106.6	106.3	106.0
75°	86.6	86.0	85.5	85.1	84.8	84.5	84.2	83.9
77.5°	65.7	65.4	65.0	64.9	64.9	64.9	64.9	64.9
80°	52.4	52.3	52.2	52.2	52.2	52.2	52.2	52.2
82.5°	40.4	40.2	40.0	39.8	39.8	39.7	39.6	39.5
85°	22.9	22.7	22.5	22.4	22.4	22.4	22.4	22.4
87.5°	11.9	12.0	12.1	12.4	12.2	12.4	12.5	12.4
90°	19.5	20.3	21.1	22.7	21.9	22.7	23.5	22.7
92.5°	65.8	52.2	46.1	42.1	40.7	38.3	39.1	37.7
95°	281.5	190.8	149.3	121.2	106.3	99.3	93.8	90.7
97.5°	701.6	562.0	461.1	367.6	309.9	274.7	253.6	246.9
100°	921.8	858.4	767.0	655.9	577.0	519.9	489.4	490.2
102.5°	994.9	992.9	939.6	869.2	807.8	762.6	737.1	719.1
105°	1016.4	1094.5	1109.4	1089.1	1053.1	1023.4	998.4	994.5
107.5°	954.8	1081.7	1150.2	1178.0	1178.7	1168.7	1160.2	1153.0
110°	896.0	1039.8	1138.3	1193.1	1214.9	1221.2	1219.6	1218.1



TEST NUMBER: P331891

CATALOG NUMBER: S123DIP-S340D805U835-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	837.8	984.8	1095.2	1165.5	1205.6	1225.0	1230.9	1231.2
115°	760.7	896.7	1011.7	1096.9	1155.5	1189.9	1205.6	1209.5
117.5°	704.9	822.3	925.5	1012.0	1073.1	1112.5	1135.0	1140.4
120°	675.5	781.0	874.9	953.8	1015.6	1059.4	1078.1	1082.8
122.5°	652.4	747.9	834.8	908.2	963.0	1002.4	1023.1	1029.0
125°	621.5	706.8	781.8	844.4	894.4	928.8	948.3	953.8
127.5°	594.7	670.6	738.4	795.3	839.8	869.2	886.9	891.9
130°	577.8	648.1	711.5	764.6	806.1	834.2	850.6	856.9
132.5°	562.1	626.9	685.8	736.5	775.4	803.6	818.1	822.5
135°	541.0	596.5	647.3	691.9	730.2	753.7	767.7	773.2
137.5°	521.8	567.3	611.1	649.7	681.9	705.7	717.6	721.2
140°	510.5	550.4	587.9	621.5	651.3	673.1	685.7	684.9
142.5°	499.9	534.1	566.7	595.9	621.2	640.6	651.9	651.1
145°	487.1	512.9	537.9	560.6	580.1	596.5	602.8	604.3
147.5°	476.6	497.1	517.3	533.4	548.2	559.3	565.3	565.9
150°	469.1	487.1	503.5	518.3	530.1	538.7	543.4	543.4
152.5°	462.2	477.7	492.2	504.6	513.8	521.8	524.6	524.6
155°	451.9	464.4	476.1	485.5	492.5	498.8	500.4	501.1
157.5°	440.9	451.4	460.5	467.8	473.9	478.6	479.9	479.7
160°	434.7	443.3	451.1	456.6	462.1	466.7	466.7	466.0
162.5°	427.2	434.5	441.7	446.6	450.2	454.2	454.2	453.5
165°	417.5	422.2	427.7	431.6	434.7	437.8	437.0	437.0
167.5°	409.0	412.6	415.8	418.6	420.0	422.2	421.4	421.4
170°	403.4	405.8	408.9	410.5	411.2	412.8	412.0	412.0
172.5°	398.4	400.1	402.6	403.6	403.7	405.3	403.9	403.3
175°	391.7	392.5	394.0	394.0	394.0	394.8	394.0	393.3
177.5°	387.5	388.1	388.7	388.7	388.1	388.7	387.5	387.5
180°	386.2	386.2	386.2	386.2	386.2	386.2	386.2	386.2

(END OF REPORT)