

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: P331882-930

Luminaire Tested: **S123DIP-S340D585U930-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331882-930
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-S340D585U930-4F0-1E-UDD-F4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 340 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 585 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2879.7 lumens
Efficiency: N/A
Efficacy: 112.5 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

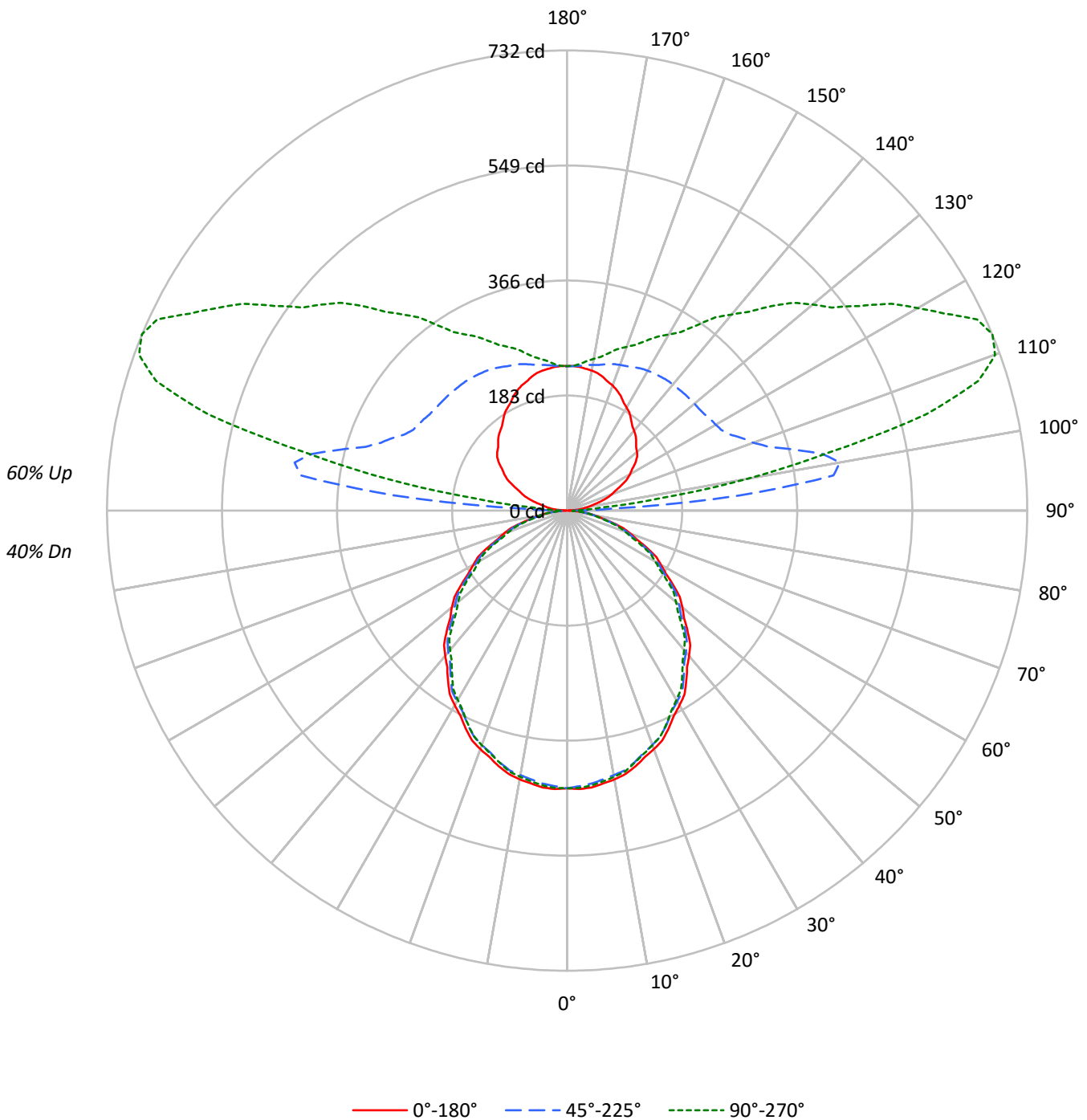
Input Watts (W): 25.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331882-930

CATALOG NUMBER: S123DIP-S340D585U930-4F0-1E-UDD-F4

Luminous Intensity Polar Plot





TEST NUMBER: P331882-930

CATALOG NUMBER: S123DIP-S340D585U930-4F0-1E-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	105	105	105	105	95	95	95	95	78	78	78	62	62	62	47	47	47	40
1	95	91	87	84	87	83	80	77	68	66	64	54	53	51	41	40	39	34
2	87	80	74	68	79	73	67	63	60	56	53	47	45	43	36	35	33	28
3	79	70	63	57	72	64	58	53	52	48	44	42	39	36	32	30	28	24
4	72	62	54	48	66	57	50	45	47	42	38	37	34	31	29	26	24	20
5	66	55	47	41	60	50	43	38	42	36	32	33	30	27	26	23	21	18
6	61	49	41	36	55	45	38	33	37	32	28	30	26	23	23	21	19	15
7	56	44	37	31	51	41	34	29	34	29	25	27	24	21	21	19	16	14
8	52	40	33	27	48	37	30	26	31	26	22	25	21	18	20	17	15	12
9	49	37	29	24	44	34	27	23	28	23	20	23	19	16	18	15	13	11
10	45	34	26	22	41	31	25	20	26	21	18	21	17	15	17	14	12	10

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4755	4755	4755
5°	4778	4712	4744
10°	4746	4671	4701
15°	4690	4619	4627
20°	4625	4543	4548
25°	4538	4454	4444
30°	4443	4354	4320
35°	4343	4248	4193
40°	4239	4131	4068
45°	4122	4025	3927
50°	4007	3893	3785
55°	3856	3757	3643
60°	3705	3597	3483
65°	3568	3423	3319
70°	3371	3229	3084
75°	3082	2969	2845
80°	2777	2665	2641
85°	2433	2347	2260



TEST NUMBER: P331882-930

CATALOG NUMBER: S123DIP-S340D585U930-4F0-1E-UDD-F4

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	41.6	1.4
10°-20°	117.5	4.1
20°-30°	173.6	6.0
30°-40°	202.8	7.0
40°-50°	203.9	7.1
50°-60°	179.1	6.2
60°-70°	133.4	4.6
70°-80°	76.0	2.6
80°-90°	23.6	0.8
90°-100°	127.8	4.4
100°-110°	362.0	12.6
110°-120°	356.1	12.4
120°-130°	284.0	9.9
130°-140°	224.0	7.8
140°-150°	167.1	5.8
150°-160°	116.5	4.0
160°-170°	68.4	2.4
170°-180°	22.3	0.8
0°-30°	332.7	11.6
0°-40°	535.5	18.6
0°-60°	918.4	31.9
0°-90°	1151.4	40.0
90°-120°	846.0	29.4
90°-150°	1521.1	52.8
90°-180°	1728.0	60.0
0°-180°	2879.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	442	442	442	442	442	
5°	442	440	436	440	439	42
15°	421	419	414	417	415	119
25°	382	380	375	375	374	176
35°	330	328	323	321	319	207
45°	271	269	264	260	258	209
55°	206	205	200	196	194	184
65°	140	138	134	132	130	138
75°	74	73	71	70	68	79
85°	20	19	19	18	18	22
90°	1	6	12	13	14	2
95°	16	51	276	80	54	17
105°	54	80	374	654	592	57
115°	95	119	286	627	719	94
125°	133	156	267	484	567	118
135°	155	185	263	398	460	120
145°	177	203	260	327	360	111
155°	201	217	252	286	298	93
165°	220	226	241	256	260	62
175°	229	230	231	234	234	22
180°	230	230	230	230	230	



TEST NUMBER: P331882-930

CATALOG NUMBER: S123DIP-S340D585U930-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	441.8	441.8	441.8	441.8	441.8	441.8	441.8	441.8	441.8	441.8	441.8
2.5°	443.4	443.0	442.8	442.5	442.2	441.7	441.0	440.3	439.5	438.8	439.4
5°	442.2	441.7	441.3	440.9	440.5	439.9	438.9	438.0	437.0	436.1	436.9
7.5°	437.9	437.4	437.0	436.6	436.2	435.5	434.6	433.6	432.6	431.6	432.4
10°	434.2	433.8	433.3	432.9	432.5	431.8	430.6	429.6	428.4	427.4	428.1
12.5°	429.3	429.0	428.6	428.3	428.0	427.2	426.2	425.2	424.1	423.1	423.7
15°	420.9	420.6	420.2	419.9	419.6	418.8	417.8	416.6	415.6	414.5	415.2
17.5°	411.1	410.7	410.3	409.8	409.4	408.6	407.5	406.4	405.3	404.2	404.6
20°	403.8	403.3	402.8	402.3	401.8	401.0	399.9	398.8	397.7	396.6	397.0
22.5°	395.6	395.1	394.6	394.1	393.6	392.8	391.7	390.6	389.5	388.4	388.7
25°	382.1	381.6	381.2	380.7	380.2	379.4	378.2	377.2	376.0	375.0	375.0
27.5°	367.8	367.3	366.8	366.3	365.8	365.0	363.9	362.6	361.5	360.3	360.4
30°	357.5	357.0	356.6	356.2	355.8	355.0	353.8	352.6	351.5	350.3	350.3
32.5°	347.2	346.6	346.0	345.4	345.0	344.1	343.2	342.3	341.4	340.6	340.1
35°	330.5	330.0	329.5	329.0	328.5	327.7	326.6	325.5	324.4	323.3	322.8
37.5°	313.5	312.8	312.2	311.5	311.0	310.1	308.9	307.8	306.7	305.6	305.0
40°	301.7	301.1	300.6	300.1	299.6	298.7	297.6	296.4	295.2	294.0	293.3
42.5°	289.8	289.2	288.6	288.0	287.5	286.6	285.4	284.2	283.1	281.8	281.2
45°	270.8	270.5	270.2	269.9	269.5	268.8	267.7	266.6	265.5	264.4	263.4
47.5°	252.1	251.6	251.1	250.6	250.1	249.4	248.3	247.3	246.3	245.2	244.3
50°	239.3	238.9	238.5	238.1	237.7	236.8	235.8	234.7	233.6	232.5	231.5
52.5°	225.9	225.7	225.3	225.1	224.8	224.0	222.9	221.8	220.6	219.4	218.7
55°	205.5	205.5	205.4	205.3	205.2	204.6	203.5	202.4	201.3	200.2	199.3
57.5°	186.1	185.8	185.5	185.2	184.9	184.3	183.4	182.5	181.7	180.8	180.0
60°	172.1	172.0	171.9	171.9	171.8	171.2	170.2	169.2	168.2	167.1	166.4
62.5°	159.6	159.4	159.2	159.0	158.7	158.2	157.1	156.1	155.1	154.1	153.4
65°	140.1	139.7	139.3	138.9	138.5	137.9	137.1	136.2	135.3	134.4	133.8
67.5°	119.6	119.2	118.9	118.5	118.1	117.6	117.0	116.3	115.7	115.0	114.5
70°	107.1	106.6	106.2	105.6	105.1	104.6	104.1	103.5	103.1	102.6	102.0
72.5°	94.1	93.7	93.4	92.9	92.5	92.1	91.6	91.0	90.4	89.8	89.3
75°	74.1	73.7	73.4	73.1	72.7	72.4	72.2	71.9	71.7	71.4	71.0
77.5°	56.3	56.2	56.0	55.8	55.6	55.4	55.1	54.8	54.5	54.1	53.9
80°	44.8	44.6	44.4	44.1	43.8	43.6	43.5	43.3	43.1	43.0	42.8
82.5°	33.6	33.5	33.5	33.4	33.3	33.3	33.3	33.3	33.3	33.2	33.0
85°	19.7	19.6	19.4	19.2	19.1	19.0	19.0	19.0	19.0	19.0	18.8
87.5°	8.1	8.1	8.1	8.2	8.2	8.2	8.4	8.6	8.8	9.0	8.9
90°	0.9	1.9	2.8	4.2	5.1	6.0	7.4	8.8	10.2	11.7	11.2
92.5°	5.8	8.6	12.5	16.1	20.0	26.9	39.1	59.0	78.7	71.5	54.0
95°	15.8	17.2	22.3	30.2	42.3	60.4	100.0	169.3	245.6	275.7	223.6
97.5°	27.0	27.5	31.5	38.3	50.2	69.9	107.6	185.7	312.8	427.4	457.2
100°	34.4	34.9	38.2	44.7	55.8	73.9	106.5	175.3	297.6	440.3	532.0
102.5°	42.2	43.0	46.0	52.1	62.1	78.8	107.9	166.4	275.3	416.2	535.7
105°	54.0	55.4	58.1	63.7	72.6	87.0	112.1	160.0	247.9	373.9	507.4
107.5°	66.4	67.8	70.5	76.0	84.3	97.7	119.7	159.5	230.4	336.5	457.7
110°	75.3	76.7	79.1	84.1	92.0	105.1	126.0	161.3	223.6	315.3	426.4



TEST NUMBER: P331882-930

CATALOG NUMBER: S123DIP-S340D585U930-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	83.5	85.0	87.2	92.4	100.3	112.9	132.3	165.1	220.0	301.2	399.3
115°	95.3	97.2	100.0	104.6	112.5	125.1	142.8	171.1	218.6	286.0	366.5
117.5°	107.1	109.3	111.6	115.9	124.7	136.3	153.8	179.1	219.4	277.0	346.7
120°	115.4	116.8	119.0	123.7	132.6	144.1	160.9	185.1	220.9	273.0	336.2
122.5°	122.4	123.8	126.1	131.1	139.6	152.0	168.4	190.7	223.5	270.4	327.7
125°	132.6	133.5	136.2	141.4	150.2	162.7	179.0	199.5	227.4	266.9	316.7
127.5°	140.2	141.6	145.1	150.3	160.0	172.6	188.3	206.8	231.9	265.2	307.0
130°	145.1	146.5	150.7	156.2	166.0	178.6	193.9	211.6	234.8	264.2	301.8
132.5°	148.8	150.6	155.2	161.8	171.6	183.8	198.8	216.1	237.1	263.7	296.9
135°	155.3	157.2	162.3	169.3	179.0	191.6	206.0	221.8	240.4	263.2	290.7
137.5°	161.4	163.4	168.4	175.9	185.6	197.1	211.0	226.1	242.6	262.2	285.2
140°	165.6	167.9	172.5	179.9	189.2	200.9	214.3	228.4	244.1	261.8	281.8
142.5°	170.0	171.9	177.0	183.7	193.0	203.9	217.0	230.6	245.2	261.1	278.8
145°	177.2	178.6	182.8	189.7	197.6	208.3	220.5	233.0	246.0	259.9	274.8
147.5°	184.4	185.2	189.4	195.4	203.0	212.1	223.2	234.5	246.0	258.2	270.9
150°	189.2	189.7	193.5	199.5	206.0	214.3	225.1	234.8	246.0	256.7	268.3
152.5°	194.1	194.2	198.0	203.3	209.0	217.0	226.2	235.6	244.9	254.9	265.4
155°	201.4	201.4	204.2	208.8	213.9	220.5	228.4	235.8	243.7	251.6	260.9
157.5°	207.1	207.5	209.7	213.9	218.2	223.2	229.5	236.3	242.1	248.7	255.8
160°	211.6	211.6	213.4	217.2	220.5	225.1	230.6	236.3	241.3	246.5	252.5
162.5°	214.9	214.9	216.5	219.4	222.3	226.2	231.1	235.9	239.9	244.3	249.2
165°	220.0	219.5	220.5	222.7	224.6	227.9	231.5	234.8	237.7	240.9	244.6
167.5°	223.8	223.2	223.6	225.4	226.7	228.8	231.5	234.1	235.4	237.5	240.3
170°	226.0	225.1	225.5	226.9	227.9	228.8	231.1	233.0	233.9	235.3	237.7
172.5°	227.5	226.9	227.1	228.0	228.6	229.2	231.1	232.6	232.8	233.4	235.1
175°	229.3	228.8	228.4	229.3	229.3	229.8	230.6	231.5	231.1	231.1	232.0
177.5°	230.1	229.8	229.3	229.8	229.8	229.8	230.1	230.8	230.1	229.8	230.1
180°	229.8	229.8	229.8	229.8	229.8	229.8	229.8	229.8	229.8	229.8	229.8



TEST NUMBER: P331882-930

CATALOG NUMBER: S123DIP-S340D585U930-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	441.8	441.8	441.8	441.8	441.8	441.8	441.8	441.8
2.5°	440.1	440.8	441.5	441.8	441.7	441.6	441.6	441.5
5°	437.8	438.6	439.5	439.9	439.7	439.5	439.3	439.1
7.5°	433.2	433.9	434.6	435.0	434.9	434.8	434.7	434.6
10°	428.9	429.7	430.4	430.7	430.6	430.4	430.2	430.1
12.5°	424.2	424.8	425.3	425.6	425.5	425.3	425.3	425.2
15°	415.8	416.5	417.2	417.3	416.7	416.2	415.7	415.2
17.5°	405.1	405.6	406.1	406.3	406.0	405.9	405.7	405.5
20°	397.3	397.6	397.9	398.0	397.7	397.5	397.2	397.0
22.5°	388.9	389.2	389.5	389.5	389.1	388.8	388.5	388.2
25°	375.1	375.2	375.3	375.2	375.0	374.7	374.5	374.2
27.5°	360.4	360.5	360.5	360.4	360.1	359.8	359.5	359.1
30°	350.3	350.3	350.3	349.9	349.4	348.8	348.2	347.6
32.5°	339.6	339.1	338.7	338.3	337.9	337.6	337.3	337.0
35°	322.3	321.8	321.2	320.8	320.4	319.9	319.5	319.1
37.5°	304.4	303.8	303.1	302.7	302.5	302.1	301.9	301.7
40°	292.7	292.0	291.3	290.8	290.5	290.2	289.8	289.5
42.5°	280.5	279.8	279.2	278.7	278.3	278.0	277.7	277.3
45°	262.4	261.4	260.3	259.7	259.2	258.8	258.4	258.0
47.5°	243.3	242.3	241.2	240.6	240.2	239.9	239.5	239.1
50°	230.6	229.7	228.8	228.0	227.6	227.1	226.6	226.0
52.5°	217.8	217.0	216.2	215.6	215.1	214.6	214.1	213.6
55°	198.4	197.4	196.5	195.8	195.4	194.9	194.5	194.1
57.5°	179.2	178.3	177.5	176.8	176.3	175.9	175.4	174.9
60°	165.7	164.9	164.1	163.5	163.1	162.7	162.2	161.8
62.5°	152.5	151.8	151.1	150.5	150.3	149.9	149.7	149.4
65°	133.1	132.5	131.8	131.3	131.1	130.8	130.5	130.3
67.5°	113.8	113.2	112.7	112.2	111.9	111.5	111.1	110.8
70°	101.4	100.8	100.2	99.7	99.3	98.9	98.4	98.0
72.5°	88.8	88.2	87.7	87.3	87.2	86.9	86.7	86.4
75°	70.6	70.1	69.7	69.4	69.1	68.9	68.6	68.4
77.5°	53.6	53.3	53.0	52.9	52.9	52.9	52.9	52.9
80°	42.7	42.6	42.6	42.6	42.6	42.6	42.6	42.6
82.5°	32.9	32.8	32.6	32.4	32.4	32.4	32.3	32.2
85°	18.7	18.5	18.3	18.3	18.3	18.3	18.3	18.3
87.5°	8.9	8.9	8.9	9.0	9.0	9.0	9.2	9.0
90°	11.7	12.1	12.6	13.5	13.0	13.5	13.9	13.5
92.5°	39.1	31.1	27.5	25.0	24.2	22.7	23.2	22.4
95°	167.4	113.5	88.8	72.1	63.3	59.0	55.8	54.0
97.5°	417.4	334.3	274.3	218.7	184.3	163.4	150.8	146.8
100°	548.3	510.6	456.2	390.1	343.2	309.2	291.1	291.6
102.5°	591.8	590.6	558.9	517.0	480.5	453.6	438.4	427.7
105°	604.5	651.0	659.9	647.8	626.4	608.7	593.9	591.5
107.5°	567.9	643.4	684.1	700.7	701.1	695.1	690.1	685.8
110°	532.9	618.5	677.1	709.6	722.7	726.4	725.5	724.5



TEST NUMBER: P331882-930

CATALOG NUMBER: S123DIP-S340D585U930-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	498.3	585.7	651.4	693.2	717.1	728.6	732.1	732.3
115°	452.5	533.4	601.8	652.4	687.3	707.8	717.1	719.4
117.5°	419.2	489.1	550.5	601.9	638.3	661.7	675.1	678.2
120°	401.8	464.6	520.3	567.4	604.1	630.1	641.2	644.1
122.5°	388.0	444.8	496.5	540.1	572.8	596.2	608.5	612.0
125°	369.7	420.4	465.0	502.2	532.0	552.4	564.1	567.4
127.5°	353.7	398.9	439.2	473.0	499.5	517.0	527.5	530.5
130°	343.6	385.5	423.1	454.8	479.5	496.2	506.0	509.6
132.5°	334.4	372.8	407.9	438.1	461.2	477.9	486.6	489.2
135°	321.8	354.8	385.1	411.6	434.3	448.3	456.6	459.9
137.5°	310.4	337.5	363.5	386.5	405.6	419.7	426.8	428.9
140°	303.7	327.3	349.7	369.7	387.3	400.4	407.8	407.3
142.5°	297.3	317.7	337.0	354.4	369.5	381.1	387.8	387.3
145°	289.7	305.1	319.9	333.5	345.0	354.8	358.6	359.5
147.5°	283.5	295.6	307.7	317.2	326.0	332.6	336.2	336.6
150°	279.0	289.7	299.5	308.3	315.3	320.4	323.2	323.2
152.5°	274.9	284.1	292.8	300.1	305.6	310.4	312.0	312.0
155°	268.8	276.2	283.2	288.8	292.9	296.7	297.6	298.1
157.5°	262.3	268.5	273.9	278.3	281.9	284.7	285.4	285.4
160°	258.5	263.7	268.3	271.6	274.8	277.6	277.6	277.1
162.5°	254.1	258.4	262.8	265.6	267.7	270.2	270.2	269.7
165°	248.3	251.1	254.4	256.7	258.5	260.4	259.9	259.9
167.5°	243.3	245.4	247.3	249.0	249.8	251.1	250.6	250.6
170°	239.9	241.3	243.2	244.1	244.6	245.6	245.1	245.1
172.5°	237.0	238.0	239.5	240.0	240.1	241.1	240.3	239.9
175°	233.0	233.4	234.4	234.4	234.4	234.8	234.4	233.9
177.5°	230.5	230.8	231.2	231.2	230.8	231.2	230.5	230.5
180°	229.8	229.8	229.8	229.8	229.8	229.8	229.8	229.8

(END OF REPORT)