

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: P332243-930

Luminaire Tested: **S123RDIP-S340D365U930-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332243-930
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: S123RDIP-S340D365U930-4F0-1E-UDD-F
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 340 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 365 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2241.8 lumens
Efficiency: N/A
Efficacy: 110.4 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.06 / 1.22
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: General Diffuse

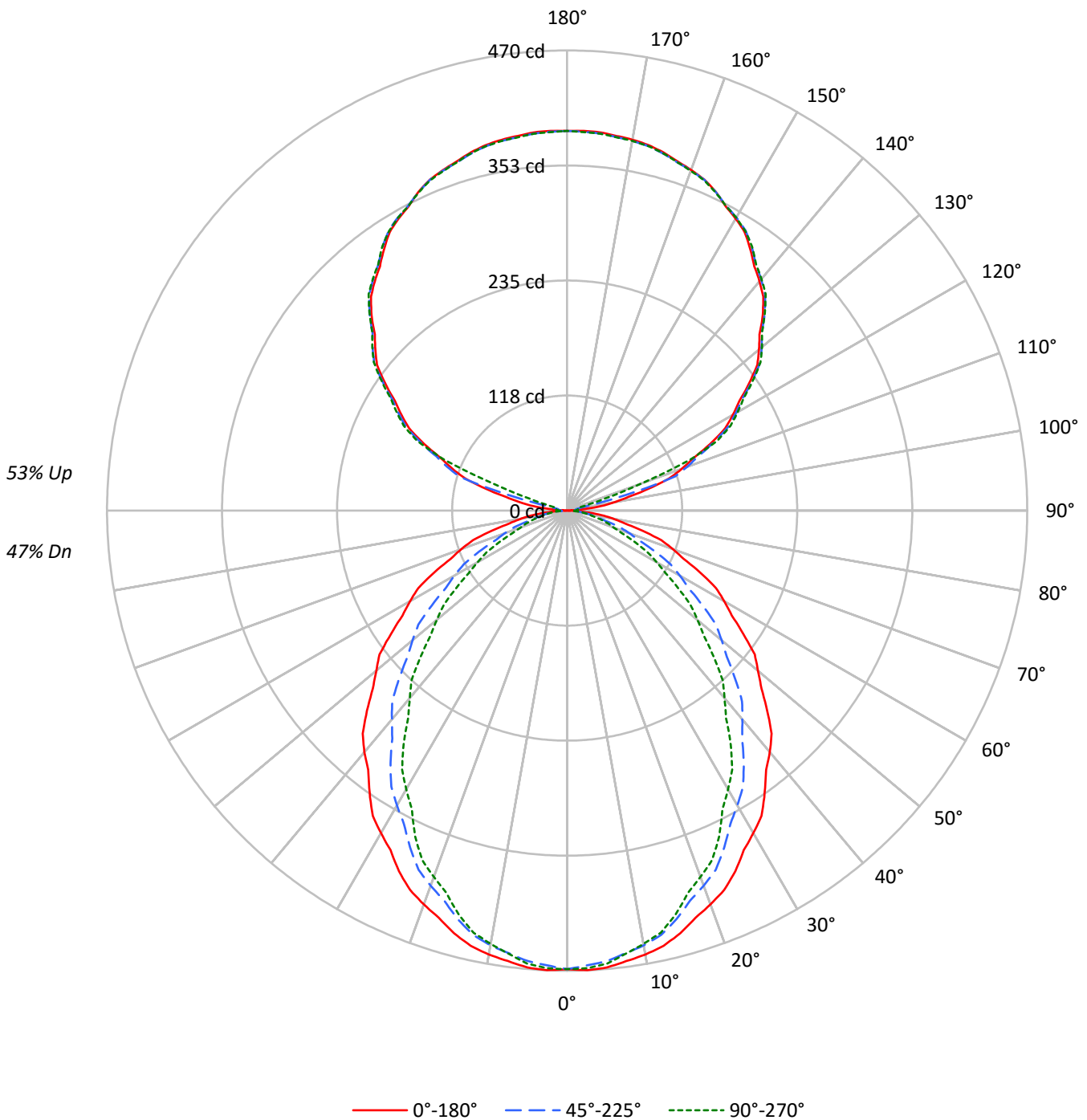
Input Watts (W): 20.3
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332243-930

CATALOG NUMBER: S123RDIP-S340D365U930-4F0-1E-UDD-F

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	106	106	106	106	98	98	98	98	82	82	82	67	67	67	54	54	54	47
1	97	93	90	86	89	86	83	80	72	70	68	59	58	56	48	47	46	40
2	89	82	76	71	82	75	70	66	64	60	57	53	50	48	42	41	39	34
3	81	72	65	59	75	67	60	55	56	52	48	47	43	41	38	36	34	29
4	75	64	56	50	68	59	52	47	50	45	41	42	38	35	34	31	29	25
5	69	57	49	43	63	53	46	41	45	40	36	38	34	31	31	28	26	22
6	63	51	43	38	58	48	41	35	41	35	31	34	30	27	28	25	23	20
7	58	46	39	33	54	43	36	31	37	31	27	31	27	24	26	23	20	18
8	54	42	35	29	50	39	32	28	34	28	24	28	24	21	24	20	18	16
9	51	39	31	26	47	36	29	25	31	26	22	26	22	19	22	19	16	14
10	47	35	28	24	44	33	27	22	29	23	20	24	20	17	20	17	15	13

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5042	5042	5042
5°	5061	4991	5020
10°	5032	4928	4912
15°	4979	4813	4763
20°	4904	4669	4560
25°	4828	4507	4363
30°	4727	4320	4084
35°	4623	4133	3829
40°	4526	3912	3513
45°	4401	3694	3227
50°	4262	3448	2907
55°	4121	3166	2609
60°	3991	2863	2282
65°	3823	2534	1954
70°	3610	2127	1577
75°	3302	1676	1485
80°	2944	1488	1364
85°	2482	1309	1223



TEST NUMBER: P332243-930

CATALOG NUMBER: S123RDIP-S340D365U930-4F0-1E-UDD-F

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	44.0	2.0
10°-20°	122.4	5.5
20°-30°	176.2	7.9
30°-40°	198.5	8.9
40°-50°	189.9	8.5
50°-60°	155.5	6.9
60°-70°	104.9	4.7
70°-80°	52.8	2.4
80°-90°	15.0	0.7
90°-100°	14.1	0.6
100°-110°	67.2	3.0
110°-120°	161.4	7.2
120°-130°	205.5	9.2
130°-140°	219.6	9.8
140°-150°	205.4	9.2
150°-160°	165.6	7.4
160°-170°	106.9	4.8
170°-180°	36.8	1.6
0°-30°	342.6	15.3
0°-40°	541.1	24.1
0°-60°	886.5	39.5
0°-90°	1059.2	47.2
90°-120°	242.7	10.8
90°-150°	873.2	38.9
90°-180°	1183.0	52.8
0°-180°	2241.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	468	468	468	468	468	
5°	468	466	462	465	465	44
15°	447	442	432	430	427	126
25°	406	396	380	372	367	187
35°	352	338	314	299	291	220
45°	289	271	243	222	212	223
55°	220	200	169	147	139	197
65°	150	129	100	82	77	148
75°	79	61	40	37	36	85
85°	20	12	11	10	10	23
90°	0	3	7	8	9	2
95°	18	7	9	11	11	22
105°	86	87	63	15	13	91
115°	161	163	165	168	169	159
125°	227	229	230	231	232	203
135°	283	284	286	286	286	217
145°	326	328	329	329	329	204
155°	359	359	359	360	359	165
165°	379	378	378	380	378	107
175°	388	386	387	388	386	37
180°	388	388	388	388	388	



TEST NUMBER: P332243-930

CATALOG NUMBER: S123RDIP-S340D365U930-4F0-1E-UDD-F

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	468.4	468.4	468.4	468.4	468.4	468.4	468.4	468.4	468.4	468.4	468.4
2.5°	469.9	469.6	469.4	469.1	468.9	468.3	467.5	466.7	465.9	465.0	465.8
5°	468.4	468.0	467.6	467.2	466.7	466.0	465.0	464.0	462.9	461.9	462.7
7.5°	464.1	463.6	463.2	462.7	462.3	461.4	460.1	458.8	457.4	456.1	456.5
10°	460.4	459.8	459.3	458.7	458.0	457.0	455.5	454.0	452.4	450.9	451.0
12.5°	455.3	454.6	454.0	453.3	452.7	451.3	449.5	447.7	445.8	443.9	443.8
15°	446.8	445.8	444.9	443.9	443.0	441.4	439.0	436.7	434.3	431.9	431.5
17.5°	436.0	435.0	433.9	432.8	431.7	429.7	426.6	423.6	420.7	417.7	416.8
20°	428.1	426.8	425.4	424.1	422.7	420.4	417.3	414.0	410.8	407.6	406.5
22.5°	419.3	417.8	416.2	414.7	413.1	410.7	407.2	403.8	400.4	397.0	395.6
25°	406.5	404.4	402.3	400.1	398.0	395.0	391.2	387.3	383.4	379.5	377.7
27.5°	390.9	388.6	386.2	383.9	381.6	378.3	374.0	369.6	365.3	360.9	358.5
30°	380.3	377.7	375.2	372.7	370.1	366.5	361.7	357.0	352.3	347.6	344.7
32.5°	369.7	366.7	363.9	361.0	358.2	354.2	349.2	344.2	339.2	334.2	331.1
35°	351.8	348.7	345.7	342.7	339.7	335.5	330.3	325.0	319.8	314.5	311.0
37.5°	333.7	330.3	326.9	323.6	320.2	315.7	310.1	304.5	299.0	293.3	289.3
40°	322.1	318.5	314.7	311.0	307.3	302.4	296.4	290.4	284.5	278.4	274.1
42.5°	309.1	305.3	301.7	297.9	294.2	289.3	283.1	276.9	270.7	264.5	259.7
45°	289.1	285.3	281.5	277.7	273.9	268.7	262.3	255.8	249.2	242.7	237.9
47.5°	269.1	265.0	260.7	256.6	252.4	247.1	240.6	234.1	227.6	221.1	215.9
50°	254.5	250.5	246.6	242.6	238.6	233.3	226.4	219.6	212.7	205.9	200.6
52.5°	241.5	237.2	232.8	228.5	224.2	218.7	211.9	205.1	198.4	191.6	186.2
55°	219.6	215.4	211.3	207.2	203.0	197.4	190.2	183.0	175.9	168.7	163.8
57.5°	199.3	194.9	190.4	185.8	181.3	175.5	168.3	161.0	153.8	146.7	142.0
60°	185.4	180.8	176.1	171.5	166.8	161.0	154.0	147.0	140.0	133.0	128.4
62.5°	171.4	166.7	162.1	157.5	152.9	147.0	140.0	133.0	126.0	119.0	114.7
65°	150.1	145.4	140.8	136.2	131.5	125.9	119.3	112.7	106.2	99.5	95.4
67.5°	128.7	124.0	119.3	114.6	109.9	104.4	98.1	91.8	85.4	79.2	76.1
70°	114.7	110.1	105.6	101.0	96.5	91.2	85.4	79.4	73.5	67.6	64.7
72.5°	100.8	96.3	91.8	87.2	82.8	77.9	72.5	67.1	61.7	56.3	54.0
75°	79.4	75.3	71.3	67.3	63.2	58.9	54.2	49.6	44.9	40.3	39.5
77.5°	59.9	56.3	52.6	48.9	45.3	42.0	39.0	36.0	33.0	30.0	29.6
80°	47.5	44.0	40.6	37.1	33.7	31.1	29.3	27.5	25.7	24.0	23.6
82.5°	35.6	32.6	29.7	26.7	23.6	21.8	21.0	20.1	19.3	18.4	18.2
85°	20.1	18.3	16.4	14.6	12.7	11.7	11.4	11.2	10.9	10.6	10.4
87.5°	7.3	6.8	6.1	5.5	4.9	4.6	4.8	5.0	5.1	5.3	5.3
90°	0.3	0.9	1.5	2.2	2.9	3.6	4.4	5.2	6.1	6.9	7.2
92.5°	5.4	5.2	5.0	4.8	4.6	4.9	5.5	6.1	6.8	7.3	7.7
95°	17.6	14.9	12.3	9.7	7.1	6.1	6.8	7.5	8.2	9.0	9.4
97.5°	35.3	34.2	32.9	31.8	30.6	27.7	23.1	18.5	13.9	9.3	9.8
100°	48.7	50.0	51.3	52.5	53.8	49.5	39.5	29.5	19.5	9.5	10.0
102.5°	63.9	64.8	65.7	66.7	67.6	62.6	51.7	40.8	29.8	19.0	17.4
105°	85.9	86.6	87.2	88.0	88.7	86.2	80.4	74.6	68.9	63.1	51.8
107.5°	109.0	109.6	110.1	110.7	111.3	112.0	112.9	113.8	114.7	115.6	107.3
110°	124.5	125.0	125.5	126.0	126.5	127.1	127.8	128.5	129.2	130.0	127.8



TEST NUMBER: P332243-930

CATALOG NUMBER: S123RDIP-S340D365U930-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	139.2	139.7	140.1	140.6	141.0	141.6	142.4	143.1	143.7	144.5	144.5
115°	161.0	161.4	161.8	162.2	162.6	163.1	163.6	164.2	164.8	165.3	166.0
117.5°	182.2	182.7	183.1	183.6	184.1	184.5	184.7	185.1	185.4	185.6	186.1
120°	195.3	195.9	196.5	197.1	197.6	198.0	198.2	198.4	198.6	198.8	199.3
122.5°	208.7	209.2	209.6	210.1	210.6	210.9	211.2	211.4	211.7	211.9	212.3
125°	227.1	227.6	228.0	228.5	229.1	229.4	229.8	230.0	230.2	230.5	230.6
127.5°	244.8	245.3	245.8	246.3	246.8	247.2	247.5	247.9	248.2	248.4	248.7
130°	255.8	256.3	256.8	257.4	257.9	258.3	258.5	258.8	259.0	259.3	259.5
132.5°	266.4	266.9	267.5	268.0	268.5	268.8	269.0	269.3	269.5	269.7	269.9
135°	282.7	283.0	283.4	283.8	284.1	284.5	284.7	285.0	285.3	285.5	285.7
137.5°	296.4	296.9	297.4	297.9	298.4	298.7	298.9	299.0	299.1	299.3	299.6
140°	305.7	306.1	306.5	306.8	307.2	307.5	307.7	307.9	308.1	308.3	308.5
142.5°	314.2	314.6	315.0	315.4	315.8	316.0	316.3	316.4	316.6	316.8	317.0
145°	326.1	326.6	327.0	327.5	327.9	328.2	328.3	328.5	328.6	328.7	328.9
147.5°	337.4	337.7	337.9	338.3	338.5	338.8	338.9	339.0	339.2	339.2	339.4
150°	344.3	344.5	344.6	344.9	345.0	345.2	345.4	345.4	345.6	345.7	345.8
152.5°	350.5	350.6	350.7	350.7	350.8	351.0	351.0	351.1	351.1	351.2	351.5
155°	359.3	359.1	359.0	358.9	358.7	358.7	358.8	358.8	358.9	359.0	359.3
157.5°	366.1	366.1	366.1	366.0	366.0	366.0	365.9	365.8	365.7	365.7	366.1
160°	370.2	370.1	370.1	370.0	370.0	369.9	369.8	369.7	369.7	369.7	370.0
162.5°	374.1	374.0	373.8	373.7	373.5	373.3	373.2	373.2	373.2	373.1	373.5
165°	378.9	378.6	378.5	378.3	378.1	378.0	377.9	377.8	377.7	377.7	378.2
167.5°	382.5	382.3	382.0	381.8	381.5	381.4	381.4	381.4	381.4	381.4	381.9
170°	384.6	384.3	384.1	383.8	383.6	383.4	383.4	383.4	383.4	383.4	384.0
172.5°	386.0	385.7	385.4	385.1	384.7	384.7	384.7	384.7	384.8	384.8	385.4
175°	387.8	387.4	387.1	386.9	386.5	386.4	386.5	386.5	386.5	386.6	387.1
177.5°	388.2	388.0	387.8	387.5	387.2	387.1	387.2	387.2	387.3	387.3	387.8
180°	387.8	387.8	387.8	387.8	387.8	387.8	387.8	387.8	387.8	387.8	387.8



TEST NUMBER: P332243-930

CATALOG NUMBER: S123RDIP-S340D365U930-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	468.4	468.4	468.4	468.4	468.4	468.4	468.4	468.4
2.5°	466.5	467.2	468.1	468.3	468.2	468.1	467.9	467.8
5°	463.5	464.2	465.0	465.3	465.1	465.0	464.8	464.6
7.5°	457.0	457.4	457.8	457.9	457.5	457.3	457.0	456.7
10°	451.1	451.2	451.3	451.1	450.7	450.3	449.8	449.4
12.5°	443.8	443.8	443.8	443.4	443.0	442.5	442.0	441.5
15°	431.0	430.6	430.2	429.7	429.2	428.5	428.0	427.4
17.5°	415.9	415.0	414.1	413.2	412.3	411.4	410.6	409.7
20°	405.4	404.3	403.2	402.2	401.1	400.1	399.2	398.1
22.5°	394.3	392.9	391.5	390.4	389.4	388.5	387.5	386.6
25°	375.9	374.2	372.4	371.0	370.1	369.2	368.3	367.4
27.5°	356.0	353.6	351.1	349.2	347.7	346.3	345.0	343.5
30°	341.9	339.0	336.1	334.0	332.6	331.3	330.0	328.6
32.5°	327.9	324.8	321.6	319.4	318.0	316.6	315.1	313.7
35°	307.3	303.6	300.0	297.4	296.0	294.4	292.9	291.4
37.5°	285.1	281.0	276.9	273.9	272.0	270.1	268.2	266.4
40°	269.7	265.3	260.9	257.7	255.8	253.9	251.9	250.0
42.5°	254.9	250.1	245.3	242.1	240.3	238.6	236.8	235.1
45°	233.1	228.3	223.5	220.0	218.1	216.1	214.0	212.0
47.5°	210.6	205.4	200.2	196.7	194.9	193.1	191.2	189.4
50°	195.4	190.2	185.0	181.4	179.4	177.5	175.5	173.6
52.5°	180.8	175.3	169.9	166.3	164.5	162.8	161.1	159.3
55°	158.9	154.0	149.1	145.8	144.1	142.4	140.7	139.0
57.5°	137.4	132.7	128.2	125.1	123.7	122.2	120.8	119.4
60°	123.8	119.3	114.7	111.7	110.3	108.8	107.5	106.0
62.5°	110.4	106.2	101.8	98.9	97.4	96.0	94.4	92.9
65°	91.2	87.2	83.0	80.5	79.5	78.6	77.7	76.7
67.5°	73.0	69.9	66.8	64.7	63.8	62.8	61.8	60.8
70°	61.7	58.8	55.8	53.9	52.9	52.0	51.0	50.1
72.5°	51.5	49.2	46.7	45.3	44.9	44.5	44.2	43.8
75°	38.6	37.7	36.9	36.4	36.2	36.0	35.9	35.7
77.5°	29.1	28.6	28.2	27.9	27.7	27.6	27.4	27.2
80°	23.4	23.2	22.9	22.7	22.5	22.3	22.2	22.0
82.5°	17.9	17.7	17.4	17.3	17.3	17.2	17.2	17.2
85°	10.3	10.1	9.9	9.9	9.9	9.9	9.9	9.9
87.5°	5.3	5.3	5.3	5.2	5.2	5.1	5.1	5.1
90°	7.4	7.7	7.9	8.2	8.2	8.4	8.5	8.6
92.5°	8.2	8.6	9.0	9.3	9.3	9.4	9.5	9.5
95°	9.9	10.3	10.8	10.9	10.9	10.9	10.9	10.9
97.5°	10.3	10.8	11.3	11.6	11.7	11.7	11.8	11.9
100°	10.5	11.0	11.6	11.8	11.9	12.0	12.1	12.1
102.5°	15.8	14.2	12.6	11.9	12.0	12.1	12.2	12.3
105°	40.4	29.1	17.8	12.1	12.3	12.4	12.6	12.6
107.5°	99.1	90.7	82.4	73.9	65.5	56.9	48.3	39.8
110°	125.7	123.6	121.5	115.9	106.7	97.5	88.4	79.2



TEST NUMBER: P332243-930

CATALOG NUMBER: S123RDIP-S340D365U930-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	144.6	144.6	144.6	143.7	141.7	139.8	137.9	135.9
115°	166.6	167.3	168.0	168.4	168.6	168.9	169.2	169.4
117.5°	186.7	187.2	187.7	188.0	188.0	188.1	188.2	188.2
120°	199.8	200.3	200.8	201.1	201.1	201.1	201.1	201.1
122.5°	212.6	213.0	213.4	213.5	213.6	213.7	213.7	213.8
125°	230.7	230.9	231.0	231.1	231.2	231.4	231.5	231.6
127.5°	248.8	249.1	249.3	249.3	249.2	249.1	248.9	248.8
130°	259.8	260.1	260.3	260.4	260.2	260.2	260.0	259.8
132.5°	270.2	270.4	270.7	270.8	270.5	270.4	270.2	270.0
135°	285.9	286.1	286.3	286.3	286.1	285.9	285.7	285.5
137.5°	299.9	300.2	300.5	300.6	300.4	300.4	300.2	300.1
140°	308.8	309.0	309.3	309.3	309.2	309.1	309.0	308.8
142.5°	317.2	317.4	317.6	317.6	317.5	317.2	317.1	316.9
145°	329.0	329.1	329.2	329.3	329.3	329.3	329.3	329.3
147.5°	339.5	339.7	339.8	339.7	339.4	339.1	338.8	338.5
150°	346.0	346.1	346.3	346.2	346.0	345.8	345.6	345.4
152.5°	351.7	352.0	352.2	352.1	351.9	351.6	351.2	351.0
155°	359.6	360.0	360.3	360.2	359.9	359.5	359.1	358.7
157.5°	366.5	366.9	367.3	367.2	366.7	366.2	365.7	365.2
160°	370.4	370.8	371.2	371.1	370.7	370.2	369.8	369.3
162.5°	374.0	374.4	374.8	374.9	374.5	374.1	373.7	373.2
165°	378.7	379.3	379.8	379.8	379.4	378.9	378.5	378.0
167.5°	382.4	382.9	383.4	383.4	382.9	382.4	381.9	381.4
170°	384.5	385.0	385.5	385.5	385.0	384.5	384.0	383.4
172.5°	385.9	386.4	386.9	386.9	386.3	385.7	385.1	384.6
175°	387.5	388.0	388.4	388.4	387.9	387.3	386.9	386.4
177.5°	388.2	388.6	389.0	388.9	388.4	387.9	387.3	386.9
180°	387.8	387.8	387.8	387.8	387.8	387.8	387.8	387.8

(END OF REPORT)