

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: P332101-940

Luminaire Tested: **S123DIW-S340D755U940-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332101-940
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-9,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIW-S340D755U940-4F0-1E-UDD-F1
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 340 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 755 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3594.3 lumens
Efficiency: N/A
Efficacy: 118.2 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

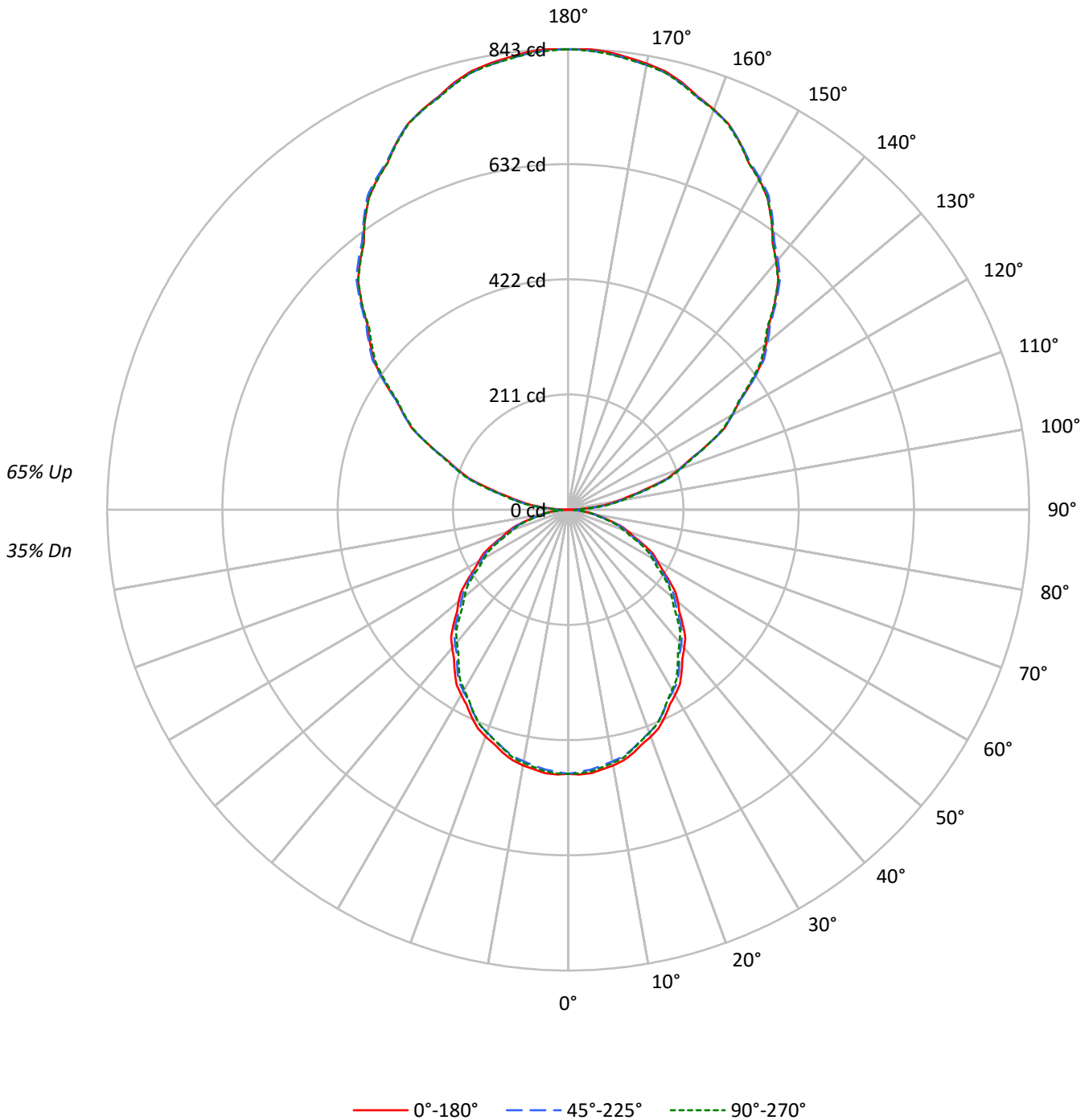
Input Watts (W): 30.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332101-940

CATALOG NUMBER: S123DIW-S340D755U940-4F0-1E-UDD-F1

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	104	104	104	104	94	94	94	94	75	75	75	58	58	58	42	42	42	35
1	94	90	86	83	85	82	78	75	66	63	61	51	49	48	37	36	36	29
2	86	79	73	68	77	71	66	62	57	54	51	45	42	40	33	31	30	25
3	78	69	62	56	70	63	57	52	51	46	43	39	36	34	29	27	25	21
4	72	61	53	47	64	55	49	44	45	40	36	35	32	29	26	24	22	18
5	66	54	46	40	59	49	42	37	40	35	31	31	28	25	23	21	19	15
6	60	49	41	35	54	44	37	32	36	31	27	28	25	22	21	19	17	14
7	56	44	36	31	50	40	33	28	33	27	24	26	22	19	19	17	15	12
8	52	40	32	27	47	36	30	25	30	25	21	23	20	17	18	15	13	11
9	48	36	29	24	43	33	27	22	27	22	19	22	18	15	16	14	12	10
10	45	33	26	21	40	30	24	20	25	20	17	20	16	14	15	13	11	9

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5201	5201	5201
5°	5226	5154	5190
10°	5191	5109	5141
15°	5131	5051	5060
20°	5060	4969	4974
25°	4963	4871	4861
30°	4860	4762	4724
35°	4750	4646	4586
40°	4636	4519	4449
45°	4509	4402	4294
50°	4382	4258	4140
55°	4219	4110	3984
60°	4052	3935	3810
65°	3904	3744	3629
70°	3688	3531	3374
75°	3373	3248	3111
80°	3037	2913	2882
85°	2668	2569	2470



TEST NUMBER: P332101-940

CATALOG NUMBER: S123DIW-S340D755U940-4F0-1E-UDD-F1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	45.5	1.3
10°-20°	128.5	3.6
20°-30°	189.9	5.3
30°-40°	221.8	6.2
40°-50°	223.0	6.2
50°-60°	195.8	5.4
60°-70°	145.9	4.1
70°-80°	83.1	2.3
80°-90°	26.4	0.7
90°-100°	54.9	1.5
100°-110°	164.3	4.6
110°-120°	279.4	7.8
120°-130°	367.5	10.2
130°-140°	413.1	11.5
140°-150°	406.1	11.3
150°-160°	341.9	9.5
160°-170°	227.6	6.3
170°-180°	79.7	2.2
0°-30°	363.9	10.1
0°-40°	585.7	16.3
0°-60°	1004.5	27.9
0°-90°	1259.9	35.1
90°-120°	498.6	13.9
90°-150°	1685.3	46.9
90°-180°	2334.0	64.9
0°-180°	3594.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	483	483	483	483	483	
5°	484	481	477	481	480	46
15°	460	458	453	456	454	130
25°	418	415	410	410	409	192
35°	362	359	354	351	349	226
45°	296	294	289	284	282	229
55°	225	224	219	215	212	201
65°	153	151	147	144	142	151
75°	81	79	78	76	75	87
85°	22	21	21	20	20	24
90°	1	7	16	18	20	4
95°	39	44	49	52	52	44
105°	149	150	156	156	158	159
115°	281	283	282	283	282	278
125°	412	414	412	410	407	367
135°	534	538	537	535	533	411
145°	648	649	651	650	648	405
155°	742	742	743	745	741	341
165°	808	806	806	810	806	228
175°	840	838	838	841	837	80
180°	843	843	843	843	843	



TEST NUMBER: P332101-940

CATALOG NUMBER: S123DIW-S340D755U940-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	483.2	483.2	483.2	483.2	483.2	483.2	483.2	483.2	483.2	483.2	483.2
2.5°	484.9	484.6	484.3	484.0	483.7	483.1	482.3	481.5	480.7	479.9	480.6
5°	483.7	483.1	482.7	482.2	481.8	481.1	480.0	479.0	478.0	477.0	477.9
7.5°	478.9	478.4	478.0	477.5	477.1	476.3	475.3	474.2	473.1	472.1	472.9
10°	474.9	474.5	473.9	473.5	473.1	472.3	471.0	469.8	468.6	467.4	468.2
12.5°	469.6	469.2	468.8	468.4	468.1	467.3	466.2	465.0	463.9	462.8	463.4
15°	460.4	460.0	459.6	459.2	458.9	458.1	456.9	455.7	454.5	453.3	454.1
17.5°	449.6	449.2	448.7	448.2	447.7	446.9	445.7	444.5	443.3	442.1	442.6
20°	441.7	441.1	440.6	440.0	439.4	438.5	437.4	436.1	435.0	433.8	434.2
22.5°	432.7	432.1	431.6	431.1	430.5	429.6	428.4	427.2	426.0	424.8	425.1
25°	417.9	417.4	416.9	416.3	415.8	414.9	413.7	412.5	411.3	410.1	410.2
27.5°	402.3	401.7	401.2	400.6	400.1	399.2	398.0	396.6	395.4	394.0	394.1
30°	391.0	390.5	390.0	389.6	389.1	388.3	387.0	385.7	384.4	383.1	383.1
32.5°	379.7	379.1	378.4	377.8	377.3	376.4	375.4	374.4	373.4	372.5	371.9
35°	361.5	361.0	360.3	359.8	359.3	358.4	357.2	356.0	354.8	353.6	353.0
37.5°	342.9	342.1	341.4	340.7	340.1	339.1	337.9	336.6	335.5	334.2	333.6
40°	329.9	329.3	328.8	328.2	327.7	326.7	325.5	324.1	322.9	321.6	320.8
42.5°	316.9	316.3	315.7	315.0	314.4	313.4	312.2	310.9	309.6	308.3	307.6
45°	296.2	295.9	295.5	295.2	294.8	294.0	292.7	291.6	290.3	289.2	288.1
47.5°	275.7	275.2	274.6	274.1	273.6	272.8	271.6	270.5	269.4	268.2	267.2
50°	261.7	261.3	260.8	260.4	259.9	259.0	257.9	256.7	255.5	254.3	253.2
52.5°	247.1	246.8	246.5	246.2	245.8	245.0	243.8	242.5	241.3	240.0	239.2
55°	224.8	224.7	224.6	224.5	224.4	223.7	222.6	221.3	220.2	219.0	217.9
57.5°	203.5	203.2	202.9	202.6	202.2	201.6	200.6	199.7	198.8	197.8	196.9
60°	188.2	188.2	188.1	188.0	187.9	187.3	186.1	185.0	184.0	182.8	182.0
62.5°	174.6	174.3	174.2	173.9	173.6	173.0	171.8	170.8	169.6	168.5	167.7
65°	153.3	152.8	152.4	151.9	151.5	150.8	149.9	148.9	148.0	147.0	146.3
67.5°	130.8	130.4	130.0	129.6	129.2	128.6	128.0	127.2	126.5	125.8	125.2
70°	117.2	116.6	116.1	115.5	114.9	114.4	113.9	113.2	112.7	112.2	111.6
72.5°	102.9	102.5	102.1	101.7	101.2	100.8	100.1	99.5	98.9	98.3	97.6
75°	81.1	80.6	80.3	79.9	79.5	79.2	78.9	78.6	78.4	78.1	77.7
77.5°	61.6	61.4	61.3	61.1	60.8	60.5	60.3	59.9	59.6	59.2	58.9
80°	49.0	48.8	48.5	48.2	47.9	47.7	47.5	47.3	47.2	47.0	46.8
82.5°	36.7	36.6	36.6	36.6	36.5	36.5	36.4	36.4	36.4	36.3	36.1
85°	21.6	21.4	21.2	21.0	20.9	20.8	20.8	20.8	20.8	20.8	20.6
87.5°	8.7	8.8	8.9	9.0	9.1	9.3	9.5	9.9	10.2	10.5	10.5
90°	0.6	2.1	3.6	5.1	6.5	8.2	10.2	12.0	14.0	15.9	16.5
92.5°	16.1	17.0	18.0	19.0	20.0	21.0	22.1	23.3	24.3	25.4	25.9
95°	39.1	40.0	41.1	42.2	43.2	44.2	45.5	46.6	47.8	49.0	49.6
97.5°	69.4	70.1	70.9	71.7	72.4	73.2	74.1	74.9	75.8	76.7	77.3
100°	90.0	90.9	91.8	92.6	93.5	94.3	95.1	95.9	96.6	97.3	97.7
102.5°	113.9	114.4	114.9	115.4	115.9	116.7	117.7	118.7	119.6	120.6	121.0
105°	148.9	149.2	149.5	149.8	150.1	150.9	152.2	153.6	154.9	156.2	156.2
107.5°	189.7	189.8	190.0	190.2	190.4	190.7	191.3	191.8	192.3	192.9	193.3
110°	215.1	215.4	215.7	216.0	216.2	216.6	216.9	217.1	217.5	217.8	218.4



TEST NUMBER: P332101-940

CATALOG NUMBER: S123DIW-S340D755U940-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	241.6	241.7	241.9	242.1	242.3	242.4	242.5	242.5	242.5	242.6	243.3
115°	281.3	281.7	282.1	282.6	283.0	283.1	282.9	282.6	282.2	282.0	282.1
117.5°	321.3	321.6	321.8	322.2	322.4	322.4	322.0	321.6	321.3	320.8	320.8
120°	346.2	347.1	347.9	348.8	349.7	349.7	349.0	348.3	347.6	346.8	346.7
122.5°	372.1	372.7	373.4	374.1	374.7	374.8	374.4	374.1	373.7	373.3	372.9
125°	411.7	412.1	412.6	413.0	413.5	413.5	413.2	413.0	412.6	412.3	411.8
127.5°	448.2	449.2	450.1	451.0	452.0	452.3	452.0	451.7	451.3	451.0	450.1
130°	472.6	473.8	474.9	476.1	477.2	477.7	477.2	476.8	476.4	475.9	475.3
132.5°	497.0	498.1	499.3	500.4	501.7	502.0	501.8	501.4	501.1	500.8	500.1
135°	534.1	535.0	535.9	536.8	537.6	538.1	537.9	537.7	537.6	537.4	536.8
137.5°	568.6	569.3	570.0	570.8	571.5	572.0	572.4	572.8	573.2	573.5	572.9
140°	592.4	593.1	593.9	594.6	595.3	595.8	595.9	596.0	596.2	596.4	596.2
142.5°	614.1	614.8	615.5	616.3	617.0	617.5	617.8	618.0	618.3	618.6	618.4
145°	648.0	648.3	648.5	648.8	649.2	649.5	650.0	650.4	650.9	651.3	651.1
147.5°	677.6	678.1	678.7	679.2	679.8	680.2	680.6	681.0	681.4	681.9	681.9
150°	698.3	698.6	698.8	699.2	699.5	699.7	700.0	700.3	700.6	700.9	700.9
152.5°	715.2	715.6	716.0	716.5	716.8	717.1	717.3	717.5	717.6	717.8	718.1
155°	742.0	742.0	742.0	742.0	742.0	742.0	742.2	742.3	742.4	742.6	743.2
157.5°	764.7	764.6	764.4	764.2	764.0	764.0	764.1	764.2	764.4	764.5	765.1
160°	779.0	778.7	778.5	778.1	777.8	777.7	777.7	777.7	777.7	777.7	778.5
162.5°	791.8	791.3	790.9	790.5	790.1	790.0	790.1	790.1	790.3	790.4	791.1
165°	808.2	807.7	807.3	806.8	806.4	806.1	806.1	806.1	806.1	806.1	807.0
167.5°	821.3	820.6	820.1	819.5	818.9	818.7	818.8	818.9	819.0	819.1	820.0
170°	828.7	828.0	827.5	826.9	826.3	826.0	826.0	826.0	826.0	826.0	827.1
172.5°	834.5	833.9	833.3	832.7	832.1	831.8	831.8	831.8	831.8	831.8	832.8
175°	840.5	840.0	839.4	838.8	838.2	837.9	837.9	837.9	837.9	837.9	838.8
177.5°	843.1	842.6	842.1	841.7	841.2	841.0	841.0	841.0	841.0	841.0	841.7
180°	842.6	842.6	842.6	842.6	842.6	842.6	842.6	842.6	842.6	842.6	842.6



TEST NUMBER: P332101-940

CATALOG NUMBER: S123DIW-S340D755U940-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	483.2	483.2	483.2	483.2	483.2	483.2	483.2	483.2
2.5°	481.3	482.1	482.9	483.2	483.1	483.0	483.0	482.9
5°	478.8	479.7	480.7	481.1	480.9	480.7	480.5	480.3
7.5°	473.8	474.6	475.4	475.7	475.6	475.5	475.5	475.3
10°	469.1	469.9	470.7	471.1	470.9	470.7	470.6	470.4
12.5°	464.0	464.6	465.2	465.5	465.4	465.2	465.1	465.0
15°	454.8	455.5	456.3	456.4	455.8	455.2	454.7	454.1
17.5°	443.1	443.6	444.2	444.3	444.1	443.9	443.7	443.5
20°	434.5	434.9	435.2	435.3	435.0	434.7	434.4	434.2
22.5°	425.3	425.7	426.0	426.0	425.6	425.3	424.9	424.5
25°	410.3	410.4	410.5	410.4	410.1	409.8	409.6	409.3
27.5°	394.2	394.3	394.3	394.2	393.9	393.5	393.2	392.8
30°	383.1	383.1	383.1	382.7	382.1	381.5	380.8	380.1
32.5°	371.4	370.9	370.4	370.0	369.6	369.3	368.9	368.5
35°	352.5	352.0	351.3	350.9	350.4	349.9	349.5	349.0
37.5°	332.9	332.3	331.5	331.1	330.8	330.5	330.2	329.9
40°	320.1	319.4	318.6	318.1	317.7	317.4	317.0	316.6
42.5°	306.8	306.0	305.3	304.8	304.4	304.1	303.7	303.3
45°	287.0	285.9	284.7	284.0	283.5	283.0	282.6	282.1
47.5°	266.1	265.0	263.9	263.1	262.7	262.3	261.9	261.5
50°	252.3	251.2	250.2	249.4	248.9	248.3	247.8	247.2
52.5°	238.3	237.4	236.5	235.8	235.2	234.7	234.2	233.6
55°	217.0	215.9	214.9	214.2	213.7	213.2	212.8	212.3
57.5°	196.0	195.0	194.1	193.4	192.9	192.3	191.8	191.3
60°	181.2	180.3	179.5	178.9	178.3	177.9	177.5	177.0
62.5°	166.8	166.0	165.2	164.6	164.3	164.0	163.7	163.4
65°	145.6	144.9	144.1	143.7	143.4	143.0	142.8	142.5
67.5°	124.5	123.9	123.2	122.7	122.3	121.9	121.5	121.2
70°	110.9	110.2	109.6	109.1	108.6	108.2	107.6	107.2
72.5°	97.1	96.5	95.9	95.5	95.3	95.1	94.8	94.5
75°	77.2	76.7	76.2	75.9	75.6	75.3	75.1	74.8
77.5°	58.6	58.3	58.0	57.9	57.9	57.9	57.9	57.9
80°	46.7	46.6	46.5	46.5	46.5	46.5	46.5	46.5
82.5°	36.0	35.8	35.7	35.5	35.5	35.4	35.3	35.2
85°	20.4	20.2	20.1	20.0	20.0	20.0	20.0	20.0
87.5°	10.6	10.6	10.7	10.7	10.8	10.8	10.9	11.0
90°	17.0	17.7	18.3	18.6	19.0	19.3	19.5	19.9
92.5°	26.4	26.8	27.3	27.5	27.3	27.1	26.9	26.8
95°	50.1	50.7	51.4	51.6	51.6	51.6	51.6	51.6
97.5°	78.0	78.6	79.4	79.6	79.6	79.5	79.5	79.5
100°	98.2	98.6	99.1	99.4	99.7	100.0	100.3	100.6
102.5°	121.5	121.9	122.3	122.5	122.5	122.4	122.3	122.3
105°	156.2	156.2	156.2	156.3	156.7	156.9	157.2	157.6
107.5°	193.8	194.3	194.7	194.9	194.7	194.6	194.4	194.2
110°	218.9	219.5	220.1	220.3	220.0	219.6	219.4	219.1



TEST NUMBER: P332101-940

CATALOG NUMBER: S123DIW-S340D755U940-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	244.1	244.8	245.5	245.8	245.8	245.7	245.6	245.6
115°	282.2	282.4	282.6	282.6	282.4	282.2	282.1	282.0
117.5°	320.8	320.7	320.7	320.6	320.1	319.7	319.3	318.9
120°	346.5	346.3	346.3	346.0	345.7	345.4	345.1	344.8
122.5°	372.6	372.1	371.8	371.4	371.0	370.5	370.1	369.7
125°	411.2	410.5	410.0	409.4	408.8	408.2	407.6	407.1
127.5°	449.3	448.5	447.7	446.9	446.3	445.6	445.0	444.3
130°	474.7	474.1	473.5	472.7	471.7	470.6	469.7	468.6
132.5°	499.4	498.6	497.9	497.2	496.4	495.6	494.8	494.0
135°	536.3	535.7	535.1	534.7	534.3	534.0	533.8	533.4
137.5°	572.3	571.7	571.1	570.5	570.0	569.4	568.8	568.3
140°	596.0	595.9	595.8	595.1	594.1	593.1	592.1	591.0
142.5°	618.3	618.1	618.0	617.5	616.7	615.9	615.1	614.3
145°	650.9	650.9	650.7	650.3	649.7	649.2	648.5	648.0
147.5°	681.9	681.9	681.9	681.4	680.6	679.7	678.8	677.9
150°	700.9	700.9	700.9	700.4	699.5	698.7	697.9	697.0
152.5°	718.4	718.5	718.8	718.5	717.7	717.0	716.2	715.5
155°	743.8	744.4	744.9	744.8	743.7	742.7	741.6	740.7
157.5°	765.7	766.3	767.0	766.8	766.0	765.2	764.4	763.5
160°	779.2	779.9	780.6	780.7	780.2	779.5	778.9	778.4
162.5°	791.8	792.6	793.4	793.3	792.3	791.4	790.4	789.4
165°	807.9	808.8	809.7	809.6	808.6	807.5	806.6	805.5
167.5°	820.9	821.9	822.8	822.8	821.9	820.9	820.0	819.1
170°	828.0	829.1	830.1	830.1	829.1	828.0	827.1	826.0
172.5°	833.7	834.6	835.4	835.4	834.4	833.4	832.3	831.3
175°	839.7	840.5	841.4	841.4	840.3	839.3	838.3	837.2
177.5°	842.4	843.1	843.8	843.7	842.9	842.0	841.2	840.4
180°	842.6	842.6	842.6	842.6	842.6	842.6	842.6	842.6

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