

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: P332397

Luminaire Tested: **S123RDIW-S340D755U835-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332397
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: S123RDIW-S340D755U835-4F0-1E-UDD-F1
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 340 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 755 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3918.6 lumens
Efficiency: N/A
Efficacy: 128.9 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: Semi-Indirect

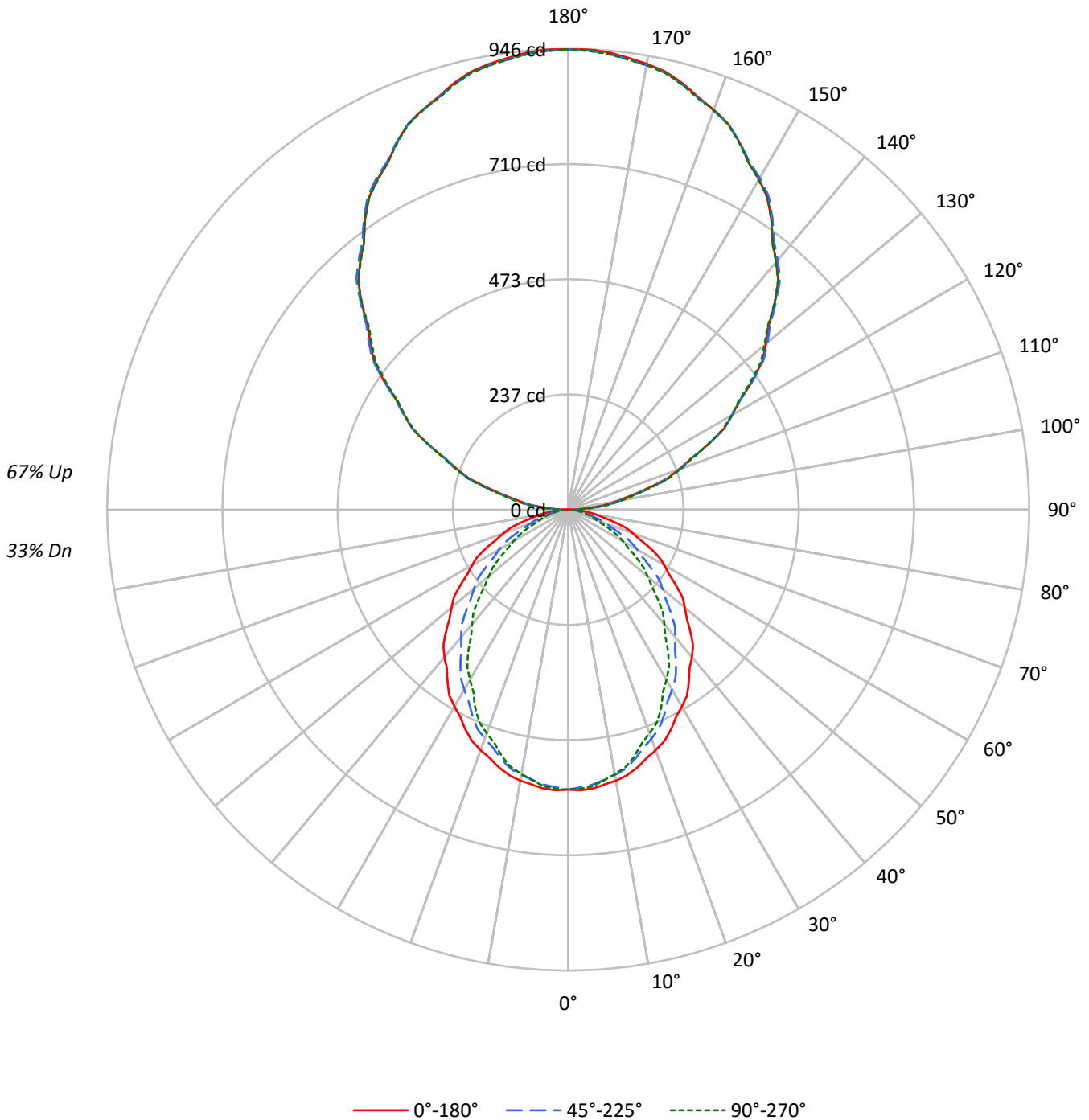
Input Watts (W): 30.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332397

CATALOG NUMBER: S123RDIW-S340D755U835-4F0-1E-UDD-F1

Luminous Intensity Polar Plot





TEST NUMBER: P332397

CATALOG NUMBER: S123RDIW-S340D755U835-4F0-1E-UDD-F1

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	57	57	57	41	41	41	33
1	94	90	86	83	85	81	78	75	65	63	61	50	49	47	36	35	35	28
2	86	79	73	68	77	71	66	62	57	54	51	44	42	40	32	31	30	24
3	78	69	62	57	71	63	57	52	51	46	43	39	36	34	29	27	25	21
4	72	61	54	48	65	56	49	44	45	40	37	35	32	29	26	24	22	18
5	66	55	47	41	59	50	43	38	40	35	32	31	28	25	23	21	19	16
6	61	49	41	36	55	45	38	33	36	31	28	28	25	22	21	19	17	14
7	56	44	37	31	50	40	34	29	33	28	24	26	22	20	19	17	15	12
8	52	40	33	28	47	37	30	26	30	25	21	24	20	18	18	15	14	11
9	48	37	29	24	44	33	27	23	27	23	19	22	18	16	16	14	12	10
10	45	33	26	22	41	31	24	20	25	20	17	20	17	14	15	13	11	9

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6184	6184	6184
5°	6207	6122	6158
10°	6172	6045	6025
15°	6107	5904	5841
20°	6015	5727	5593
25°	5922	5529	5352
30°	5797	5299	5009
35°	5670	5070	4696
40°	5552	4799	4308
45°	5398	4532	3958
50°	5228	4228	3565
55°	5054	3883	3200
60°	4895	3511	2799
65°	4689	3110	2397
70°	4428	2609	1936
75°	4051	2054	1822
80°	3608	1822	1674
85°	3051	1606	1494



TEST NUMBER: P332397

CATALOG NUMBER: S123RDIW-S340D755U835-4F0-1E-UDD-F1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	54.0	1.4
10°-20°	150.1	3.8
20°-30°	216.1	5.5
30°-40°	243.5	6.2
40°-50°	232.9	5.9
50°-60°	190.7	4.9
60°-70°	128.7	3.3
70°-80°	64.7	1.7
80°-90°	19.9	0.5
90°-100°	61.6	1.6
100°-110°	184.2	4.7
110°-120°	313.4	8.0
120°-130°	412.2	10.5
130°-140°	463.3	11.8
140°-150°	455.4	11.6
150°-160°	383.4	9.8
160°-170°	255.2	6.5
170°-180°	89.4	2.3
0°-30°	420.2	10.7
0°-40°	663.7	16.9
0°-60°	1087.3	27.7
0°-90°	1300.7	33.2
90°-120°	559.2	14.3
90°-150°	1890.0	48.2
90°-180°	2618.0	66.8
0°-180°	3918.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	574	574	574	574	574	
5°	574	572	567	570	570	54
15°	548	542	530	527	524	154
25°	499	486	466	456	451	229
35°	432	414	386	366	357	270
45°	355	333	298	272	260	273
55°	269	246	207	181	170	241
65°	184	158	122	100	94	182
75°	97	75	49	45	44	104
85°	25	15	13	12	12	28
90°	1	8	18	21	22	4
95°	44	49	55	58	58	49
105°	167	169	175	175	177	179
115°	316	317	316	317	316	312
125°	462	464	462	459	456	412
135°	599	603	603	600	598	461
145°	727	728	730	730	727	454
155°	832	832	833	835	831	383
165°	906	904	904	908	903	255
175°	943	940	940	944	939	89
180°	945	945	945	945	945	



TEST NUMBER: P332397

CATALOG NUMBER: S123RDIW-S340D755U835-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	574.5	574.5	574.5	574.5	574.5	574.5	574.5	574.5	574.5	574.5	574.5
2.5°	576.4	576.0	575.7	575.4	575.1	574.4	573.4	572.4	571.4	570.4	571.3
5°	574.5	574.0	573.5	573.0	572.4	571.6	570.3	569.1	567.8	566.6	567.5
7.5°	569.2	568.6	568.1	567.5	567.0	565.9	564.3	562.7	561.0	559.4	559.9
10°	564.7	564.0	563.3	562.6	561.8	560.5	558.7	556.8	554.9	553.1	553.2
12.5°	558.4	557.6	556.8	556.0	555.2	553.6	551.3	549.1	546.8	544.5	544.4
15°	548.0	546.8	545.7	544.5	543.4	541.4	538.5	535.6	532.7	529.8	529.3
17.5°	534.8	533.5	532.2	530.8	529.5	527.0	523.3	519.6	516.0	512.3	511.2
20°	525.1	523.5	521.8	520.2	518.5	515.7	511.8	507.8	503.9	500.0	498.6
22.5°	514.3	512.4	510.5	508.6	506.7	503.7	499.5	495.3	491.1	486.9	485.2
25°	498.6	496.0	493.4	490.8	488.2	484.5	479.8	475.0	470.2	465.5	463.3
27.5°	479.5	476.6	473.7	470.9	468.0	464.0	458.7	453.3	448.0	442.7	439.7
30°	466.4	463.3	460.2	457.1	454.0	449.5	443.7	437.9	432.1	426.3	422.8
32.5°	453.4	449.8	446.3	442.8	439.3	434.5	428.3	422.2	416.1	409.9	406.1
35°	431.5	427.7	424.0	420.3	416.6	411.5	405.1	398.6	392.2	385.8	381.4
37.5°	409.3	405.1	401.0	396.9	392.7	387.2	380.4	373.5	366.7	359.8	354.8
40°	395.1	390.6	386.0	381.5	376.9	370.9	363.6	356.2	348.9	341.5	336.2
42.5°	379.1	374.5	370.0	365.4	360.9	354.8	347.2	339.6	332.0	324.4	318.5
45°	354.6	349.9	345.3	340.6	335.9	329.6	321.7	313.7	305.7	297.7	291.8
47.5°	330.1	325.0	319.8	314.7	309.6	303.1	295.1	287.1	279.2	271.2	264.8
50°	312.2	307.3	302.5	297.6	292.7	286.1	277.7	269.3	260.9	252.5	246.1
52.5°	296.2	290.9	285.6	280.3	275.0	268.2	259.9	251.6	243.3	235.0	228.4
55°	269.3	264.2	259.2	254.1	249.0	242.1	233.3	224.5	215.7	206.9	200.9
57.5°	244.5	239.0	233.5	227.9	222.4	215.2	206.4	197.5	188.7	179.9	174.2
60°	227.4	221.7	216.0	210.3	204.6	197.5	188.9	180.3	171.7	163.1	157.5
62.5°	210.2	204.5	198.8	193.2	187.5	180.3	171.7	163.1	154.5	145.9	140.7
65°	184.1	178.4	172.7	167.0	161.3	154.4	146.3	138.2	130.2	122.1	117.0
67.5°	157.9	152.1	146.3	140.6	134.8	128.1	120.3	112.6	104.8	97.1	93.3
70°	140.7	135.1	129.5	123.9	118.4	111.9	104.7	97.4	90.2	82.9	79.3
72.5°	123.6	118.1	112.6	107.0	101.5	95.5	88.9	82.3	75.7	69.1	66.2
75°	97.4	92.4	87.4	82.5	77.5	72.2	66.5	60.8	55.1	49.4	48.4
77.5°	73.5	69.0	64.5	60.0	55.6	51.5	47.8	44.1	40.5	36.8	36.3
80°	58.2	54.0	49.8	45.5	41.3	38.1	35.9	33.7	31.5	29.4	29.0
82.5°	43.7	40.0	36.4	32.7	29.0	26.7	25.7	24.7	23.7	22.6	22.3
85°	24.7	22.4	20.1	17.9	15.6	14.3	14.0	13.7	13.4	13.0	12.8
87.5°	9.1	8.5	7.9	7.4	6.8	6.7	7.1	7.6	8.0	8.4	8.5
90°	0.7	2.4	4.0	5.7	7.3	9.2	11.4	13.5	15.7	17.8	18.5
92.5°	18.0	19.1	20.2	21.3	22.4	23.6	24.8	26.1	27.3	28.5	29.0
95°	43.8	44.9	46.1	47.3	48.4	49.6	51.0	52.3	53.6	54.9	55.6
97.5°	77.8	78.6	79.5	80.4	81.2	82.1	83.1	84.0	85.0	86.0	86.7
100°	100.9	101.9	102.9	103.9	104.9	105.8	106.6	107.5	108.3	109.1	109.6
102.5°	127.7	128.3	128.9	129.4	130.0	130.9	132.0	133.1	134.1	135.2	135.7
105°	167.0	167.3	167.7	168.0	168.3	169.2	170.7	172.2	173.7	175.2	175.2
107.5°	212.7	212.9	213.1	213.3	213.5	213.9	214.5	215.1	215.7	216.3	216.8
110°	241.2	241.6	241.9	242.2	242.5	242.9	243.2	243.5	243.9	244.2	244.9



TEST NUMBER: P332397

CATALOG NUMBER: S123RDIW-S340D755U835-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	270.9	271.1	271.3	271.5	271.7	271.8	271.9	272.0	272.0	272.1	272.9
115°	315.5	315.9	316.4	316.9	317.4	317.5	317.2	316.9	316.5	316.2	316.4
117.5°	360.3	360.6	360.9	361.3	361.6	361.6	361.1	360.7	360.3	359.8	359.8
120°	388.2	389.2	390.2	391.2	392.2	392.2	391.4	390.6	389.8	388.9	388.8
122.5°	417.3	418.0	418.7	419.5	420.2	420.3	419.9	419.5	419.1	418.6	418.2
125°	461.7	462.2	462.7	463.2	463.7	463.7	463.4	463.1	462.7	462.4	461.8
127.5°	502.6	503.7	504.8	505.8	506.9	507.2	506.9	506.5	506.1	505.8	504.8
130°	530.0	531.3	532.6	533.9	535.2	535.7	535.2	534.7	534.2	533.7	533.0
132.5°	557.3	558.6	559.9	561.2	562.6	563.0	562.7	562.3	561.9	561.6	560.8
135°	599.0	600.0	601.0	602.0	602.9	603.4	603.2	603.0	602.9	602.7	602.0
137.5°	637.6	638.4	639.2	640.1	640.9	641.5	641.9	642.4	642.8	643.2	642.5
140°	664.3	665.1	666.0	666.8	667.6	668.1	668.3	668.4	668.6	668.8	668.6
142.5°	688.7	689.5	690.3	691.1	691.9	692.5	692.8	693.1	693.4	693.7	693.5
145°	726.7	727.0	727.3	727.6	728.0	728.4	728.9	729.4	729.9	730.4	730.2
147.5°	759.9	760.5	761.1	761.7	762.3	762.8	763.3	763.7	764.2	764.7	764.7
150°	783.1	783.4	783.7	784.1	784.4	784.7	785.0	785.4	785.7	786.0	786.0
152.5°	802.1	802.5	803.0	803.5	803.9	804.2	804.4	804.6	804.8	805.0	805.3
155°	832.1	832.1	832.1	832.1	832.1	832.1	832.3	832.5	832.6	832.8	833.5
157.5°	857.6	857.4	857.2	857.0	856.8	856.8	856.9	857.0	857.2	857.3	858.0
160°	873.6	873.3	873.0	872.6	872.3	872.1	872.1	872.1	872.1	872.1	873.0
162.5°	887.9	887.4	886.9	886.5	886.0	885.9	886.0	886.1	886.3	886.4	887.2
165°	906.3	905.8	905.3	904.8	904.3	904.0	904.0	904.0	904.0	904.0	905.0
167.5°	921.0	920.3	919.7	919.0	918.3	918.1	918.2	918.3	918.5	918.6	919.6
170°	929.3	928.6	928.0	927.3	926.6	926.3	926.3	926.3	926.3	926.3	927.5
172.5°	935.8	935.2	934.5	933.8	933.2	932.8	932.8	932.8	932.8	932.8	933.9
175°	942.6	942.0	941.3	940.7	940.0	939.7	939.7	939.7	939.7	939.7	940.7
177.5°	945.5	944.9	944.4	943.9	943.4	943.1	943.1	943.1	943.1	943.1	943.9
180°	944.9	944.9	944.9	944.9	944.9	944.9	944.9	944.9	944.9	944.9	944.9



TEST NUMBER: P332397

CATALOG NUMBER: S123RDIW-S340D755U835-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	574.5	574.5	574.5	574.5	574.5	574.5	574.5	574.5
2.5°	572.2	573.1	574.1	574.4	574.3	574.1	573.9	573.8
5°	568.5	569.4	570.3	570.7	570.5	570.3	570.1	569.9
7.5°	560.5	561.0	561.5	561.6	561.2	560.9	560.5	560.2
10°	553.3	553.4	553.5	553.3	552.8	552.3	551.7	551.2
12.5°	544.4	544.3	544.3	543.9	543.3	542.7	542.1	541.5
15°	528.7	528.2	527.7	527.1	526.4	525.6	524.9	524.2
17.5°	510.1	509.0	507.9	506.8	505.7	504.6	503.6	502.5
20°	497.3	495.9	494.6	493.3	492.0	490.8	489.6	488.3
22.5°	483.6	481.9	480.2	478.8	477.6	476.5	475.3	474.2
25°	461.1	459.0	456.8	455.1	454.0	452.9	451.7	450.6
27.5°	436.7	433.7	430.7	428.3	426.5	424.8	423.1	421.3
30°	419.3	415.8	412.3	409.7	408.0	406.4	404.7	403.0
32.5°	402.2	398.4	394.5	391.7	390.0	388.3	386.5	384.8
35°	376.9	372.4	368.0	364.8	363.0	361.1	359.2	357.4
37.5°	349.7	344.6	339.6	335.9	333.6	331.3	329.0	326.7
40°	330.8	325.4	320.0	316.1	313.7	311.4	309.0	306.6
42.5°	312.6	306.8	300.9	296.9	294.7	292.6	290.5	288.3
45°	285.9	280.0	274.1	269.9	267.5	265.0	262.5	260.0
47.5°	258.3	251.9	245.5	241.2	239.0	236.8	234.5	232.3
50°	239.7	233.3	226.9	222.5	220.1	217.7	215.3	212.9
52.5°	221.7	215.0	208.4	204.0	201.8	199.7	197.6	195.4
55°	194.9	188.9	182.9	178.8	176.8	174.7	172.6	170.5
57.5°	168.5	162.8	157.2	153.4	151.7	149.9	148.2	146.4
60°	151.9	146.3	140.7	137.0	135.3	133.5	131.8	130.0
62.5°	135.4	130.2	124.9	121.3	119.5	117.7	115.8	114.0
65°	111.9	106.9	101.8	98.7	97.5	96.4	95.3	94.1
67.5°	89.5	85.7	81.9	79.4	78.2	77.0	75.8	74.6
70°	75.7	72.1	68.4	66.1	64.9	63.8	62.6	61.5
72.5°	63.2	60.3	57.3	55.6	55.1	54.6	54.2	53.7
75°	47.3	46.3	45.2	44.6	44.4	44.2	44.0	43.8
77.5°	35.7	35.1	34.6	34.2	34.0	33.8	33.6	33.4
80°	28.7	28.4	28.1	27.9	27.6	27.4	27.2	27.0
82.5°	22.0	21.7	21.4	21.2	21.2	21.1	21.1	21.1
85°	12.6	12.4	12.2	12.1	12.1	12.1	12.1	12.1
87.5°	8.5	8.6	8.6	8.6	8.6	8.6	8.6	8.6
90°	19.1	19.8	20.5	20.9	21.3	21.6	21.9	22.3
92.5°	29.6	30.1	30.6	30.8	30.6	30.4	30.2	30.0
95°	56.2	56.9	57.6	57.9	57.9	57.9	57.9	57.9
97.5°	87.5	88.2	89.0	89.3	89.3	89.2	89.1	89.1
100°	110.1	110.6	111.1	111.5	111.8	112.2	112.5	112.8
102.5°	136.2	136.7	137.2	137.4	137.4	137.3	137.2	137.2
105°	175.2	175.2	175.2	175.3	175.7	176.0	176.3	176.7
107.5°	217.3	217.9	218.4	218.6	218.4	218.2	218.0	217.8
110°	245.5	246.2	246.8	247.0	246.7	246.3	246.0	245.7



TEST NUMBER: P332397

CATALOG NUMBER: S123RDIW-S340D755U835-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	273.7	274.5	275.3	275.6	275.6	275.5	275.4	275.4
115°	316.5	316.7	316.9	316.9	316.7	316.5	316.4	316.2
117.5°	359.8	359.7	359.7	359.5	359.0	358.5	358.1	357.6
120°	388.6	388.4	388.3	388.0	387.7	387.4	387.0	386.7
122.5°	417.8	417.3	416.9	416.5	416.0	415.5	415.1	414.6
125°	461.1	460.4	459.8	459.1	458.5	457.8	457.1	456.5
127.5°	503.9	503.0	502.1	501.2	500.5	499.7	499.0	498.2
130°	532.4	531.7	531.0	530.1	529.0	527.8	526.7	525.5
132.5°	560.0	559.2	558.4	557.6	556.7	555.8	554.9	554.0
135°	601.4	600.7	600.1	599.6	599.2	598.9	598.6	598.2
137.5°	641.8	641.1	640.5	639.8	639.2	638.5	637.9	637.3
140°	668.4	668.3	668.1	667.4	666.3	665.1	664.0	662.8
142.5°	693.4	693.2	693.0	692.5	691.6	690.7	689.8	688.9
145°	730.0	729.9	729.7	729.3	728.6	728.0	727.3	726.7
147.5°	764.7	764.7	764.7	764.2	763.2	762.2	761.2	760.2
150°	786.0	786.0	786.0	785.5	784.5	783.6	782.6	781.6
152.5°	805.6	805.8	806.1	805.8	804.9	804.1	803.2	802.4
155°	834.1	834.8	835.4	835.2	834.0	832.9	831.7	830.6
157.5°	858.7	859.4	860.1	859.9	859.0	858.1	857.2	856.2
160°	873.8	874.6	875.4	875.5	874.9	874.2	873.5	872.9
162.5°	888.0	888.9	889.7	889.6	888.5	887.5	886.4	885.3
165°	906.0	907.0	908.0	907.9	906.8	905.6	904.5	903.3
167.5°	920.6	921.7	922.7	922.7	921.7	920.6	919.6	918.6
170°	928.6	929.8	930.9	930.9	929.8	928.6	927.5	926.3
172.5°	934.9	935.9	936.9	936.9	935.7	934.6	933.4	932.3
175°	941.7	942.6	943.6	943.6	942.4	941.2	940.1	938.9
177.5°	944.7	945.5	946.3	946.2	945.3	944.3	943.4	942.5
180°	944.9	944.9	944.9	944.9	944.9	944.9	944.9	944.9

(END OF REPORT)