

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: P332437-927

Luminaire Tested: **S123RDIW-S775D755U927-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332437-927
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-S775D755U927-4F0-1E-UDD-F1
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 775 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: 4386.6 lumens
Efficiency: N/A
Efficacy: 97.5 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

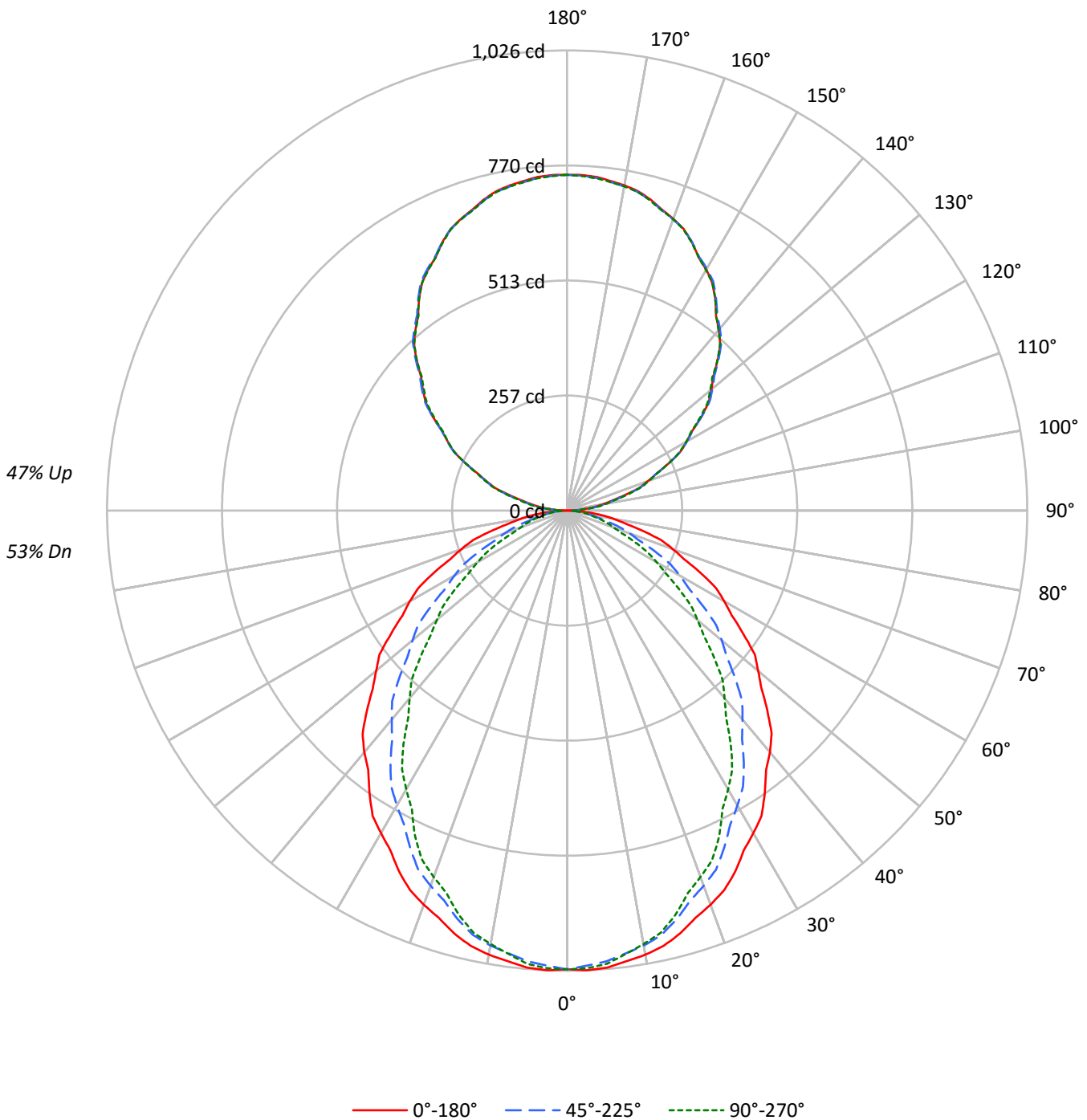
Input Watts (W): 45
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332437-927

CATALOG NUMBER: S123RDIW-S775D755U927-4F0-1E-UDD-F1

Luminous Intensity Polar Plot





TEST NUMBER: P332437-927

CATALOG NUMBER: S123RDIW-S775D755U927-4F0-1E-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	108	108	108	108	100	100	100	100	85	85	85	71	71	71	59	59	59	53
1	99	95	91	87	91	88	84	82	75	73	70	63	62	60	52	51	50	45
2	90	83	77	72	83	77	72	67	66	62	59	56	53	51	46	45	43	38
3	82	73	66	60	76	68	62	57	59	54	50	50	46	43	41	39	37	33
4	76	65	57	51	70	61	54	48	52	47	43	44	40	37	37	34	32	28
5	70	58	50	44	64	54	47	42	47	41	37	40	36	33	34	31	28	25
6	64	52	44	38	59	49	42	36	42	37	33	36	32	29	31	27	25	22
7	59	47	39	34	55	44	37	32	38	33	29	33	29	25	28	25	22	20
8	55	43	35	30	51	40	33	29	35	30	26	30	26	23	26	22	20	18
9	51	39	32	27	48	37	30	26	32	27	23	28	24	21	24	21	18	16
10	48	36	29	24	45	34	27	23	30	25	21	26	22	19	22	19	16	15

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11009	11009	11009
5°	11051	10899	10962
10°	10989	10762	10726
15°	10871	10510	10399
20°	10709	10195	9958
25°	10542	9841	9526
30°	10320	9434	8918
35°	10093	9025	8360
40°	9884	8543	7669
45°	9608	8068	7046
50°	9306	7529	6348
55°	8997	6912	5697
60°	8714	6250	4982
65°	8344	5535	4266
70°	7884	4648	3446
75°	7207	3656	3244
80°	6428	3242	2982
85°	5434	2865	2655



TEST NUMBER: P332437-927

CATALOG NUMBER: S123RDIW-S775D755U927-4F0-1E-UDD-F1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	96.0	2.2
10°-20°	267.2	6.1
20°-30°	384.8	8.8
30°-40°	433.4	9.9
40°-50°	414.6	9.5
50°-60°	339.6	7.7
60°-70°	229.1	5.2
70°-80°	115.3	2.6
80°-90°	32.7	0.7
90°-100°	48.8	1.1
100°-110°	145.9	3.3
110°-120°	248.2	5.7
120°-130°	326.5	7.4
130°-140°	367.0	8.4
140°-150°	360.7	8.2
150°-160°	303.7	6.9
160°-170°	202.2	4.6
170°-180°	70.8	1.6
0°-30°	748.0	17.1
0°-40°	1181.5	26.9
0°-60°	1935.6	44.1
0°-90°	2312.7	52.7
90°-120°	442.9	10.1
90°-150°	1497.2	34.1
90°-180°	2074.0	47.3
0°-180°	4386.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1023	1023	1023	1023	1023	
5°	1023	1018	1009	1016	1014	97
15°	976	966	943	939	933	275
25°	888	866	829	812	802	408
35°	768	737	687	652	636	481
45°	631	592	530	484	463	487
55°	479	437	368	322	304	430
65°	328	281	217	178	168	324
75°	173	133	88	80	78	185
85°	44	27	23	22	22	49
90°	1	7	14	16	18	4
95°	35	39	44	46	46	39
105°	132	134	139	139	140	142
115°	250	251	250	251	250	247
125°	366	367	366	364	362	326
135°	474	478	477	475	474	366
145°	576	577	579	578	576	359
155°	659	659	660	662	658	303
165°	718	716	716	719	716	202
175°	747	745	744	748	744	71
180°	748	748	748	748	748	



TEST NUMBER: P332437-927

CATALOG NUMBER: S123RDIW-S775D755U927-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1022.8	1022.8	1022.8	1022.8	1022.8	1022.8	1022.8	1022.8	1022.8	1022.8	1022.8
2.5°	1026.0	1025.5	1024.8	1024.3	1023.7	1022.5	1020.7	1019.0	1017.2	1015.4	1017.1
5°	1022.8	1021.8	1020.9	1020.0	1019.1	1017.5	1015.3	1013.0	1010.8	1008.7	1010.3
7.5°	1013.3	1012.3	1011.3	1010.3	1009.3	1007.3	1004.5	1001.6	998.8	995.9	996.8
10°	1005.4	1004.0	1002.7	1001.5	1000.1	997.8	994.5	991.3	987.9	984.6	984.8
12.5°	994.0	992.6	991.2	989.8	988.3	985.6	981.5	977.5	973.4	969.3	969.2
15°	975.5	973.4	971.4	969.4	967.3	963.8	958.6	953.5	948.2	943.1	942.2
17.5°	952.0	949.7	947.4	945.0	942.6	938.2	931.6	925.0	918.5	912.0	910.0
20°	934.9	931.8	928.9	926.0	923.1	918.1	911.0	904.0	897.1	890.0	887.6
22.5°	915.6	912.2	908.8	905.4	902.0	896.6	889.1	881.7	874.3	866.8	863.8
25°	887.6	883.0	878.3	873.7	869.1	862.5	854.1	845.6	837.1	828.6	824.7
27.5°	853.5	848.4	843.4	838.3	833.2	825.9	816.5	807.1	797.6	788.1	782.8
30°	830.3	824.7	819.3	813.7	808.2	800.3	790.0	779.6	769.3	759.0	752.7
32.5°	807.1	800.8	794.6	788.3	782.0	773.4	762.5	751.6	740.7	729.8	722.9
35°	768.1	761.4	754.8	748.2	741.6	732.5	721.1	709.6	698.2	686.8	678.9
37.5°	728.6	721.2	713.8	706.5	699.1	689.4	677.2	665.0	652.8	640.6	631.5
40°	703.4	695.3	687.1	679.1	671.0	660.4	647.3	634.2	621.1	608.0	598.4
42.5°	674.9	666.8	658.6	650.5	642.5	631.6	618.1	604.5	591.0	577.5	567.0
45°	631.2	623.0	614.7	606.3	598.0	586.8	572.6	558.4	544.2	530.0	519.5
47.5°	587.6	578.5	569.4	560.3	551.2	539.6	525.4	511.1	496.9	482.8	471.3
50°	555.7	547.1	538.4	529.7	521.1	509.3	494.4	479.4	464.5	449.6	438.2
52.5°	527.2	517.8	508.4	499.0	489.6	477.5	462.7	448.0	433.2	418.4	406.5
55°	479.4	470.4	461.4	452.3	443.3	430.9	415.3	399.7	384.0	368.3	357.6
57.5°	435.3	425.5	415.7	405.8	395.9	383.2	367.4	351.6	335.9	320.2	310.1
60°	404.8	394.7	384.5	374.4	364.2	351.5	336.2	320.9	305.6	290.3	280.4
62.5°	374.2	364.1	353.9	343.8	333.7	321.0	305.7	290.4	275.1	259.8	250.4
65°	327.6	317.5	307.4	297.2	287.1	274.8	260.5	246.1	231.7	217.3	208.3
67.5°	281.1	270.8	260.5	250.3	240.0	228.0	214.2	200.4	186.6	172.9	166.1
70°	250.5	240.6	230.6	220.6	210.7	199.2	186.3	173.5	160.6	147.7	141.2
72.5°	220.0	210.2	200.3	190.5	180.8	170.0	158.3	146.6	134.8	123.1	117.8
75°	173.3	164.5	155.7	146.8	138.0	128.5	118.4	108.2	98.1	87.9	86.1
77.5°	130.9	122.9	114.9	106.9	98.9	91.7	85.1	78.6	72.1	65.5	64.6
80°	103.7	96.1	88.6	81.0	73.4	67.7	63.8	60.0	56.2	52.3	51.7
82.5°	77.8	71.3	64.7	58.2	51.7	47.5	45.7	43.9	42.1	40.3	39.8
85°	44.0	39.9	35.9	31.8	27.7	25.4	24.9	24.3	23.8	23.2	22.9
87.5°	16.1	14.7	13.3	12.0	10.6	10.1	10.5	10.8	11.1	11.5	11.4
90°	0.6	1.9	3.2	4.5	5.8	7.3	9.0	10.7	12.4	14.1	14.7
92.5°	14.3	15.1	16.0	16.9	17.7	18.7	19.6	20.7	21.6	22.6	23.0
95°	34.7	35.6	36.5	37.5	38.3	39.3	40.4	41.4	42.5	43.5	44.0
97.5°	61.6	62.3	63.0	63.7	64.3	65.0	65.8	66.5	67.3	68.1	68.7
100°	79.9	80.7	81.5	82.3	83.1	83.8	84.4	85.2	85.8	86.4	86.8
102.5°	101.2	101.6	102.1	102.5	103.0	103.7	104.6	105.4	106.2	107.1	107.5
105°	132.3	132.5	132.8	133.1	133.3	134.0	135.2	136.4	137.6	138.8	138.8
107.5°	168.5	168.7	168.8	169.0	169.1	169.4	169.9	170.4	170.9	171.3	171.7
110°	191.1	191.4	191.6	191.9	192.1	192.4	192.7	192.9	193.2	193.5	194.0



TEST NUMBER: P332437-927

CATALOG NUMBER: S123RDIW-S775D755U927-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	214.6	214.8	214.9	215.1	215.2	215.3	215.4	215.5	215.5	215.6	216.2
115°	249.9	250.3	250.6	251.0	251.4	251.5	251.3	251.0	250.7	250.5	250.6
117.5°	285.4	285.7	285.9	286.2	286.5	286.5	286.1	285.7	285.4	285.0	285.0
120°	307.5	308.3	309.1	309.9	310.7	310.7	310.1	309.4	308.8	308.1	308.0
122.5°	330.6	331.1	331.7	332.3	332.9	333.0	332.6	332.3	332.0	331.6	331.3
125°	365.8	366.1	366.5	366.9	367.3	367.3	367.1	366.9	366.5	366.3	365.8
127.5°	398.2	399.0	399.9	400.7	401.6	401.8	401.6	401.2	400.9	400.7	399.9
130°	419.9	420.9	421.9	422.9	424.0	424.4	424.0	423.6	423.2	422.8	422.2
132.5°	441.5	442.5	443.5	444.6	445.7	446.0	445.8	445.4	445.1	444.9	444.3
135°	474.5	475.3	476.1	476.9	477.6	478.0	477.8	477.7	477.6	477.4	476.9
137.5°	505.1	505.7	506.4	507.1	507.7	508.2	508.5	508.9	509.2	509.5	509.0
140°	526.2	526.9	527.6	528.2	528.9	529.3	529.4	529.5	529.7	529.8	529.7
142.5°	545.6	546.2	546.8	547.5	548.1	548.6	548.8	549.1	549.3	549.5	549.4
145°	575.7	575.9	576.2	576.4	576.7	577.0	577.4	577.8	578.2	578.6	578.5
147.5°	602.0	602.5	602.9	603.4	603.9	604.3	604.7	605.0	605.4	605.8	605.8
150°	620.4	620.6	620.8	621.2	621.4	621.6	621.9	622.2	622.4	622.7	622.7
152.5°	635.4	635.7	636.1	636.5	636.8	637.1	637.2	637.4	637.5	637.7	637.9
155°	659.2	659.2	659.2	659.2	659.2	659.2	659.3	659.5	659.6	659.7	660.3
157.5°	679.4	679.2	679.1	678.9	678.7	678.7	678.8	678.9	679.1	679.1	679.7
160°	692.1	691.8	691.6	691.3	691.0	690.9	690.9	690.9	690.9	690.9	691.6
162.5°	703.4	703.0	702.6	702.3	701.9	701.8	701.9	702.0	702.1	702.2	702.8
165°	718.0	717.6	717.2	716.8	716.4	716.1	716.1	716.1	716.1	716.1	716.9
167.5°	729.6	729.0	728.6	728.0	727.5	727.3	727.4	727.5	727.6	727.7	728.5
170°	736.2	735.6	735.1	734.6	734.0	733.8	733.8	733.8	733.8	733.8	734.7
172.5°	741.3	740.8	740.3	739.7	739.3	738.9	738.9	738.9	738.9	738.9	739.8
175°	746.7	746.2	745.7	745.2	744.7	744.4	744.4	744.4	744.4	744.4	745.2
177.5°	749.0	748.5	748.1	747.7	747.3	747.1	747.1	747.1	747.1	747.1	747.7
180°	748.5	748.5	748.5	748.5	748.5	748.5	748.5	748.5	748.5	748.5	748.5



TEST NUMBER: P332437-927

CATALOG NUMBER: S123RDIW-S775D755U927-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1022.8	1022.8	1022.8	1022.8	1022.8	1022.8	1022.8	1022.8
2.5°	1018.7	1020.3	1021.9	1022.6	1022.3	1022.0	1021.7	1021.4
5°	1011.9	1013.6	1015.3	1015.9	1015.6	1015.2	1014.8	1014.5
7.5°	997.8	998.6	999.6	999.7	999.1	998.5	997.8	997.2
10°	985.0	985.2	985.3	985.0	984.0	983.1	982.2	981.3
12.5°	969.1	969.0	968.9	968.3	967.3	966.1	965.1	964.0
15°	941.3	940.3	939.4	938.3	937.1	935.7	934.5	933.2
17.5°	908.0	906.1	904.1	902.2	900.2	898.3	896.4	894.5
20°	885.3	882.8	880.4	878.1	875.9	873.7	871.5	869.3
22.5°	860.9	857.9	854.8	852.3	850.2	848.2	846.1	844.1
25°	820.9	817.1	813.2	810.2	808.2	806.1	804.1	802.1
27.5°	777.4	772.1	766.7	762.4	759.3	756.2	753.1	750.0
30°	746.5	740.1	733.9	729.3	726.4	723.4	720.4	717.5
32.5°	716.1	709.2	702.3	697.4	694.3	691.2	688.1	685.0
35°	671.0	663.1	655.1	649.5	646.2	642.9	639.5	636.2
37.5°	622.5	613.5	604.5	598.0	593.9	589.8	585.7	581.6
40°	588.8	579.2	569.7	562.8	558.5	554.3	550.0	545.8
42.5°	556.5	546.1	535.6	528.5	524.7	520.9	517.1	513.3
45°	509.1	498.5	488.0	480.5	476.1	471.7	467.3	462.9
47.5°	459.9	448.5	437.0	429.4	425.4	421.4	417.6	413.6
50°	426.7	415.3	403.9	396.0	391.8	387.5	383.3	379.1
52.5°	394.7	382.8	370.9	363.1	359.3	355.5	351.6	347.8
55°	346.9	336.2	325.5	318.3	314.7	310.9	307.3	303.6
57.5°	300.0	289.9	279.8	273.1	270.1	266.9	263.7	260.6
60°	270.4	260.5	250.5	244.0	240.8	237.7	234.6	231.4
62.5°	241.1	231.7	222.4	216.0	212.7	209.5	206.2	202.9
65°	199.2	190.2	181.2	175.6	173.6	171.6	169.6	167.5
67.5°	159.4	152.7	145.8	141.4	139.3	137.0	134.9	132.7
70°	134.8	128.3	121.8	117.6	115.6	113.5	111.5	109.5
72.5°	112.6	107.3	102.0	98.9	98.1	97.3	96.4	95.5
75°	84.2	82.4	80.6	79.5	79.1	78.7	78.3	78.0
77.5°	63.5	62.5	61.6	60.8	60.5	60.1	59.7	59.4
80°	51.2	50.6	50.1	49.6	49.2	48.9	48.5	48.1
82.5°	39.2	38.7	38.1	37.8	37.7	37.6	37.5	37.5
85°	22.5	22.1	21.8	21.5	21.5	21.5	21.5	21.5
87.5°	11.3	11.3	11.2	11.2	11.1	11.0	10.9	10.9
90°	15.1	15.7	16.2	16.6	16.9	17.1	17.3	17.7
92.5°	23.4	23.8	24.2	24.4	24.2	24.1	23.9	23.8
95°	44.5	45.1	45.6	45.9	45.9	45.9	45.9	45.9
97.5°	69.3	69.9	70.5	70.7	70.7	70.7	70.6	70.6
100°	87.2	87.6	88.0	88.3	88.6	88.9	89.1	89.4
102.5°	107.9	108.3	108.7	108.8	108.8	108.8	108.7	108.7
105°	138.8	138.8	138.8	138.9	139.2	139.4	139.7	140.0
107.5°	172.1	172.6	173.0	173.2	173.0	172.9	172.7	172.5
110°	194.5	195.0	195.5	195.7	195.4	195.1	194.9	194.6



TEST NUMBER: P332437-927

CATALOG NUMBER: S123RDIW-S775D755U927-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	216.8	217.5	218.1	218.3	218.3	218.2	218.2	218.2
115°	250.7	250.9	251.0	251.0	250.9	250.7	250.6	250.5
117.5°	285.0	284.9	284.9	284.8	284.4	284.0	283.7	283.3
120°	307.8	307.7	307.6	307.4	307.1	306.9	306.6	306.3
122.5°	331.0	330.6	330.3	329.9	329.5	329.2	328.8	328.4
125°	365.3	364.7	364.2	363.7	363.2	362.7	362.1	361.6
127.5°	399.2	398.5	397.8	397.0	396.5	395.9	395.3	394.7
130°	421.8	421.2	420.6	419.9	419.1	418.1	417.2	416.3
132.5°	443.6	443.0	442.4	441.7	441.0	440.3	439.6	438.9
135°	476.4	475.9	475.4	475.0	474.7	474.4	474.2	473.9
137.5°	508.4	507.9	507.4	506.8	506.4	505.8	505.3	504.9
140°	529.5	529.4	529.3	528.7	527.8	526.9	526.0	525.1
142.5°	549.3	549.1	549.0	548.6	547.9	547.2	546.4	545.7
145°	578.3	578.2	578.1	577.7	577.2	576.7	576.2	575.7
147.5°	605.8	605.8	605.8	605.4	604.6	603.8	603.0	602.2
150°	622.7	622.7	622.7	622.3	621.5	620.8	620.0	619.2
152.5°	638.2	638.3	638.6	638.3	637.6	637.0	636.3	635.6
155°	660.8	661.3	661.8	661.6	660.7	659.8	658.9	658.0
157.5°	680.2	680.8	681.4	681.2	680.5	679.8	679.1	678.3
160°	692.2	692.8	693.5	693.6	693.1	692.5	692.0	691.5
162.5°	703.5	704.2	704.8	704.7	703.9	703.1	702.2	701.3
165°	717.7	718.5	719.3	719.2	718.4	717.4	716.5	715.6
167.5°	729.3	730.2	730.9	730.9	730.2	729.3	728.5	727.7
170°	735.6	736.6	737.4	737.4	736.6	735.6	734.7	733.8
172.5°	740.6	741.4	742.2	742.2	741.2	740.4	739.4	738.6
175°	746.0	746.7	747.5	747.5	746.6	745.6	744.7	743.8
177.5°	748.4	749.0	749.6	749.6	748.8	748.1	747.3	746.6
180°	748.5	748.5	748.5	748.5	748.5	748.5	748.5	748.5

(END OF REPORT)