

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: P331796-927

Luminaire Tested: **S122RDIW-S485D970U927-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331796-927
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122RDIW-S485D970U927-4F0-1E-UDD-F1
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 970 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4007.0 lumens
Efficiency: N/A
Efficacy: 88.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Indirect

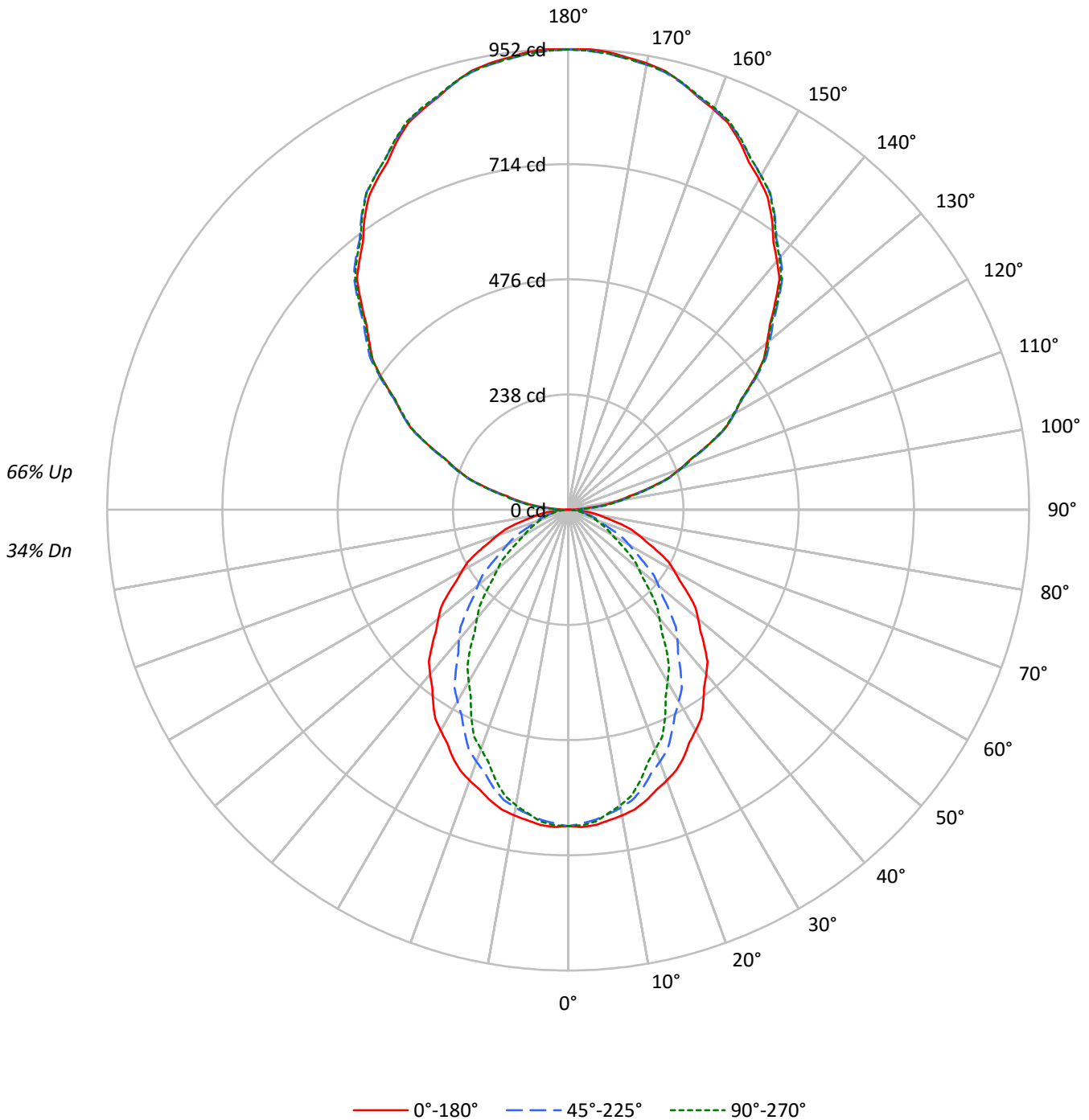
Input Watts (W): 45.2
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331796-927

CATALOG NUMBER: S122RDIW-S485D970U927-4F0-1E-UDD-F1

Luminous Intensity Polar Plot





TEST NUMBER: P331796-927

CATALOG NUMBER: S122RDIW-S485D970U927-4F0-1E-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	34
1	94	90	87	83	85	82	79	76	65	63	61	50	49	48	37	36	35	29
2	86	79	73	69	78	72	67	63	58	54	51	45	42	40	33	31	30	25
3	79	70	63	57	71	63	57	53	51	47	43	40	37	35	29	28	26	21
4	72	62	54	49	65	56	50	45	46	41	37	36	32	30	26	24	23	19
5	66	55	48	42	60	50	44	39	41	36	32	32	29	26	24	22	20	16
6	61	50	42	36	55	45	38	34	37	32	28	29	26	23	22	19	18	15
7	56	45	37	32	51	41	34	29	33	28	25	26	23	20	20	18	16	13
8	52	41	33	28	47	37	31	26	30	26	22	24	21	18	18	16	14	12
9	49	37	30	25	44	34	28	23	28	23	20	22	19	16	17	15	13	11
10	45	34	27	22	41	31	25	21	26	21	18	21	17	15	16	13	12	10

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10555	10555	10555
5°	10595	10423	10481
10°	10516	10252	10165
15°	10394	9949	9663
20°	10227	9514	9036
25°	10055	9021	8432
30°	9818	8516	7655
35°	9585	7965	6974
40°	9352	7396	6184
45°	9079	6754	5471
50°	8796	6106	4770
55°	8510	5413	4096
60°	8176	4682	3400
65°	7798	3931	3095
70°	7345	3238	2851
75°	6787	2951	2658
80°	5997	2641	2427
85°	4705	2075	2075



TEST NUMBER: P331796-927

CATALOG NUMBER: S122RDIW-S485D970U927-4F0-1E-UDD-F1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	61.2	1.5
10°-20°	168.0	4.2
20°-30°	235.9	5.9
30°-40°	257.3	6.4
40°-50°	236.6	5.9
50°-60°	185.8	4.6
60°-70°	121.1	3.0
70°-80°	62.5	1.6
80°-90°	20.0	0.5
90°-100°	60.2	1.5
100°-110°	187.1	4.7
110°-120°	319.9	8.0
120°-130°	420.6	10.5
130°-140°	472.1	11.8
140°-150°	462.9	11.6
150°-160°	388.3	9.7
160°-170°	257.5	6.4
170°-180°	90.0	2.2
0°-30°	465.2	11.6
0°-40°	722.4	18.0
0°-60°	1144.8	28.6
0°-90°	1348.4	33.7
90°-120°	567.2	14.2
90°-150°	1922.8	48.0
90°-180°	2659.0	66.4
0°-180°	4007.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	654	654	654	654	654	
5°	654	650	643	648	647	62
15°	622	615	595	584	578	175
25°	564	544	506	483	473	259
35°	486	455	404	368	354	304
45°	398	357	296	255	240	307
55°	302	255	192	158	146	270
65°	204	156	103	84	81	202
75°	109	69	47	43	43	115
85°	25	14	11	11	11	30
90°	1	11	28	27	27	3
95°	42	49	51	51	50	48
105°	172	175	176	178	178	182
115°	321	325	324	323	321	317
125°	467	474	472	470	469	417
135°	604	613	615	614	611	467
145°	733	739	744	744	741	458
155°	838	841	843	847	845	386
165°	912	912	912	917	913	257
175°	949	947	945	950	946	90
180°	951	951	951	951	951	



TEST NUMBER: P331796-927

CATALOG NUMBER: S122RDIW-S485D970U927-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	653.7	653.7	653.7	653.7	653.7	653.7	653.7	653.7	653.7	653.7	653.7
2.5°	656.1	655.6	655.1	654.5	654.0	653.2	652.0	650.9	649.7	648.6	649.6
5°	653.7	653.1	652.4	651.8	651.1	649.9	648.2	646.5	644.8	643.1	644.3
7.5°	647.0	646.2	645.4	644.5	643.7	642.3	640.3	638.3	636.4	634.4	634.7
10°	641.4	640.4	639.4	638.6	637.6	635.9	633.3	630.6	628.0	625.3	625.0
12.5°	634.2	633.1	631.9	630.8	629.7	627.5	624.1	620.8	617.3	614.0	613.3
15°	621.8	620.4	618.9	617.4	616.0	613.1	608.6	604.1	599.7	595.2	592.7
17.5°	606.6	604.4	602.1	599.9	597.7	593.7	588.0	582.3	576.6	570.8	567.8
20°	595.2	592.6	589.9	587.3	584.6	580.0	573.5	566.9	560.3	553.7	550.5
22.5°	582.9	580.0	576.9	574.0	571.1	565.9	558.5	551.0	543.7	536.2	532.0
25°	564.4	560.2	556.0	551.8	547.6	541.1	532.4	523.8	515.1	506.4	501.1
27.5°	542.2	537.6	533.0	528.5	523.9	516.7	506.9	497.1	487.4	477.5	471.3
30°	526.6	521.6	516.6	511.6	506.6	498.8	488.3	477.8	467.2	456.8	450.0
32.5°	511.4	505.6	499.7	493.9	488.1	479.7	469.1	458.3	447.6	436.9	429.2
35°	486.3	479.6	472.9	466.2	459.5	450.4	438.8	427.2	415.7	404.1	395.8
37.5°	461.2	453.8	446.5	439.1	431.8	421.9	409.6	397.3	384.9	372.6	363.5
40°	443.7	435.9	427.9	420.1	412.2	401.9	389.1	376.4	363.6	350.9	341.5
42.5°	425.7	417.4	409.1	400.8	392.5	381.8	368.6	355.4	342.2	329.1	319.4
45°	397.6	388.8	379.9	371.1	362.3	351.0	337.2	323.4	309.6	295.8	286.5
47.5°	370.1	360.8	351.5	342.1	332.8	321.0	306.7	292.5	278.2	264.0	254.7
50°	350.2	340.9	331.6	322.3	312.9	301.0	286.5	272.1	257.6	243.1	234.1
52.5°	330.8	321.1	311.3	301.6	291.8	279.9	265.7	251.6	237.4	223.3	214.5
55°	302.3	292.1	281.8	271.6	261.3	249.1	234.9	220.7	206.4	192.3	184.4
57.5°	273.1	262.6	252.1	241.5	231.0	219.0	205.3	191.6	178.0	164.4	157.1
60°	253.2	242.7	232.2	221.7	211.1	199.2	185.6	172.1	158.5	145.0	138.2
62.5°	233.8	223.3	212.8	202.2	191.7	180.1	167.2	154.2	141.3	128.4	122.0
65°	204.1	193.5	182.8	172.1	161.5	150.3	138.5	126.6	114.8	102.9	98.5
67.5°	175.5	164.9	154.3	143.8	133.2	122.6	111.9	101.3	90.6	80.0	78.0
70°	155.6	145.4	135.1	124.8	114.5	104.9	95.9	86.7	77.7	68.6	67.3
72.5°	136.7	126.8	117.0	107.2	97.4	88.8	81.5	74.2	66.9	59.7	58.5
75°	108.8	99.7	90.5	81.3	72.0	65.2	60.8	56.2	51.8	47.3	46.4
77.5°	81.5	73.4	65.4	57.3	49.3	44.1	42.0	39.8	37.6	35.5	34.9
80°	64.5	57.8	51.1	44.4	37.6	33.7	32.3	31.1	29.7	28.4	27.9
82.5°	48.9	43.6	38.4	33.2	28.0	24.9	24.0	23.1	22.2	21.3	21.0
85°	25.4	22.7	19.9	17.2	14.4	12.8	12.4	12.0	11.6	11.2	11.2
87.5°	7.8	7.3	6.9	6.5	6.1	6.3	7.1	7.8	8.6	9.4	9.2
90°	0.8	2.9	5.1	7.2	9.3	12.4	16.3	20.2	24.2	28.0	27.7
92.5°	14.3	15.8	17.4	19.0	20.6	21.8	22.7	23.7	24.6	25.5	25.6
95°	41.7	43.5	45.3	47.1	48.9	49.9	50.3	50.6	51.0	51.3	51.3
97.5°	76.2	77.8	79.4	81.0	82.5	83.7	84.3	85.0	85.6	86.3	86.3
100°	101.9	103.3	104.7	106.2	107.6	108.6	109.1	109.6	110.2	110.7	110.7
102.5°	128.9	130.0	131.1	132.3	133.4	134.4	135.0	135.7	136.3	137.0	137.2
105°	172.5	173.0	173.6	174.1	174.7	175.1	175.5	175.8	176.2	176.5	176.9
107.5°	216.5	217.3	218.0	218.8	219.6	220.0	220.0	220.0	220.0	220.0	220.1
110°	244.7	245.8	246.8	248.0	249.0	249.5	249.5	249.5	249.5	249.5	249.5



TEST NUMBER: P331796-927

CATALOG NUMBER: S122RDIW-S485D970U927-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	275.5	276.6	277.7	278.8	279.8	280.3	280.1	280.0	279.9	279.7	279.2
115°	320.9	322.0	323.1	324.2	325.2	325.6	325.2	324.9	324.5	324.2	324.0
117.5°	366.2	367.7	369.1	370.5	371.9	372.1	371.1	370.1	369.2	368.1	367.7
120°	396.4	397.8	399.3	400.7	402.1	402.1	400.7	399.3	397.8	396.4	396.4
122.5°	424.0	425.7	427.4	429.1	430.8	431.2	430.2	429.2	428.2	427.1	426.7
125°	467.0	468.6	470.2	471.8	473.4	474.0	473.4	472.9	472.3	471.8	471.3
127.5°	508.9	510.9	512.9	515.0	517.0	517.7	517.1	516.4	515.8	515.2	514.4
130°	535.2	537.5	539.8	542.2	544.5	545.4	545.1	544.7	544.4	544.0	543.7
132.5°	564.7	566.6	568.5	570.4	572.3	573.2	573.3	573.4	573.5	573.5	572.7
135°	604.2	606.2	608.1	610.1	612.0	613.1	613.5	613.9	614.3	614.6	614.4
137.5°	645.7	647.4	649.0	650.5	652.1	653.2	653.6	654.1	654.6	655.1	654.9
140°	670.7	672.4	674.0	675.6	677.2	678.4	679.4	680.2	681.1	682.0	682.0
142.5°	696.5	698.1	699.7	701.2	702.9	704.0	704.6	705.2	705.8	706.4	706.5
145°	733.3	734.6	735.9	737.1	738.4	739.5	740.6	741.6	742.8	743.8	743.9
147.5°	766.3	767.8	769.3	770.7	772.2	773.3	774.0	774.8	775.5	776.2	776.6
150°	788.7	789.8	790.8	791.9	793.0	793.9	794.6	795.4	796.1	796.8	797.3
152.5°	808.7	809.7	810.8	811.8	812.9	813.9	814.8	815.6	816.4	817.3	817.9
155°	838.4	839.0	839.6	840.1	840.6	841.1	841.7	842.2	842.7	843.3	844.1
157.5°	864.0	864.4	864.7	865.1	865.4	865.8	866.1	866.4	866.7	867.0	868.2
160°	879.4	879.7	880.1	880.4	880.8	881.1	881.3	881.5	881.6	881.8	882.9
162.5°	893.5	893.6	893.7	893.7	893.8	893.9	894.1	894.3	894.5	894.6	895.9
165°	912.3	912.1	912.0	911.7	911.6	911.5	911.5	911.5	911.5	911.5	912.8
167.5°	928.0	927.5	926.9	926.4	925.9	925.6	925.6	925.5	925.5	925.4	926.7
170°	936.4	935.8	935.3	934.8	934.2	933.9	933.7	933.5	933.3	933.2	934.4
172.5°	942.1	941.6	941.0	940.6	940.0	939.6	939.4	939.3	939.1	938.9	940.2
175°	949.2	948.6	948.2	947.6	947.1	946.6	946.3	945.9	945.5	945.2	946.4
177.5°	952.1	951.6	951.3	950.8	950.4	950.0	949.7	949.4	949.2	948.9	949.7
180°	950.8	950.8	950.8	950.8	950.8	950.8	950.8	950.8	950.8	950.8	950.8



TEST NUMBER: P331796-927

CATALOG NUMBER: S122RDIW-S485D970U927-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	653.7	653.7	653.7	653.7	653.7	653.7	653.7	653.7
2.5°	650.6	651.7	652.8	653.2	653.0	652.8	652.5	652.4
5°	645.5	646.7	647.8	648.2	647.8	647.5	647.1	646.7
7.5°	635.0	635.3	635.7	635.6	634.9	634.1	633.5	632.8
10°	624.6	624.2	623.8	623.2	622.4	621.6	620.8	620.0
12.5°	612.6	611.9	611.2	610.1	608.8	607.5	606.2	604.9
15°	590.2	587.7	585.2	583.3	581.9	580.7	579.3	578.1
17.5°	564.8	561.9	558.9	556.3	554.1	551.8	549.5	547.2
20°	547.2	543.9	540.6	537.5	534.6	531.7	528.9	525.9
22.5°	527.8	523.6	519.4	516.1	514.0	511.8	509.7	507.5
25°	495.7	490.3	484.9	481.2	479.2	477.2	475.3	473.3
27.5°	465.0	458.7	452.4	447.7	444.6	441.5	438.3	435.2
30°	443.3	436.7	429.9	424.8	421.2	417.7	414.2	410.6
32.5°	421.5	413.9	406.2	400.8	397.4	394.1	390.7	387.4
35°	387.5	379.2	371.0	365.4	362.5	359.6	356.7	353.8
37.5°	354.3	345.2	336.1	329.9	326.6	323.3	320.0	316.6
40°	332.2	322.8	313.5	307.1	303.7	300.3	296.8	293.4
42.5°	309.7	300.1	290.5	284.0	280.7	277.3	274.0	270.7
45°	277.1	267.8	258.5	252.2	249.1	245.9	242.7	239.6
47.5°	245.4	236.1	226.9	220.8	217.9	215.1	212.1	209.3
50°	225.0	215.9	206.8	201.0	198.2	195.4	192.7	189.9
52.5°	205.7	197.0	188.2	182.6	180.1	177.5	174.9	172.4
55°	176.5	168.6	160.7	155.5	153.0	150.5	148.1	145.5
57.5°	149.9	142.7	135.5	130.8	128.7	126.6	124.5	122.3
60°	131.5	124.8	118.1	113.8	111.6	109.5	107.4	105.3
62.5°	115.6	109.2	102.8	99.0	97.8	96.5	95.2	94.0
65°	94.0	89.5	85.1	82.6	82.2	81.8	81.4	81.0
67.5°	75.9	73.8	71.8	70.6	70.1	69.7	69.3	68.8
70°	66.0	64.7	63.4	62.4	61.9	61.4	60.8	60.4
72.5°	57.4	56.3	55.2	54.5	54.2	53.9	53.6	53.2
75°	45.5	44.6	43.6	43.1	43.0	42.9	42.7	42.6
77.5°	34.5	33.9	33.4	33.0	32.8	32.6	32.4	32.2
80°	27.3	26.9	26.3	26.1	26.1	26.1	26.1	26.1
82.5°	20.7	20.4	20.0	19.9	19.9	19.9	19.9	19.9
85°	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2
87.5°	9.0	8.9	8.7	8.6	8.6	8.7	8.7	8.8
90°	27.3	27.0	26.6	26.5	26.8	26.9	27.1	27.3
92.5°	25.7	25.7	25.8	25.8	25.9	25.9	26.0	26.0
95°	51.3	51.3	51.3	51.2	50.8	50.5	50.1	49.7
97.5°	86.3	86.3	86.3	86.3	86.3	86.3	86.2	86.2
100°	110.7	110.7	110.7	110.7	110.4	110.3	110.1	110.0
102.5°	137.4	137.4	137.6	137.6	137.4	137.2	137.0	136.9
105°	177.2	177.6	177.9	178.2	178.2	178.2	178.2	178.2
107.5°	220.3	220.5	220.5	220.2	219.4	218.6	217.8	217.0
110°	249.5	249.5	249.5	249.3	248.7	248.2	247.6	247.2



TEST NUMBER: P331796-927

CATALOG NUMBER: S122RDIW-S485D970U927-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	278.8	278.5	278.0	277.6	277.2	276.8	276.4	276.0
115°	323.8	323.6	323.4	323.1	322.6	322.0	321.5	320.9
117.5°	367.3	366.9	366.4	365.9	365.4	364.9	364.3	363.8
120°	396.4	396.4	396.4	396.1	395.5	395.1	394.5	394.0
122.5°	426.4	425.9	425.5	425.1	424.7	424.3	423.9	423.5
125°	470.7	470.2	469.7	469.3	469.1	469.0	468.7	468.6
127.5°	513.8	513.2	512.5	511.9	511.4	510.8	510.2	509.7
130°	543.3	543.0	542.6	542.0	541.3	540.6	539.9	539.2
132.5°	572.0	571.2	570.4	569.7	569.2	568.5	568.0	567.4
135°	614.3	614.1	613.9	613.5	613.0	612.4	612.0	611.4
137.5°	654.7	654.7	654.5	654.0	653.3	652.6	651.9	651.2
140°	682.0	682.0	682.0	681.7	681.0	680.2	679.5	678.8
142.5°	706.7	706.9	706.9	706.7	706.0	705.3	704.6	703.9
145°	744.2	744.3	744.5	744.3	743.5	742.8	742.1	741.4
147.5°	777.0	777.4	777.8	777.6	777.0	776.3	775.6	774.9
150°	797.8	798.4	798.9	798.9	798.4	797.8	797.3	796.8
152.5°	818.6	819.4	820.0	820.0	819.4	818.6	817.9	817.3
155°	845.1	846.0	846.8	847.0	846.5	846.0	845.4	844.9
157.5°	869.5	870.7	871.9	872.0	871.2	870.4	869.5	868.6
160°	883.9	885.0	886.1	886.3	885.6	884.9	884.2	883.4
162.5°	897.1	898.3	899.5	899.7	898.8	897.9	897.1	896.3
165°	914.0	915.2	916.5	916.6	915.8	914.9	914.0	913.1
167.5°	928.0	929.2	930.4	930.6	929.7	928.8	927.8	926.9
170°	935.6	936.9	938.2	938.3	937.2	936.1	935.0	934.0
172.5°	941.4	942.7	943.9	944.0	942.9	941.9	940.8	939.8
175°	947.7	949.0	950.1	950.3	949.2	948.2	947.1	946.0
177.5°	950.6	951.4	952.3	952.3	951.4	950.6	949.7	948.9
180°	950.8	950.8	950.8	950.8	950.8	950.8	950.8	950.8

(END OF REPORT)