

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: P331771-927

Luminaire Tested: **S122RDIW-S290D710U927-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331771-927
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-2,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122RDIW-S290D710U927-4F0-1E-UDD-F
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 290 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 710 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3065.8 lumens
Efficiency: N/A
Efficacy: 100.8 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

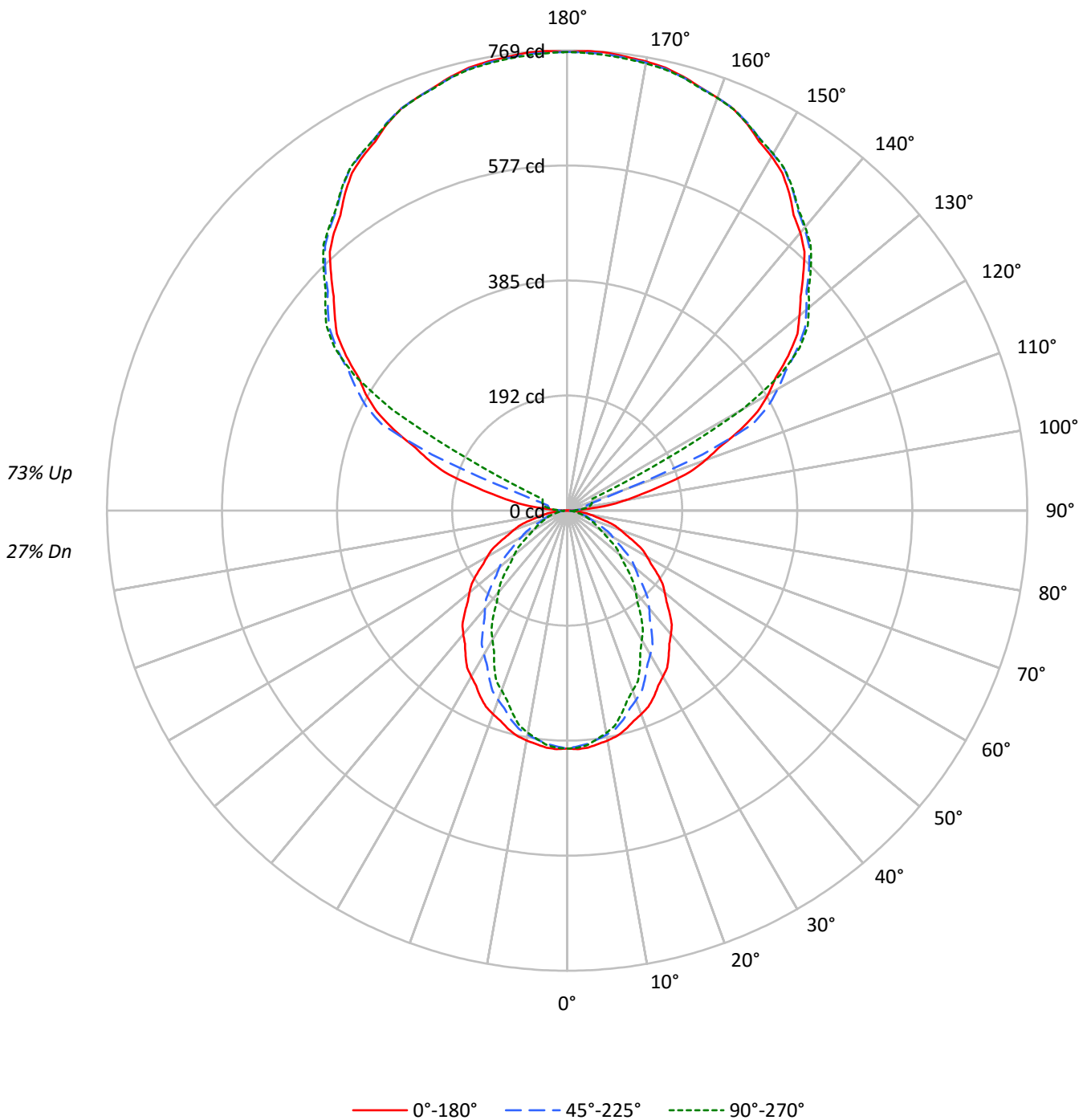
Input Watts (W): 30.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331771-927

CATALOG NUMBER: S122RDIW-S290D710U927-4F0-1E-UDD-F

Luminous Intensity Polar Plot





TEST NUMBER: P331771-927

CATALOG NUMBER: S122RDIW-S290D710U927-4F0-1E-UDD-F

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	102	102	102	102	91	91	91	91	70	70	70	52	52	52	35	35	35	27
1	93	89	85	82	83	79	76	74	62	60	58	46	45	43	31	30	30	23
2	85	78	72	67	75	70	65	61	55	51	48	41	38	37	28	26	25	20
3	77	68	62	56	69	61	56	51	48	44	41	36	33	31	25	23	22	17
4	71	61	53	48	63	55	48	43	43	39	35	32	29	27	22	20	19	15
5	65	54	46	41	58	49	42	37	38	34	30	29	26	23	20	18	17	13
6	60	48	41	35	53	44	37	32	35	30	26	26	23	21	18	16	15	12
7	55	44	36	31	49	39	33	28	31	27	23	24	21	18	17	15	13	10
8	51	40	32	27	46	36	29	25	29	24	21	22	19	16	15	13	12	9
9	48	36	29	24	43	33	26	22	26	22	18	20	17	15	14	12	11	8
10	44	33	26	21	40	30	24	20	24	20	16	18	15	13	13	11	10	8

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6421	6421	6421
5°	6446	6340	6374
10°	6396	6237	6184
15°	6322	6051	5877
20°	6220	5787	5498
25°	6116	5489	5129
30°	5972	5179	4657
35°	5830	4845	4242
40°	5689	4498	3762
45°	5523	4108	3329
50°	5350	3715	2901
55°	5177	3291	2494
60°	4973	2848	2070
65°	4741	2392	1883
70°	4471	1969	1733
75°	4130	1797	1616
80°	3645	1609	1469
85°	2853	1260	1260



TEST NUMBER: P331771-927

CATALOG NUMBER: S122RDIW-S290D710U927-4F0-1E-UDD-F

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	37.2	1.2
10°-20°	102.2	3.3
20°-30°	143.5	4.7
30°-40°	156.5	5.1
40°-50°	143.9	4.7
50°-60°	113.0	3.7
60°-70°	73.7	2.4
70°-80°	38.0	1.2
80°-90°	11.7	0.4
90°-100°	25.6	0.8
100°-110°	93.8	3.1
110°-120°	250.6	8.2
120°-130°	413.7	13.5
130°-140°	440.0	14.4
140°-150°	408.9	13.3
150°-160°	328.8	10.7
160°-170°	211.9	6.9
170°-180°	72.9	2.4
0°-30°	282.9	9.2
0°-40°	439.4	14.3
0°-60°	696.4	22.7
0°-90°	819.8	26.7
90°-120°	369.9	12.1
90°-150°	1632.5	53.2
90°-180°	2246.0	73.3
0°-180°	3065.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	398	398	398	398	398	
5°	398	396	391	394	393	38
15°	378	374	362	355	352	106
25°	343	331	308	294	288	158
35°	296	277	246	224	215	185
45°	242	217	180	155	146	187
55°	184	155	117	96	89	164
65°	124	95	63	51	49	123
75°	66	42	29	26	26	70
85°	15	8	7	7	7	18
90°	1	6	11	14	15	2
95°	36	19	22	24	24	44
105°	169	176	34	40	42	180
115°	319	329	342	97	46	314
125°	451	458	469	472	474	402
135°	558	567	572	577	576	431
145°	647	647	656	660	657	405
155°	713	708	714	717	713	328
165°	751	748	749	753	749	212
175°	768	764	765	769	764	73
180°	766	766	766	766	766	



TEST NUMBER: P331771-927

CATALOG NUMBER: S122RDIW-S290D710U927-4F0-1E-UDD-F

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	397.7	397.7	397.7	397.7	397.7	397.7	397.7	397.7	397.7	397.7	397.7
2.5°	399.1	398.8	398.5	398.2	397.8	397.3	396.6	395.9	395.2	394.5	395.1
5°	397.7	397.3	396.9	396.5	396.1	395.3	394.3	393.2	392.2	391.2	391.9
7.5°	393.6	393.1	392.5	392.1	391.6	390.7	389.5	388.2	387.1	385.9	386.0
10°	390.1	389.5	389.0	388.4	387.9	386.7	385.2	383.6	382.0	380.4	380.2
12.5°	385.8	385.1	384.4	383.7	383.0	381.7	379.6	377.6	375.5	373.4	373.0
15°	378.2	377.3	376.4	375.6	374.7	372.9	370.2	367.5	364.7	362.0	360.5
17.5°	368.9	367.6	366.2	364.9	363.5	361.2	357.7	354.2	350.7	347.2	345.4
20°	362.0	360.4	358.9	357.2	355.6	352.8	348.8	344.8	340.9	336.8	334.9
22.5°	354.6	352.8	350.9	349.2	347.4	344.2	339.7	335.2	330.7	326.2	323.6
25°	343.3	340.7	338.2	335.6	333.1	329.2	323.8	318.6	313.3	308.1	304.8
27.5°	329.8	327.0	324.2	321.5	318.6	314.3	308.3	302.4	296.4	290.5	286.7
30°	320.3	317.3	314.2	311.2	308.2	303.4	297.0	290.7	284.2	277.8	273.8
32.5°	311.1	307.5	304.0	300.4	296.8	291.8	285.3	278.8	272.3	265.7	261.1
35°	295.8	291.8	287.6	283.6	279.5	273.9	266.9	259.8	252.9	245.8	240.7
37.5°	280.6	276.1	271.6	267.1	262.6	256.7	249.1	241.6	234.2	226.6	221.1
40°	269.9	265.1	260.3	255.5	250.7	244.5	236.7	228.9	221.2	213.4	207.7
42.5°	259.0	253.9	248.8	243.8	238.8	232.2	224.2	216.2	208.2	200.2	194.3
45°	241.9	236.5	231.1	225.8	220.4	213.5	205.1	196.7	188.3	179.9	174.3
47.5°	225.1	219.4	213.8	208.1	202.4	195.3	186.6	177.9	169.2	160.6	155.0
50°	213.0	207.4	201.7	196.0	190.4	183.1	174.3	165.5	156.7	147.9	142.4
52.5°	201.2	195.3	189.4	183.5	177.5	170.2	161.6	153.0	144.4	135.8	130.5
55°	183.9	177.7	171.4	165.2	158.9	151.5	142.8	134.2	125.6	116.9	112.2
57.5°	166.1	159.7	153.3	146.9	140.5	133.2	124.8	116.6	108.3	100.0	95.5
60°	154.0	147.7	141.2	134.8	128.4	121.1	112.9	104.6	96.4	88.2	84.1
62.5°	142.2	135.9	129.4	123.0	116.6	109.5	101.6	93.8	86.0	78.1	74.2
65°	124.1	117.6	111.2	104.7	98.2	91.4	84.2	77.0	69.8	62.6	59.9
67.5°	106.7	100.3	93.9	87.5	81.0	74.5	68.0	61.6	55.1	48.6	47.4
70°	94.7	88.4	82.1	76.0	69.7	63.8	58.3	52.8	47.3	41.7	41.0
72.5°	83.1	77.2	71.1	65.2	59.2	54.0	49.6	45.2	40.7	36.3	35.6
75°	66.2	60.6	55.1	49.4	43.8	39.7	36.9	34.2	31.5	28.8	28.2
77.5°	49.6	44.7	39.8	34.9	29.9	26.9	25.5	24.2	22.9	21.6	21.3
80°	39.2	35.2	31.1	27.0	22.9	20.4	19.6	18.9	18.1	17.3	17.0
82.5°	29.7	26.5	23.4	20.2	17.0	15.1	14.6	14.0	13.5	13.0	12.8
85°	15.4	13.8	12.1	10.5	8.8	7.8	7.5	7.3	7.1	6.8	6.8
87.5°	4.8	4.5	4.2	4.0	3.7	3.7	4.0	4.1	4.4	4.5	4.6
90°	0.6	1.9	3.2	4.6	5.9	7.1	8.2	9.1	10.1	11.1	11.7
92.5°	11.2	11.1	10.9	10.9	10.7	10.9	11.4	11.9	12.4	12.8	13.2
95°	36.0	32.0	27.9	23.8	19.8	18.1	19.0	19.9	20.8	21.6	22.3
97.5°	71.5	60.0	48.6	37.2	25.7	21.0	23.0	25.0	26.9	28.9	29.5
100°	98.2	81.3	64.4	47.5	30.7	23.2	25.3	27.4	29.5	31.6	32.6
102.5°	127.5	123.9	120.3	116.7	113.1	102.6	85.1	67.6	50.0	32.5	33.7
105°	168.6	172.3	176.0	179.7	183.4	168.4	134.8	101.1	67.5	33.8	35.2
107.5°	215.5	218.5	221.5	224.4	227.4	208.7	168.4	128.1	87.7	47.4	45.9
110°	245.7	248.3	250.9	253.4	256.0	239.5	203.9	168.3	132.7	97.0	84.8



TEST NUMBER: P331771-927

CATALOG NUMBER: S122RDIW-S290D710U927-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	274.1	276.4	278.7	280.9	283.2	280.0	271.2	262.4	253.6	244.8	199.9
115°	318.9	321.0	323.1	325.2	327.3	329.9	333.0	336.0	339.1	342.1	285.1
117.5°	358.9	361.2	363.6	365.9	368.3	370.5	372.6	374.8	376.8	379.0	365.2
120°	388.2	390.1	391.9	393.7	395.6	397.6	399.8	402.0	404.3	406.5	408.0
122.5°	413.0	415.0	416.9	418.9	420.8	423.0	425.4	427.9	430.2	432.7	433.6
125°	450.8	452.5	454.1	455.7	457.2	459.2	461.6	463.9	466.3	468.6	469.4
127.5°	485.1	486.9	488.7	490.4	492.3	494.0	495.7	497.5	499.2	501.0	502.2
130°	506.8	508.8	510.8	512.8	514.8	516.4	517.8	519.1	520.5	521.9	523.2
132.5°	529.1	530.8	532.4	534.1	535.8	537.3	538.6	540.0	541.4	542.7	543.8
135°	557.9	559.8	561.8	563.8	565.8	567.4	568.5	569.6	570.7	571.8	573.0
137.5°	587.1	588.4	589.9	591.2	592.6	593.9	595.2	596.4	597.7	599.0	600.2
140°	606.2	607.1	608.1	609.1	610.1	611.2	612.6	613.9	615.3	616.7	617.8
142.5°	622.1	623.0	623.9	624.8	625.7	626.9	628.4	630.0	631.5	633.1	634.1
145°	647.2	647.1	647.0	646.8	646.7	647.7	649.7	651.9	653.9	656.1	657.0
147.5°	669.0	668.6	668.1	667.7	667.2	668.0	670.0	672.1	674.1	676.2	676.9
150°	683.3	682.4	681.5	680.6	679.8	680.3	682.3	684.3	686.3	688.2	689.0
152.5°	695.2	694.3	693.3	692.3	691.3	691.8	693.7	695.5	697.4	699.3	700.1
155°	712.6	711.5	710.4	709.3	708.2	708.4	709.9	711.3	712.8	714.3	715.0
157.5°	726.3	725.3	724.4	723.4	722.5	722.5	723.6	724.6	725.6	726.7	727.5
160°	734.3	733.5	732.8	732.1	731.3	731.3	732.1	732.8	733.5	734.3	735.0
162.5°	741.3	740.6	739.9	739.1	738.4	738.3	738.9	739.7	740.3	740.9	741.7
165°	750.9	750.1	749.4	748.7	747.9	747.7	748.1	748.5	748.8	749.2	750.1
167.5°	758.0	757.2	756.5	755.7	755.0	754.9	755.2	755.5	755.9	756.2	757.1
170°	762.0	761.2	760.5	759.8	759.0	758.8	759.0	759.3	759.5	759.8	760.7
172.5°	764.6	763.9	763.2	762.4	761.7	761.4	761.7	761.9	762.2	762.4	763.3
175°	768.1	767.2	766.4	765.5	764.6	764.3	764.5	764.9	765.1	765.3	766.2
177.5°	768.7	767.9	767.2	766.6	765.9	765.6	765.6	765.8	765.9	766.0	766.7
180°	766.4	766.4	766.4	766.4	766.4	766.4	766.4	766.4	766.4	766.4	766.4



TEST NUMBER: P331771-927

CATALOG NUMBER: S122RDIW-S290D710U927-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	397.7	397.7	397.7	397.7	397.7	397.7	397.7	397.7
2.5°	395.8	396.4	397.0	397.3	397.2	397.0	396.9	396.8
5°	392.6	393.3	394.0	394.3	394.0	393.8	393.6	393.3
7.5°	386.3	386.5	386.7	386.6	386.2	385.7	385.3	384.9
10°	379.9	379.7	379.5	379.1	378.6	378.1	377.6	377.2
12.5°	372.6	372.2	371.8	371.1	370.3	369.6	368.8	368.0
15°	359.0	357.4	355.9	354.8	354.0	353.2	352.4	351.6
17.5°	343.6	341.7	340.0	338.4	337.0	335.6	334.2	332.9
20°	332.9	330.8	328.8	326.9	325.2	323.4	321.7	320.0
22.5°	321.1	318.5	315.9	313.9	312.6	311.3	310.0	308.7
25°	301.5	298.2	294.9	292.7	291.5	290.3	289.1	287.9
27.5°	282.8	279.0	275.2	272.4	270.5	268.5	266.6	264.7
30°	269.7	265.6	261.5	258.4	256.2	254.1	251.9	249.8
32.5°	256.4	251.8	247.1	243.8	241.8	239.7	237.7	235.7
35°	235.8	230.7	225.6	222.2	220.5	218.7	217.0	215.2
37.5°	215.6	210.0	204.5	200.7	198.7	196.6	194.6	192.6
40°	202.1	196.4	190.7	186.8	184.7	182.7	180.5	178.5
42.5°	188.4	182.5	176.7	172.8	170.7	168.7	166.7	164.7
45°	168.6	162.9	157.2	153.4	151.5	149.6	147.7	145.8
47.5°	149.2	143.6	138.0	134.3	132.5	130.8	129.0	127.3
50°	136.9	131.3	125.8	122.2	120.6	118.9	117.2	115.5
52.5°	125.2	119.9	114.5	111.1	109.6	108.0	106.4	104.9
55°	107.3	102.6	97.8	94.6	93.1	91.6	90.1	88.6
57.5°	91.2	86.7	82.4	79.5	78.3	77.0	75.7	74.4
60°	80.0	76.0	71.9	69.2	67.9	66.6	65.4	64.1
62.5°	70.3	66.5	62.6	60.2	59.4	58.7	57.9	57.1
65°	57.2	54.4	51.7	50.2	50.0	49.7	49.5	49.3
67.5°	46.2	44.9	43.6	42.9	42.6	42.4	42.1	41.9
70°	40.2	39.4	38.6	38.0	37.6	37.3	37.0	36.7
72.5°	34.9	34.2	33.6	33.2	33.0	32.8	32.6	32.4
75°	27.6	27.1	26.5	26.2	26.1	26.1	26.0	25.9
77.5°	20.9	20.6	20.3	20.1	20.0	19.8	19.7	19.6
80°	16.6	16.3	16.0	15.8	15.8	15.8	15.8	15.8
82.5°	12.6	12.4	12.2	12.1	12.1	12.1	12.1	12.1
85°	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
87.5°	4.7	4.7	4.8	4.8	4.8	4.9	5.0	5.0
90°	12.4	12.9	13.5	14.0	14.3	14.5	14.7	15.0
92.5°	13.5	13.9	14.2	14.4	14.5	14.7	14.8	15.0
95°	22.9	23.4	24.1	24.3	24.2	24.1	24.0	23.8
97.5°	29.9	30.4	30.9	31.2	31.4	31.5	31.7	31.8
100°	33.6	34.5	35.6	36.2	36.4	36.7	36.9	37.2
102.5°	35.1	36.4	37.6	38.4	38.8	39.1	39.5	39.8
105°	36.5	37.9	39.2	40.2	40.6	41.2	41.7	42.1
107.5°	44.6	43.3	41.8	41.4	41.9	42.4	42.9	43.3
110°	72.4	60.0	47.8	41.8	42.3	42.9	43.3	43.8



TEST NUMBER: P331771-927

CATALOG NUMBER: S122RDIW-S290D710U927-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	154.9	110.0	65.0	42.7	43.1	43.5	43.9	44.3
115°	228.1	171.0	113.9	81.0	72.1	63.2	54.3	45.5
117.5°	351.4	337.5	323.8	302.3	273.1	244.0	214.8	185.7
120°	409.5	410.9	412.4	404.8	388.2	371.5	354.9	338.3
122.5°	434.4	435.3	436.3	435.1	431.8	428.6	425.4	422.2
125°	470.3	471.2	472.1	472.7	473.0	473.4	473.8	474.1
127.5°	503.5	504.8	506.0	506.7	506.8	506.8	506.9	507.0
130°	524.6	525.9	527.3	527.9	527.8	527.7	527.5	527.4
132.5°	545.0	546.2	547.3	547.9	547.7	547.6	547.5	547.4
135°	574.3	575.4	576.7	577.2	576.9	576.7	576.5	576.2
137.5°	601.3	602.5	603.8	604.2	603.7	603.3	602.9	602.5
140°	618.9	620.0	621.2	621.4	620.8	620.1	619.5	618.9
142.5°	635.1	636.1	637.2	637.3	636.8	636.1	635.5	634.9
145°	657.7	658.6	659.5	659.7	659.0	658.4	657.7	657.2
147.5°	677.6	678.2	678.8	678.9	678.3	677.9	677.3	676.8
150°	689.7	690.5	691.2	691.3	690.6	690.0	689.4	688.8
152.5°	700.8	701.6	702.3	702.3	701.4	700.6	699.8	698.9
155°	715.7	716.5	717.2	717.1	716.1	715.2	714.2	713.2
157.5°	728.4	729.2	730.1	730.0	729.0	728.1	727.1	726.1
160°	735.7	736.5	737.2	737.1	736.3	735.4	734.6	733.7
162.5°	742.6	743.4	744.3	744.2	743.1	742.0	740.9	739.9
165°	751.0	751.8	752.7	752.7	751.8	751.0	750.1	749.2
167.5°	758.0	758.8	759.6	759.5	758.4	757.3	756.2	755.1
170°	761.5	762.3	763.2	763.1	762.0	760.9	759.8	758.7
172.5°	764.1	765.0	765.9	765.7	764.6	763.5	762.4	761.3
175°	767.1	767.9	768.7	768.6	767.3	766.1	764.9	763.7
177.5°	767.4	768.0	768.7	768.7	767.8	766.8	766.0	765.1
180°	766.4	766.4	766.4	766.4	766.4	766.4	766.4	766.4

(END OF REPORT)