

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: P332783-930

Luminaire Tested: **S124DIW-S795D770U930-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332783-930
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-6,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124DIW-S795D770U930-4F0-1E-UDD-D
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 795 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 770 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

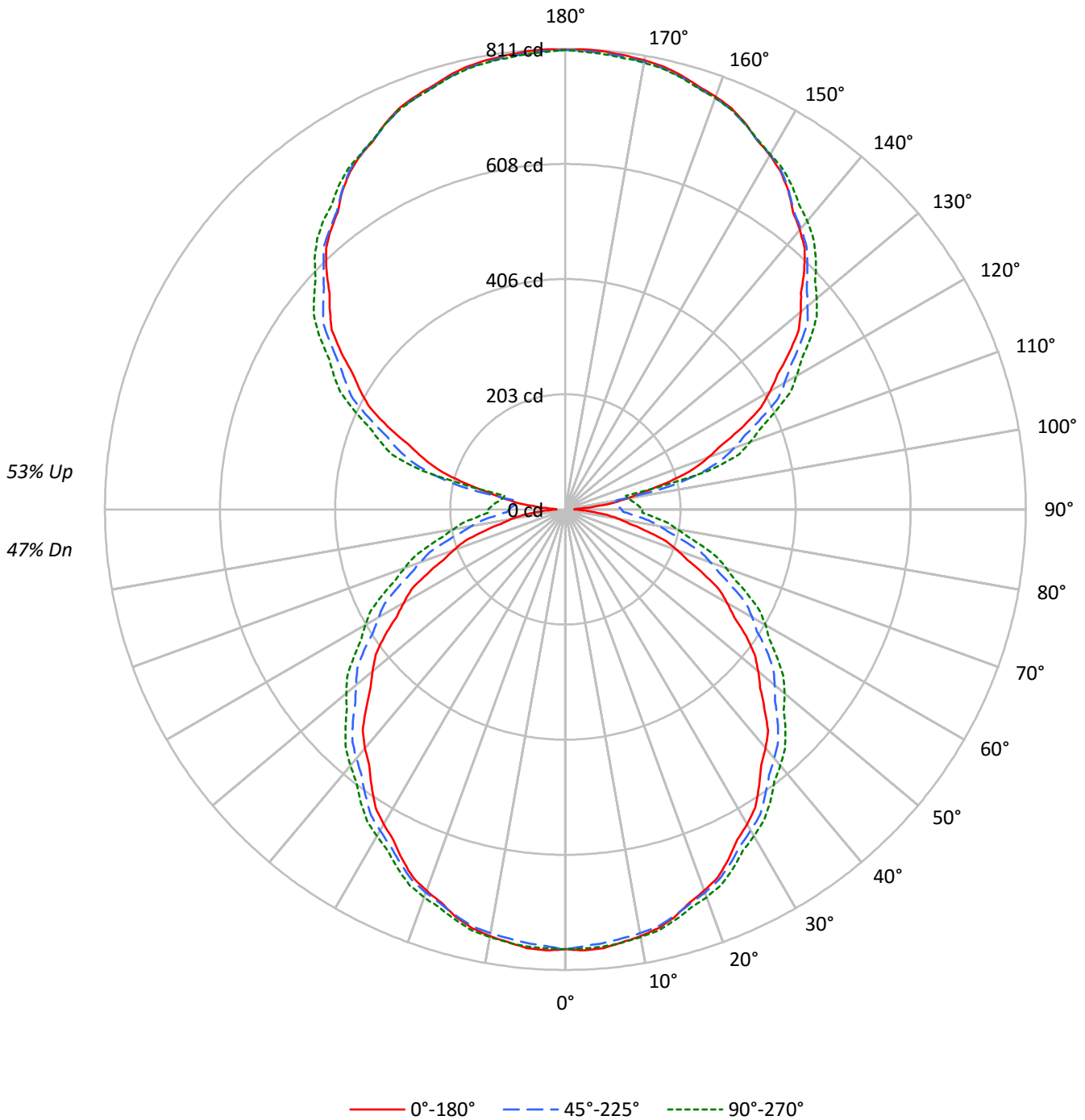
Lumens per Lamp: N/A
Luminaire Lumens: 5145.1 lumens
Efficiency: N/A
Efficacy: 114.3 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')
CIE Type: General Diffuse

Input Watts (W): 45
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: P332783-930
CATALOG NUMBER: S124DIW-S795D770U930-4F0-1E-UDD-D

Luminous Intensity Polar Plot





TEST NUMBER: P332783-930

CATALOG NUMBER: S124DIW-S795D770U930-4F0-1E-UDD-D

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									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	50	30	10	50	30	10	50	30	10	50	30	10	0																
RCR	0	107	107	107	107	98	98	98	98	82	82	82	67	67	67	54	54	54	47	47	47	47	47	47	47	47	47	47	47	47																
	1	96	92	87	83	88	84	81	77	70	68	65	58	56	54	46	45	44	38	38	38	38	38	38	38	38	38	38	38	38																
	2	87	79	73	67	80	73	67	63	61	57	53	50	47	44	40	38	36	31	31	31	31	31	31	31	31	31	31	31	31																
	3	79	69	62	56	72	64	57	52	54	48	44	44	40	37	35	32	30	26	26	26	26	26	26	26	26	26	26	26	26																
	4	72	61	53	47	66	56	49	44	47	42	37	39	35	31	31	28	26	22	22	22	22	22	22	22	22	22	22	22	22																
	5	66	54	46	40	61	50	43	37	42	36	32	35	30	27	28	25	22	19	19	19	19	19	19	19	19	19	19	19	19																
	6	61	49	40	34	56	45	37	32	38	32	28	31	27	24	25	22	19	16	16	16	16	16	16	16	16	16	16	16	16																
	7	56	44	36	30	52	40	33	28	34	29	24	28	24	21	23	20	17	14	14	14	14	14	14	14	14	14	14	14	14																
	8	52	40	32	26	48	37	30	25	31	26	22	26	22	18	21	18	15	13	13	13	13	13	13	13	13	13	13	13	13																
	9	49	36	29	23	44	34	27	22	29	23	19	24	20	16	19	16	14	11	11	11	11	11	11	11	11	11	11	11	11																
	10	45	33	26	21	42	31	24	20	26	21	17	22	18	15	18	15	12	10	10	10	10	10	10	10	10	10	10	10	10																

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6252	6252	6252
5°	6271	6110	6128
10°	6233	6010	6006
15°	6177	5894	5862
20°	6093	5766	5723
25°	5998	5624	5569
30°	5895	5481	5411
35°	5779	5336	5274
40°	5685	5196	5129
45°	5547	5069	5005
50°	5430	4922	4876
55°	5310	4783	4722
60°	5121	4605	4583
65°	4915	4414	4411
70°	4666	4197	4210
75°	4318	3960	4029
80°	3929	3731	3851
85°	3441	3526	3748



TEST NUMBER: P332783-930

CATALOG NUMBER: S124DIW-S795D770U930-4F0-1E-UDD-D

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	73.3	1.4
10°-20°	210.1	4.1
20°-30°	317.7	6.2
30°-40°	384.4	7.5
40°-50°	406.4	7.9
50°-60°	382.5	7.4
60°-70°	317.3	6.2
70°-80°	222.9	4.3
80°-90°	128.4	2.5
90°-100°	102.5	2.0
100°-110°	231.8	4.5
110°-120°	374.7	7.3
120°-130°	449.5	8.7
130°-140°	467.5	9.1
140°-150°	430.5	8.4
150°-160°	345.7	6.7
160°-170°	223.0	4.3
170°-180°	76.9	1.5
0°-30°	601.2	11.7
0°-40°	985.6	19.2
0°-60°	1774.4	34.5
0°-90°	2443.0	47.5
90°-120°	709.0	13.8
90°-150°	2056.6	40.0
90°-180°	2702.0	52.5
0°-180°	5145.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	774	774	774	774	774	
5°	775	772	767	773	773	74
15°	743	744	741	749	748	209
25°	680	685	688	697	698	313
35°	595	605	614	626	629	372
45°	496	513	529	543	548	383
55°	388	407	433	449	455	346
65°	269	297	326	347	355	266
75°	149	182	218	241	250	159
85°	46	83	121	146	156	49
90°	16	57	99	127	136	11
95°	45	54	89	115	124	52
105°	190	212	246	271	258	199
115°	345	356	382	402	408	340
125°	482	484	504	521	528	430
135°	595	595	603	617	624	458
145°	685	686	686	691	696	428
155°	750	750	749	751	749	346
165°	791	788	788	792	787	223
175°	809	806	806	811	804	77
180°	809	809	809	809	809	



TEST NUMBER: P332783-930

CATALOG NUMBER: S124DIW-S795D770U930-4F0-1E-UDD-D

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	774.5	774.5	774.5	774.5	774.5	774.5	774.5	774.5	774.5	774.5	774.5
2.5°	777.2	776.7	776.2	775.8	775.3	774.5	773.2	772.0	770.8	769.6	770.6
5°	775.3	774.7	774.1	773.6	773.0	772.0	770.6	769.3	767.9	766.6	768.2
7.5°	768.7	768.3	768.0	767.7	767.3	766.5	765.5	764.3	763.2	762.1	763.9
10°	763.1	763.0	762.8	762.5	762.4	761.8	760.8	759.9	758.9	757.9	759.7
12.5°	755.5	755.5	755.5	755.4	755.4	755.0	754.4	753.7	753.0	752.4	754.0
15°	743.2	743.4	743.6	743.8	744.0	743.8	743.2	742.7	742.0	741.4	743.2
17.5°	726.4	726.9	727.5	728.1	728.7	728.9	728.8	728.7	728.6	728.5	730.3
20°	714.6	715.2	715.8	716.3	716.9	717.3	717.5	717.6	717.9	718.0	720.0
22.5°	701.4	702.1	702.9	703.6	704.3	704.9	705.2	705.6	705.9	706.3	708.2
25°	679.9	681.0	682.2	683.4	684.5	685.4	686.0	686.6	687.1	687.7	689.8
27.5°	656.0	657.6	659.3	661.0	662.8	664.1	665.0	665.8	666.7	667.6	669.5
30°	640.0	641.6	643.1	644.7	646.2	647.6	649.0	650.3	651.7	653.0	655.1
32.5°	622.6	624.5	626.4	628.2	630.1	631.7	633.2	634.7	636.3	637.7	640.2
35°	594.9	597.2	599.6	601.9	604.1	606.3	608.2	610.2	612.0	614.0	616.7
37.5°	567.0	569.6	572.3	574.9	577.6	580.2	582.5	584.9	587.3	589.7	592.5
40°	548.9	551.5	553.9	556.4	559.0	561.6	564.3	567.0	569.6	572.3	575.3
42.5°	528.2	530.9	533.8	536.5	539.4	542.3	545.5	548.7	551.9	555.0	558.2
45°	496.0	499.7	503.4	507.0	510.7	514.4	518.0	521.7	525.3	529.0	532.3
47.5°	465.4	469.1	472.9	476.7	480.5	484.5	488.7	492.9	497.2	501.4	504.8
50°	443.1	447.4	451.6	455.8	460.1	464.3	468.6	472.8	477.0	481.3	485.2
52.5°	420.9	425.2	429.4	433.7	437.9	442.5	447.3	452.2	457.1	461.9	465.7
55°	388.5	392.6	396.6	400.6	404.7	409.6	415.4	421.2	427.0	432.8	436.6
57.5°	352.3	357.3	362.3	367.3	372.3	377.6	383.4	389.1	394.9	400.6	405.2
60°	328.6	333.7	338.7	343.7	348.7	354.4	360.8	367.1	373.5	379.8	384.3
62.5°	305.7	311.3	316.7	322.2	327.7	333.6	340.0	346.3	352.7	359.1	363.5
65°	268.8	275.0	281.2	287.3	293.5	299.9	306.4	313.0	319.5	326.0	330.8
67.5°	233.3	239.9	246.4	252.9	259.5	266.3	273.3	280.3	287.3	294.3	299.2
70°	209.0	215.6	222.1	228.7	235.2	242.1	249.5	256.8	264.1	271.4	276.6
72.5°	185.4	192.1	198.9	205.5	212.2	219.5	227.3	235.1	242.9	250.6	255.7
75°	149.2	156.3	163.4	170.6	177.7	185.3	193.4	201.5	209.6	217.7	223.1
77.5°	115.4	122.9	130.4	138.0	145.5	153.6	162.1	170.6	179.0	187.5	193.0
80°	94.5	102.2	109.9	117.6	125.4	133.5	141.9	150.4	158.9	167.4	173.2
82.5°	73.7	81.7	89.8	97.8	105.7	114.1	122.5	131.0	139.5	148.0	153.8
85°	46.0	54.1	62.1	70.3	78.4	86.7	95.4	104.0	112.8	121.4	127.2
87.5°	26.0	34.2	42.3	50.5	58.7	67.1	75.7	84.4	93.0	101.7	107.5
90°	15.7	24.9	34.1	43.3	52.4	61.7	71.1	80.5	89.8	99.1	105.6
92.5°	20.8	27.8	34.8	41.8	48.9	57.1	66.4	75.8	85.2	94.5	100.8
95°	44.6	46.3	48.1	49.9	51.7	56.6	64.7	72.7	80.7	88.8	94.7
97.5°	81.0	89.3	97.6	105.9	114.2	114.8	107.6	100.4	93.3	86.0	91.2
100°	108.8	116.3	123.7	131.1	138.5	136.7	125.6	114.6	103.5	92.5	95.5
102.5°	140.7	146.9	153.1	159.2	165.4	171.0	175.9	180.8	185.8	190.7	171.1
105°	190.0	194.6	199.3	204.0	208.6	214.8	222.7	230.5	238.2	246.1	252.1
107.5°	237.1	240.7	244.3	247.8	251.4	257.0	264.6	272.3	280.0	287.6	292.9
110°	268.4	271.5	274.6	277.7	280.8	286.1	293.7	301.3	308.8	316.3	321.0



TEST NUMBER: P332783-930

CATALOG NUMBER: S124DIW-S795D770U930-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	298.6	301.8	304.9	308.0	311.1	316.1	322.9	329.7	336.6	343.3	347.6
115°	345.3	347.5	349.6	351.7	353.8	357.9	363.9	370.0	376.0	382.0	386.6
117.5°	388.1	389.7	391.3	392.8	394.4	398.3	404.3	410.3	416.4	422.4	426.3
120°	416.5	417.6	418.7	419.8	420.9	424.2	429.7	435.1	440.6	446.1	450.1
122.5°	443.6	444.0	444.4	444.9	445.3	448.3	453.8	459.3	464.7	470.2	474.2
125°	481.6	481.9	482.2	482.6	483.0	485.4	489.9	494.5	499.0	503.6	507.7
127.5°	518.2	518.1	518.0	518.0	518.0	520.1	524.4	528.7	533.0	537.4	540.8
130°	541.2	541.2	541.1	541.0	541.0	542.7	546.2	549.7	553.2	556.7	560.3
132.5°	563.0	563.0	563.1	563.1	563.2	564.7	567.7	570.7	573.6	576.7	580.1
135°	594.8	594.7	594.5	594.4	594.3	595.2	597.0	598.9	600.8	602.7	606.1
137.5°	623.7	623.6	623.5	623.3	623.2	623.7	625.0	626.2	627.5	628.8	631.9
140°	642.6	642.7	642.8	642.9	642.9	643.2	643.7	644.1	644.6	645.1	647.9
142.5°	658.8	659.3	659.7	660.2	660.6	660.9	661.0	661.0	661.0	661.1	663.6
145°	684.7	684.9	685.2	685.3	685.6	685.7	685.7	685.7	685.7	685.7	687.0
147.5°	705.4	706.0	706.5	707.1	707.7	707.8	707.8	707.6	707.4	707.4	707.6
150°	720.4	720.8	721.1	721.5	721.8	721.9	721.8	721.6	721.5	721.4	721.4
152.5°	732.3	732.7	733.1	733.5	733.9	733.9	733.7	733.5	733.3	733.0	733.2
155°	749.8	750.0	750.1	750.2	750.4	750.2	749.8	749.4	749.0	748.6	749.2
157.5°	764.8	764.7	764.6	764.5	764.4	764.1	763.7	763.2	762.7	762.3	763.0
160°	773.4	773.0	772.7	772.3	771.8	771.5	771.4	771.3	771.1	771.0	771.8
162.5°	781.1	780.6	780.2	779.7	779.1	778.8	778.7	778.5	778.4	778.3	779.1
165°	791.0	790.3	789.6	789.0	788.3	788.0	788.0	788.0	788.0	788.0	789.0
167.5°	798.7	798.0	797.4	796.6	795.9	795.6	795.5	795.4	795.3	795.2	796.4
170°	803.1	802.3	801.4	800.6	799.9	799.5	799.6	799.8	799.9	800.1	801.1
172.5°	806.0	805.2	804.4	803.6	802.7	802.4	802.6	802.7	802.8	803.0	804.0
175°	809.1	808.3	807.6	806.7	805.9	805.6	805.7	805.8	806.0	806.1	807.3
177.5°	810.6	809.8	809.1	808.3	807.6	807.3	807.6	807.7	808.0	808.1	809.0
180°	809.1	809.1	809.1	809.1	809.1	809.1	809.1	809.1	809.1	809.1	809.1



TEST NUMBER: P332783-930

CATALOG NUMBER: S124DIW-S795D770U930-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	774.5	774.5	774.5	774.5	774.5	774.5	774.5	774.5
2.5°	771.7	772.8	773.9	774.4	774.2	774.0	773.9	773.7
5°	769.7	771.3	772.7	773.5	773.2	773.1	772.9	772.7
7.5°	765.6	767.3	769.1	769.8	769.6	769.4	769.2	769.1
10°	761.4	763.1	764.9	765.6	765.5	765.2	765.1	764.9
12.5°	755.5	757.2	758.7	759.5	759.5	759.4	759.4	759.3
15°	744.9	746.7	748.4	749.2	749.0	748.8	748.6	748.4
17.5°	732.0	733.8	735.6	736.4	736.2	736.1	735.9	735.7
20°	721.9	723.8	725.8	726.8	726.8	726.8	726.8	726.8
22.5°	710.1	712.0	714.0	715.1	715.4	715.7	716.0	716.3
25°	691.9	694.1	696.2	697.3	697.5	697.7	697.9	698.1
27.5°	671.5	673.4	675.5	676.5	676.8	677.0	677.3	677.4
30°	657.2	659.3	661.5	662.8	663.2	663.5	663.9	664.3
32.5°	642.6	645.1	647.4	648.9	649.2	649.6	650.0	650.4
35°	619.4	622.1	624.8	626.4	627.0	627.5	628.2	628.8
37.5°	595.2	597.9	600.6	602.3	602.9	603.6	604.1	604.8
40°	578.1	581.1	583.9	585.7	586.5	587.3	588.1	588.8
42.5°	561.4	564.6	567.8	569.7	570.3	571.0	571.6	572.2
45°	535.6	538.8	542.1	544.2	545.2	546.2	547.1	548.0
47.5°	508.2	511.6	515.0	517.2	518.4	519.6	520.7	521.9
50°	489.0	492.8	496.7	499.2	500.3	501.6	502.7	503.9
52.5°	469.6	473.4	477.3	479.8	480.9	482.1	483.2	484.5
55°	440.4	444.3	448.2	450.7	451.8	453.0	454.1	455.3
57.5°	409.9	414.4	419.0	421.8	422.9	424.0	425.1	426.2
60°	388.7	393.1	397.5	400.6	402.1	403.7	405.2	406.8
62.5°	367.9	372.3	376.7	379.8	381.3	382.9	384.3	385.9
65°	335.7	340.6	345.4	348.5	350.1	351.6	353.1	354.7
67.5°	304.1	309.0	313.9	317.1	318.6	320.1	321.6	323.1
70°	281.8	287.1	292.3	295.5	296.9	298.2	299.5	300.9
72.5°	260.7	265.8	270.8	274.1	275.6	277.1	278.6	280.1
75°	228.4	233.8	239.3	242.8	244.6	246.3	248.0	249.7
77.5°	198.4	203.9	209.4	213.0	214.9	216.7	218.6	220.5
80°	179.0	184.7	190.5	194.1	195.7	197.2	198.8	200.3
82.5°	159.8	165.8	171.7	175.5	177.2	178.9	180.6	182.3
85°	133.0	138.8	144.6	148.4	150.3	152.2	154.2	156.1
87.5°	113.2	119.0	124.7	128.4	130.2	131.9	133.7	135.4
90°	111.9	118.4	124.7	128.8	130.7	132.5	134.3	136.1
92.5°	107.0	113.2	119.5	123.4	125.0	126.6	128.2	129.8
95°	100.8	106.8	112.8	116.8	118.6	120.5	122.4	124.3
97.5°	96.3	101.4	106.6	110.1	111.9	113.6	115.4	117.2
100°	98.4	101.3	104.2	106.4	107.9	109.3	110.9	112.3
102.5°	151.5	131.9	112.3	103.2	104.8	106.3	107.9	109.3
105°	258.1	264.2	270.2	271.5	268.2	264.9	261.6	258.4
107.5°	298.3	303.6	308.9	312.6	314.5	316.3	318.3	320.2
110°	325.7	330.4	335.1	338.4	340.4	342.3	344.3	346.3



TEST NUMBER: P332783-930

CATALOG NUMBER: S124DIW-S795D770U930-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	351.8	356.0	360.3	363.4	365.4	367.5	369.6	371.6
115°	391.1	395.6	400.1	403.1	404.4	405.8	407.1	408.5
117.5°	430.3	434.2	438.2	440.9	442.4	443.9	445.4	446.9
120°	454.3	458.4	462.5	465.2	466.5	467.7	469.0	470.3
122.5°	478.2	482.2	486.2	488.8	489.9	491.1	492.1	493.3
125°	511.7	515.8	519.8	522.5	523.8	525.1	526.4	527.7
127.5°	544.1	547.6	550.9	553.2	554.4	555.6	556.8	558.0
130°	563.9	567.4	571.0	573.4	574.6	575.8	576.9	578.0
132.5°	583.5	586.9	590.4	592.6	593.7	594.8	595.8	596.9
135°	609.4	612.8	616.1	618.5	620.0	621.3	622.8	624.2
137.5°	635.0	638.1	641.2	643.2	644.1	644.9	645.8	646.7
140°	650.9	653.8	656.6	658.7	659.8	660.9	661.9	663.1
142.5°	666.1	668.5	671.1	672.7	673.6	674.4	675.2	676.0
145°	688.3	689.6	690.8	692.0	693.0	694.1	695.1	696.2
147.5°	707.8	708.1	708.4	708.9	709.6	710.4	711.2	711.9
150°	721.4	721.4	721.4	721.5	721.6	721.7	721.9	721.9
152.5°	733.4	733.6	733.9	733.9	733.9	733.8	733.7	733.6
155°	749.7	750.2	750.7	750.8	750.4	750.0	749.6	749.3
157.5°	763.7	764.4	765.1	765.1	764.4	763.7	763.0	762.3
160°	772.7	773.4	774.2	774.2	773.4	772.7	771.8	771.0
162.5°	779.9	780.6	781.5	781.5	780.6	779.6	778.7	777.8
165°	790.1	791.2	792.2	792.2	791.0	789.8	788.6	787.3
167.5°	797.6	798.7	800.0	799.9	798.5	797.2	795.8	794.5
170°	802.2	803.3	804.4	804.2	802.9	801.5	800.2	798.8
172.5°	805.1	806.2	807.2	807.1	805.6	804.2	802.7	801.3
175°	808.5	809.8	811.0	810.7	809.1	807.6	805.9	804.3
177.5°	809.9	810.7	811.6	811.4	810.1	808.8	807.6	806.2
180°	809.1	809.1	809.1	809.1	809.1	809.1	809.1	809.1

(END OF REPORT)