

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

Luminaire Tested: **S124DIW-S795D770U835-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332783
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-S795D770U835-4F0-1E-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: 6310.7 lumens
Efficiency: N/A
Efficacy: 140.2 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

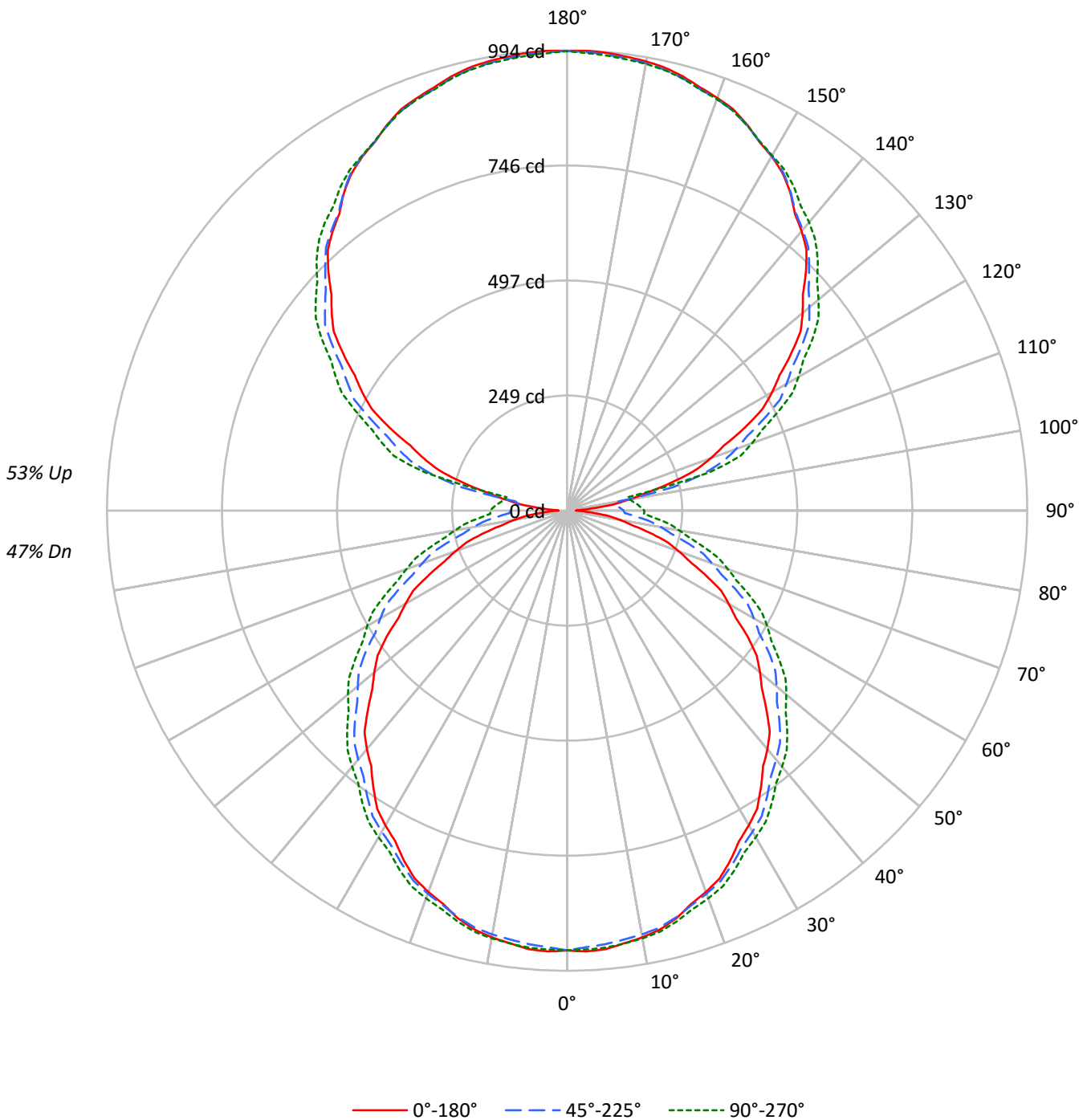
Input Watts (W): 45
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7668	7668	7668
5°	7692	7494	7516
10°	7645	7371	7366
15°	7577	7230	7190
20°	7473	7073	7019
25°	7357	6898	6831
30°	7231	6723	6637
35°	7088	6544	6468
40°	6974	6374	6291
45°	6804	6217	6140
50°	6661	6036	5980
55°	6513	5866	5792
60°	6282	5649	5621
65°	6029	5415	5409
70°	5722	5149	5165
75°	5296	4857	4943
80°	4819	4575	4724
85°	4219	4325	4598



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.9	1.4
10°-20°	257.7	4.1
20°-30°	389.7	6.2
30°-40°	471.5	7.5
40°-50°	498.5	7.9
50°-60°	469.1	7.4
60°-70°	389.2	6.2
70°-80°	273.4	4.3
80°-90°	157.4	2.5
90°-100°	125.7	2.0
100°-110°	284.4	4.5
110°-120°	459.6	7.3
120°-130°	551.3	8.7
130°-140°	573.4	9.1
140°-150°	528.1	8.4
150°-160°	424.1	6.7
160°-170°	273.5	4.3
170°-180°	94.3	1.5
0°-30°	737.4	11.7
0°-40°	1208.8	19.2
0°-60°	2176.4	34.5
0°-90°	2996.4	47.5
90°-120°	869.7	13.8
90°-150°	2522.5	40.0
90°-180°	3314.0	52.5
0°-180°	6310.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	950	950	950	950	950	
5°	951	948	940	948	948	90
15°	912	912	909	918	918	257
25°	834	840	844	855	856	384
35°	730	742	753	767	771	457
45°	608	629	649	666	672	470
55°	476	499	531	551	558	424
65°	330	364	400	426	435	327
75°	183	223	267	296	306	195
85°	56	101	149	180	192	60
90°	19	70	122	156	167	13
95°	55	66	109	141	152	63
105°	233	260	302	332	317	245
115°	424	436	469	493	501	417
125°	591	594	618	639	647	527
135°	730	729	739	757	766	562
145°	840	841	841	848	854	525
155°	920	920	918	921	919	424
165°	970	967	966	972	966	274
175°	992	988	989	995	986	94
180°	992	992	992	992	992	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	949.9	949.9	949.9	949.9	949.9	949.9	949.9	949.9	949.9	949.9	949.9
2.5°	953.3	952.7	952.1	951.6	951.0	950.0	948.4	946.9	945.4	943.9	945.2
5°	950.9	950.2	949.5	948.8	948.1	946.9	945.2	943.6	941.9	940.3	942.2
7.5°	942.8	942.4	942.0	941.6	941.1	940.2	938.9	937.5	936.1	934.8	936.9
10°	936.0	935.8	935.6	935.3	935.1	934.4	933.2	932.0	930.8	929.6	931.8
12.5°	926.7	926.6	926.6	926.5	926.5	926.1	925.3	924.4	923.6	922.8	924.8
15°	911.6	911.8	912.0	912.3	912.5	912.3	911.6	910.9	910.1	909.4	911.6
17.5°	890.9	891.6	892.3	893.1	893.8	894.0	893.9	893.8	893.6	893.5	895.7
20°	876.5	877.2	877.9	878.6	879.3	879.8	880.0	880.2	880.5	880.7	883.1
22.5°	860.3	861.2	862.1	863.0	863.9	864.6	865.0	865.4	865.8	866.3	868.6
25°	833.9	835.3	836.8	838.2	839.6	840.7	841.4	842.1	842.8	843.5	846.1
27.5°	804.6	806.6	808.7	810.8	812.9	814.5	815.6	816.6	817.7	818.8	821.2
30°	785.0	786.9	788.8	790.7	792.6	794.3	796.0	797.6	799.3	800.9	803.5
32.5°	763.7	766.0	768.3	770.5	772.8	774.8	776.7	778.5	780.4	782.2	785.2
35°	729.7	732.5	735.4	738.2	741.0	743.6	746.0	748.4	750.7	753.1	756.4
37.5°	695.4	698.7	702.0	705.2	708.5	711.6	714.5	717.4	720.4	723.3	726.7
40°	673.3	676.4	679.4	682.5	685.6	688.8	692.1	695.4	698.7	702.0	705.6
42.5°	647.8	651.2	654.7	658.1	661.6	665.2	669.1	673.0	676.9	680.7	684.7
45°	608.4	612.9	617.4	621.9	626.4	630.9	635.4	639.9	644.3	648.8	652.9
47.5°	570.8	575.4	580.0	584.7	589.3	594.2	599.4	604.6	609.8	615.0	619.2
50°	543.5	548.7	553.9	559.1	564.3	569.5	574.7	579.9	585.1	590.3	595.1
52.5°	516.3	521.5	526.7	531.9	537.1	542.7	548.6	554.6	560.6	566.5	571.2
55°	476.5	481.5	486.5	491.4	496.4	502.4	509.5	516.6	523.7	530.8	535.5
57.5°	432.1	438.2	444.4	450.5	456.6	463.2	470.3	477.3	484.4	491.4	497.0
60°	403.1	409.3	415.4	421.6	427.7	434.7	442.5	450.3	458.1	465.9	471.3
62.5°	375.0	381.8	388.5	395.2	401.9	409.2	417.0	424.8	432.6	440.4	445.8
65°	329.7	337.3	344.9	352.4	360.0	367.8	375.8	383.9	391.9	399.9	405.8
67.5°	286.1	294.2	302.2	310.2	318.3	326.6	335.2	343.8	352.4	361.0	367.0
70°	256.3	264.4	272.4	280.5	288.5	297.0	306.0	315.0	323.9	332.9	339.3
72.5°	227.4	235.6	243.9	252.1	260.3	269.2	278.8	288.3	297.9	307.4	313.6
75°	183.0	191.7	200.4	209.2	217.9	227.3	237.2	247.1	257.1	267.0	273.6
77.5°	141.5	150.7	160.0	169.3	178.5	188.4	198.8	209.2	219.6	230.0	236.7
80°	115.9	125.4	134.8	144.3	153.8	163.7	174.1	184.5	194.9	205.3	212.4
82.5°	90.4	100.2	110.1	119.9	129.7	139.9	150.3	160.7	171.1	181.5	188.7
85°	56.4	66.3	76.2	86.2	96.1	106.4	117.0	127.6	138.3	148.9	156.0
87.5°	31.9	41.9	51.9	62.0	72.0	82.3	92.9	103.5	114.1	124.7	131.8
90°	19.2	30.5	41.8	53.1	64.3	75.7	87.2	98.7	110.1	121.6	129.5
92.5°	25.5	34.1	42.7	51.3	60.0	70.0	81.5	93.0	104.5	115.9	123.6
95°	54.7	56.8	59.0	61.2	63.4	69.4	79.3	89.2	99.0	108.9	116.2
97.5°	99.3	109.5	119.7	129.9	140.1	140.8	132.0	123.2	114.4	105.5	111.8
100°	133.4	142.6	151.7	160.8	169.9	167.7	154.1	140.6	127.0	113.5	117.1
102.5°	172.6	180.2	187.8	195.3	202.9	209.7	215.8	221.8	227.9	233.9	209.9
105°	233.0	238.7	244.4	250.2	255.9	263.5	273.1	282.7	292.2	301.8	309.2
107.5°	290.8	295.2	299.6	303.9	308.3	315.2	324.6	334.0	343.4	352.8	359.3
110°	329.2	333.0	336.8	340.6	344.4	350.9	360.2	369.5	378.7	388.0	393.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	366.3	370.2	374.0	377.8	381.6	387.7	396.1	404.4	412.8	421.1	426.3
115°	423.5	426.2	428.8	431.4	434.0	439.0	446.4	453.8	461.2	468.6	474.2
117.5°	476.0	478.0	479.9	481.8	483.8	488.5	495.9	503.3	510.7	518.1	522.9
120°	510.8	512.2	513.6	514.9	516.3	520.3	527.0	533.7	540.4	547.1	552.1
122.5°	544.1	544.6	545.1	545.7	546.2	549.8	556.6	563.3	570.0	576.7	581.6
125°	590.7	591.1	591.5	591.9	592.4	595.4	600.9	606.5	612.1	617.7	622.7
127.5°	635.6	635.5	635.4	635.4	635.3	637.9	643.2	648.5	653.8	659.1	663.3
130°	663.8	663.8	663.7	663.6	663.5	665.6	669.9	674.2	678.5	682.8	687.2
132.5°	690.5	690.6	690.7	690.7	690.8	692.6	696.3	700.0	703.6	707.3	711.5
135°	729.6	729.4	729.2	729.1	728.9	730.0	732.3	734.6	736.9	739.2	743.4
137.5°	765.0	764.9	764.7	764.5	764.4	765.0	766.6	768.1	769.6	771.2	775.0
140°	788.2	788.3	788.4	788.5	788.6	788.9	789.5	790.0	790.6	791.2	794.7
142.5°	808.1	808.7	809.2	809.8	810.3	810.6	810.7	810.7	810.8	810.9	813.9
145°	839.8	840.1	840.4	840.6	840.9	841.0	841.0	841.0	841.0	841.0	842.6
147.5°	865.2	865.9	866.6	867.3	868.0	868.2	868.1	867.9	867.7	867.6	867.9
150°	883.6	884.1	884.5	884.9	885.3	885.5	885.3	885.1	885.0	884.8	884.8
152.5°	898.2	898.7	899.2	899.7	900.2	900.2	899.9	899.7	899.4	899.1	899.3
155°	919.7	919.9	920.0	920.2	920.4	920.2	919.7	919.2	918.7	918.2	918.9
157.5°	938.0	937.9	937.8	937.7	937.6	937.2	936.7	936.1	935.5	935.0	935.8
160°	948.6	948.1	947.7	947.2	946.7	946.3	946.2	946.0	945.8	945.7	946.7
162.5°	958.1	957.5	956.9	956.3	955.6	955.2	955.1	954.9	954.7	954.6	955.6
165°	970.2	969.3	968.5	967.7	966.9	966.5	966.5	966.5	966.5	966.5	967.8
167.5°	979.7	978.8	978.0	977.1	976.2	975.8	975.7	975.6	975.5	975.4	976.8
170°	985.0	984.0	983.0	982.0	981.1	980.6	980.8	981.0	981.1	981.3	982.6
172.5°	988.6	987.6	986.6	985.6	984.6	984.2	984.4	984.5	984.7	984.9	986.2
175°	992.4	991.4	990.5	989.5	988.5	988.1	988.2	988.4	988.6	988.7	990.2
177.5°	994.2	993.3	992.4	991.4	990.5	990.2	990.5	990.7	991.0	991.2	992.3
180°	992.4	992.4	992.4	992.4	992.4	992.4	992.4	992.4	992.4	992.4	992.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	949.9	949.9	949.9	949.9	949.9	949.9	949.9	949.9
2.5°	946.5	947.9	949.2	949.8	949.6	949.4	949.2	949.0
5°	944.1	946.0	947.8	948.7	948.4	948.2	948.0	947.7
7.5°	939.0	941.1	943.3	944.2	944.0	943.7	943.5	943.3
10°	933.9	936.0	938.2	939.1	938.9	938.6	938.4	938.2
12.5°	926.7	928.7	930.6	931.5	931.5	931.4	931.4	931.3
15°	913.7	915.8	917.9	918.9	918.7	918.4	918.2	917.9
17.5°	897.8	900.0	902.2	903.2	903.0	902.8	902.6	902.4
20°	885.4	887.8	890.2	891.4	891.4	891.4	891.4	891.4
22.5°	871.0	873.3	875.7	877.1	877.5	877.8	878.2	878.6
25°	848.7	851.3	853.9	855.3	855.5	855.8	856.0	856.3
27.5°	823.6	826.0	828.5	829.8	830.1	830.4	830.7	830.9
30°	806.1	808.7	811.3	812.9	813.4	813.8	814.3	814.8
32.5°	788.2	791.2	794.1	795.9	796.3	796.8	797.3	797.8
35°	759.7	763.0	766.3	768.3	769.0	769.7	770.5	771.2
37.5°	730.0	733.4	736.7	738.8	739.5	740.3	741.0	741.8
40°	709.1	712.7	716.2	718.4	719.4	720.3	721.3	722.2
42.5°	688.6	692.5	696.4	698.8	699.5	700.3	701.1	701.8
45°	656.9	660.9	664.9	667.5	668.7	669.9	671.1	672.2
47.5°	623.3	627.5	631.7	634.4	635.9	637.3	638.7	640.1
50°	599.8	604.5	609.2	612.3	613.7	615.2	616.6	618.0
52.5°	576.0	580.7	585.4	588.5	589.9	591.3	592.7	594.2
55°	540.2	545.0	549.7	552.8	554.2	555.6	557.0	558.4
57.5°	502.7	508.3	513.9	517.4	518.7	520.0	521.4	522.7
60°	476.8	482.2	487.6	491.3	493.2	495.1	497.0	498.9
62.5°	451.2	456.7	462.1	465.8	467.7	469.6	471.4	473.3
65°	411.8	417.7	423.6	427.5	429.4	431.3	433.1	435.0
67.5°	373.0	379.0	385.0	388.9	390.8	392.6	394.5	396.3
70°	345.7	352.1	358.5	362.5	364.1	365.8	367.4	369.1
72.5°	319.8	326.0	332.2	336.2	338.0	339.9	341.7	343.6
75°	280.2	286.8	293.5	297.8	300.0	302.1	304.2	306.3
77.5°	243.4	250.1	256.8	261.3	263.6	265.8	268.1	270.4
80°	219.5	226.6	233.7	238.1	240.0	241.9	243.8	245.7
82.5°	196.0	203.3	210.6	215.3	217.3	219.4	221.5	223.6
85°	163.1	170.2	177.3	182.0	184.4	186.7	189.1	191.5
87.5°	138.8	145.9	152.9	157.5	159.7	161.8	164.0	166.1
90°	137.3	145.2	153.0	158.0	160.3	162.5	164.7	166.9
92.5°	131.2	138.9	146.6	151.4	153.3	155.3	157.2	159.2
95°	123.6	131.0	138.4	143.2	145.5	147.8	150.1	152.4
97.5°	118.1	124.4	130.7	135.0	137.2	139.3	141.5	143.7
100°	120.7	124.2	127.8	130.5	132.3	134.1	136.0	137.8
102.5°	185.8	161.8	137.7	126.6	128.5	130.4	132.3	134.1
105°	316.6	324.0	331.4	333.0	329.0	324.9	320.9	316.9
107.5°	365.9	372.4	378.9	383.4	385.7	388.0	390.4	392.7
110°	399.5	405.3	411.0	415.1	417.5	419.9	422.3	424.7



TEST NUMBER: P332783

CATALOG NUMBER: S124DIW-S795D770U835-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	431.5	436.7	441.9	445.7	448.2	450.7	453.3	455.8
115°	479.7	485.2	490.8	494.4	496.0	497.7	499.3	501.0
117.5°	527.8	532.6	537.5	540.8	542.6	544.5	546.3	548.1
120°	557.2	562.3	567.3	570.6	572.2	573.7	575.3	576.9
122.5°	586.5	591.4	596.4	599.5	600.9	602.3	603.6	605.0
125°	627.6	632.6	637.6	640.9	642.5	644.1	645.7	647.2
127.5°	667.4	671.6	675.7	678.5	680.0	681.5	683.0	684.4
130°	691.6	696.0	700.4	703.3	704.8	706.2	707.6	709.0
132.5°	715.7	719.9	724.2	726.9	728.2	729.5	730.8	732.1
135°	747.5	751.6	755.7	758.6	760.4	762.1	763.9	765.6
137.5°	778.8	782.6	786.4	788.9	790.0	791.0	792.1	793.2
140°	798.3	801.9	805.4	807.9	809.3	810.6	811.9	813.3
142.5°	817.0	820.0	823.1	825.1	826.2	827.2	828.2	829.2
145°	844.2	845.8	847.3	848.8	850.0	851.3	852.6	853.9
147.5°	868.2	868.5	868.9	869.5	870.4	871.3	872.3	873.2
150°	884.8	884.8	884.8	884.9	885.1	885.2	885.4	885.5
152.5°	899.6	899.8	900.1	900.2	900.1	900.0	899.9	899.8
155°	919.5	920.2	920.8	920.9	920.4	919.9	919.4	919.0
157.5°	936.7	937.6	938.4	938.4	937.6	936.7	935.8	935.0
160°	947.7	948.6	949.6	949.6	948.6	947.7	946.7	945.7
162.5°	956.6	957.5	958.5	958.5	957.4	956.2	955.1	954.0
165°	969.1	970.4	971.7	971.7	970.2	968.7	967.2	965.7
167.5°	978.3	979.7	981.2	981.1	979.4	977.8	976.1	974.5
170°	983.9	985.3	986.6	986.4	984.8	983.1	981.5	979.8
172.5°	987.5	988.8	990.1	989.9	988.1	986.4	984.6	982.8
175°	991.7	993.2	994.7	994.4	992.4	990.5	988.5	986.5
177.5°	993.4	994.4	995.5	995.2	993.6	992.0	990.5	988.9
180°	992.4	992.4	992.4	992.4	992.4	992.4	992.4	992.4

(END OF REPORT)