

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: P332784-840

Luminaire Tested: **S124DIW-S795D770U840-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332784-840
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124DIW-S795D770U840-4F0-1E-UDD-D1
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 795 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 770 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5961.5 lumens
Efficiency: N/A
Efficacy: 132.5 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

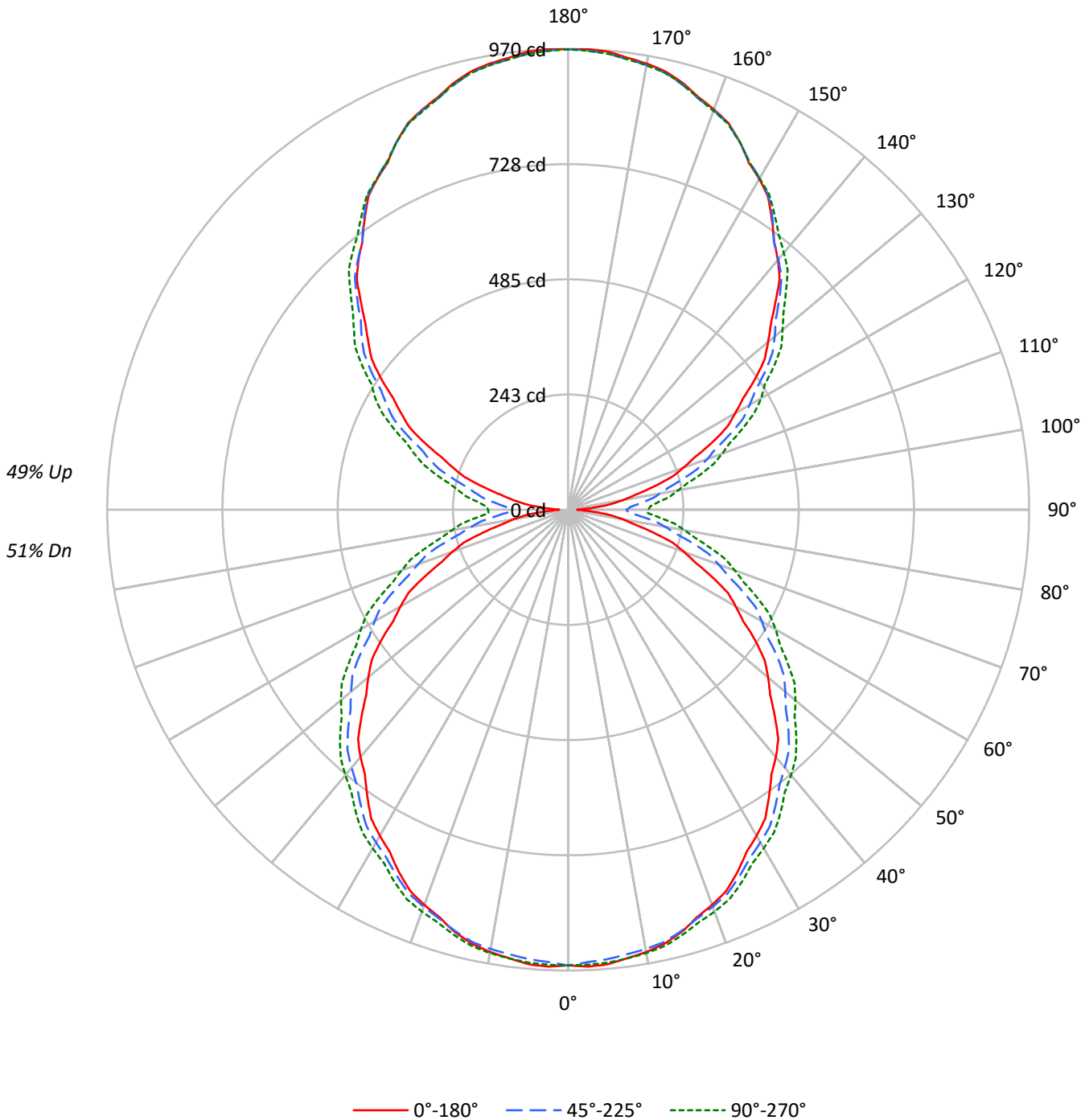
Input Watts (W): 45
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332784-840

CATALOG NUMBER: S124DIW-S795D770U840-4F0-1E-UDD-D1

Luminous Intensity Polar Plot





TEST NUMBER: P332784-840

CATALOG NUMBER: S124DIW-S795D770U840-4F0-1E-UDD-D1

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	107	107	107	107	99	99	99	99	84	84	84	70	70	70	57	57	57	51
1	97	92	88	84	89	85	81	78	72	69	67	60	58	56	49	47	46	41
2	88	80	73	68	81	74	68	63	62	58	54	52	49	46	42	40	38	33
3	80	70	62	56	73	65	58	52	55	49	45	45	42	38	37	34	32	28
4	73	62	53	47	67	57	50	44	48	43	38	40	36	33	33	30	27	23
5	67	55	46	40	61	51	43	38	43	37	33	36	32	28	29	26	23	20
6	61	49	41	35	56	45	38	32	39	33	28	32	28	24	27	23	20	17
7	57	44	36	30	52	41	34	28	35	29	25	29	25	21	24	21	18	15
8	53	40	32	27	48	37	30	25	32	26	22	27	22	19	22	19	16	14
9	49	36	29	24	45	34	27	22	29	24	20	25	20	17	20	17	14	12
10	46	33	26	21	42	31	24	20	27	21	18	23	18	15	19	16	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7744	7744	7744
5°	7768	7569	7589
10°	7720	7444	7439
15°	7651	7301	7261
20°	7547	7143	7089
25°	7429	6965	6898
30°	7302	6789	6703
35°	7158	6609	6532
40°	7042	6436	6353
45°	6871	6278	6200
50°	6727	6095	6039
55°	6577	5924	5849
60°	6344	5704	5676
65°	6089	5468	5463
70°	5778	5200	5215
75°	5348	4904	4991
80°	4865	4620	4771
85°	4264	4369	4644



TEST NUMBER: P332784-840

CATALOG NUMBER: S124DIW-S795D770U840-4F0-1E-UDD-D1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	90.8	1.5
10°-20°	260.3	4.4
20°-30°	393.5	6.6
30°-40°	476.1	8.0
40°-50°	503.4	8.4
50°-60°	473.7	7.9
60°-70°	393.1	6.6
70°-80°	276.1	4.6
80°-90°	159.0	2.7
90°-100°	156.6	2.6
100°-110°	258.0	4.3
110°-120°	367.4	6.2
120°-130°	449.8	7.5
130°-140°	487.2	8.2
140°-150°	470.0	7.9
150°-160°	393.4	6.6
160°-170°	261.7	4.4
170°-180°	91.6	1.5
0°-30°	744.6	12.5
0°-40°	1220.8	20.5
0°-60°	2197.9	36.9
0°-90°	3026.0	50.8
90°-120°	782.0	13.1
90°-150°	2188.8	36.7
90°-180°	2936.0	49.2
0°-180°	5961.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	959	959	959	959	959	
5°	960	957	950	958	957	91
15°	921	921	918	928	927	259
25°	842	848	852	863	865	388
35°	737	750	760	775	779	461
45°	614	635	655	673	679	475
55°	481	504	536	557	564	429
65°	333	368	404	430	439	330
75°	185	225	270	299	309	196
85°	57	102	150	181	193	61
90°	19	71	123	157	168	14
95°	59	102	150	180	191	61
105°	184	208	249	277	289	196
115°	333	344	376	398	406	329
125°	480	481	505	523	529	428
135°	616	621	628	643	648	477
145°	747	749	750	755	757	467
155°	854	854	854	856	854	393
165°	930	928	926	930	928	262
175°	968	964	963	968	963	92
180°	969	969	969	969	969	



TEST NUMBER: P332784-840

CATALOG NUMBER: S124DIW-S795D770U840-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	959.3	959.3	959.3	959.3	959.3	959.3	959.3	959.3	959.3	959.3	959.3
2.5°	962.7	962.1	961.5	961.0	960.4	959.4	957.8	956.2	954.7	953.2	954.5
5°	960.3	959.6	958.9	958.2	957.5	956.2	954.5	952.9	951.2	949.6	951.5
7.5°	952.1	951.7	951.3	950.9	950.4	949.5	948.2	946.7	945.3	944.0	946.1
10°	945.2	945.0	944.8	944.5	944.3	943.6	942.4	941.2	940.0	938.8	941.0
12.5°	935.8	935.7	935.7	935.6	935.6	935.2	934.4	933.5	932.7	931.9	933.9
15°	920.6	920.8	921.0	921.3	921.5	921.3	920.6	919.9	919.1	918.4	920.6
17.5°	899.7	900.4	901.1	901.9	902.6	902.8	902.7	902.6	902.4	902.3	904.5
20°	885.1	885.9	886.6	887.3	888.0	888.5	888.7	888.9	889.2	889.4	891.8
22.5°	868.8	869.7	870.6	871.5	872.4	873.1	873.5	873.9	874.3	874.8	877.2
25°	842.1	843.5	845.1	846.5	847.9	849.0	849.7	850.4	851.1	851.8	854.4
27.5°	812.5	814.6	816.7	818.8	820.9	822.5	823.6	824.7	825.8	826.9	829.3
30°	792.7	794.7	796.6	798.5	800.4	802.1	803.9	805.5	807.2	808.8	811.4
32.5°	771.2	773.6	775.9	778.1	780.4	782.4	784.4	786.2	788.1	789.9	792.9
35°	736.9	739.7	742.7	745.5	748.3	750.9	753.4	755.8	758.1	760.5	763.9
37.5°	702.3	705.6	708.9	712.2	715.5	718.6	721.5	724.5	727.5	730.4	733.9
40°	679.9	683.1	686.1	689.2	692.4	695.6	698.9	702.3	705.6	708.9	712.6
42.5°	654.2	657.6	661.2	664.6	668.1	671.8	675.7	679.6	683.6	687.4	691.5
45°	614.4	618.9	623.5	628.0	632.6	637.1	641.7	646.2	650.7	655.2	659.3
47.5°	576.4	581.1	585.7	590.5	595.1	600.1	605.3	610.6	615.8	621.1	625.3
50°	548.9	554.1	559.4	564.6	569.9	575.1	580.4	585.6	590.9	596.1	601.0
52.5°	521.4	526.6	531.9	537.1	542.4	548.1	554.0	560.1	566.1	572.1	576.8
55°	481.2	486.3	491.3	496.2	501.3	507.4	514.5	521.7	528.9	536.0	540.8
57.5°	436.4	442.5	448.8	454.9	461.1	467.8	474.9	482.0	489.2	496.2	501.9
60°	407.1	413.3	419.5	425.8	431.9	439.0	446.9	454.7	462.6	470.5	475.9
62.5°	378.7	385.6	392.3	399.1	405.9	413.2	421.1	429.0	436.9	444.7	450.2
65°	333.0	340.6	348.3	355.9	363.6	371.4	379.5	387.7	395.8	403.8	409.8
67.5°	288.9	297.1	305.2	313.3	321.4	329.8	338.5	347.2	355.9	364.6	370.6
70°	258.8	267.0	275.1	283.3	291.3	299.9	309.0	318.1	327.1	336.2	342.6
72.5°	229.6	237.9	246.3	254.6	262.9	271.9	281.6	291.1	300.8	310.4	316.7
75°	184.8	193.6	202.4	211.3	220.0	229.5	239.5	249.5	259.6	269.6	276.3
77.5°	142.9	152.2	161.6	171.0	180.3	190.3	200.8	211.3	221.8	232.3	239.0
80°	117.0	126.6	136.1	145.7	155.3	165.3	175.8	186.3	196.8	207.3	214.5
82.5°	91.3	101.2	111.2	121.1	131.0	141.3	151.8	162.3	172.8	183.3	190.6
85°	57.0	67.0	77.0	87.1	97.0	107.4	118.2	128.9	139.7	150.4	157.5
87.5°	32.2	42.3	52.4	62.6	72.7	83.1	93.8	104.5	115.2	125.9	133.1
90°	19.4	30.8	42.2	53.6	64.9	76.4	88.1	99.7	111.2	122.8	130.8
92.5°	32.4	43.0	53.7	64.4	75.1	86.0	97.3	108.5	119.7	130.9	138.1
95°	59.0	68.3	77.7	87.1	96.4	106.6	117.5	128.6	139.5	150.4	157.3
97.5°	91.2	99.2	107.1	115.1	123.1	132.7	143.7	154.8	165.8	176.9	183.7
100°	116.7	123.6	130.5	137.3	144.2	153.1	163.9	174.7	185.5	196.3	203.1
102.5°	144.3	150.1	155.7	161.5	167.1	175.2	185.7	196.2	206.7	217.2	223.9
105°	184.3	189.2	194.2	199.1	204.1	211.3	220.8	230.2	239.7	249.2	255.7
107.5°	228.3	232.5	236.5	240.7	244.8	251.1	259.5	267.9	276.4	284.9	291.2
110°	257.4	261.2	264.8	268.4	272.2	278.0	286.3	294.5	302.7	310.8	316.0



TEST NUMBER: P332784-840

CATALOG NUMBER: S124DIW-S795D770U840-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	287.7	290.7	293.8	296.8	299.8	305.2	312.9	320.5	328.2	335.9	341.1
115°	333.3	335.4	337.5	339.7	341.8	346.6	353.9	361.1	368.5	375.8	380.8
117.5°	377.1	378.5	379.9	381.3	382.7	386.9	393.8	400.7	407.6	414.4	418.9
120°	405.6	407.0	408.4	409.8	411.1	415.1	421.4	427.9	434.3	440.7	444.6
122.5°	436.2	436.6	437.0	437.4	437.9	441.2	447.5	453.8	460.1	466.5	470.6
125°	480.2	480.0	479.8	479.5	479.3	482.1	487.9	493.6	499.5	505.2	509.5
127.5°	521.0	521.2	521.5	521.7	522.0	524.3	528.6	532.9	537.2	541.6	545.5
130°	548.9	549.2	549.4	549.7	549.9	552.0	555.7	559.6	563.4	567.2	571.2
132.5°	578.2	578.3	578.6	578.7	578.8	580.3	583.2	586.1	589.1	592.0	595.7
135°	616.0	617.0	618.0	618.9	620.0	621.4	623.0	624.7	626.3	628.0	631.5
137.5°	658.2	658.5	658.7	658.9	659.1	659.8	661.0	662.0	663.1	664.2	667.2
140°	686.4	686.5	686.6	686.7	686.8	687.0	687.2	687.5	687.7	687.9	690.8
142.5°	711.3	711.7	712.0	712.3	712.6	712.6	712.3	712.0	711.7	711.4	714.1
145°	746.8	747.3	747.7	748.1	748.5	748.8	749.0	749.2	749.3	749.5	750.7
147.5°	782.2	782.7	783.4	783.9	784.5	784.7	784.6	784.4	784.3	784.2	784.2
150°	803.8	804.3	804.7	805.1	805.5	805.8	805.8	805.8	805.8	805.8	805.8
152.5°	823.3	823.6	824.0	824.4	824.8	825.0	825.1	825.3	825.4	825.5	825.9
155°	854.4	854.4	854.4	854.4	854.4	854.3	854.1	854.0	853.8	853.7	854.3
157.5°	880.8	880.5	880.2	879.9	879.6	879.5	879.4	879.4	879.4	879.3	879.8
160°	896.5	896.3	896.1	896.0	895.8	895.5	895.4	895.2	895.0	894.9	895.4
162.5°	910.8	910.4	909.9	909.5	909.1	908.8	908.6	908.5	908.3	908.1	909.0
165°	930.2	929.7	929.2	928.7	928.2	927.8	927.4	927.1	926.8	926.3	927.4
167.5°	944.9	944.3	943.6	942.9	942.2	941.8	941.9	941.9	941.9	942.0	943.0
170°	953.4	952.5	951.7	950.9	950.1	949.7	949.9	950.1	950.2	950.4	951.4
172.5°	959.4	958.7	958.0	957.3	956.5	956.2	956.2	956.3	956.3	956.3	957.6
175°	967.7	966.7	965.9	965.1	964.3	963.8	963.6	963.4	963.3	963.1	964.3
177.5°	970.3	969.7	969.0	968.4	967.7	967.3	967.3	967.3	967.3	967.3	968.3
180°	969.1	969.1	969.1	969.1	969.1	969.1	969.1	969.1	969.1	969.1	969.1



TEST NUMBER: P332784-840

CATALOG NUMBER: S124DIW-S795D770U840-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	959.3	959.3	959.3	959.3	959.3	959.3	959.3	959.3
2.5°	955.8	957.3	958.6	959.2	959.0	958.8	958.6	958.4
5°	953.4	955.3	957.2	958.1	957.8	957.6	957.4	957.0
7.5°	948.3	950.4	952.6	953.5	953.3	953.0	952.8	952.6
10°	943.1	945.2	947.5	948.4	948.2	947.9	947.7	947.5
12.5°	935.8	937.9	939.8	940.7	940.7	940.6	940.6	940.5
15°	922.7	924.8	927.0	928.0	927.8	927.5	927.3	927.0
17.5°	906.7	908.9	911.1	912.1	911.9	911.7	911.5	911.3
20°	894.1	896.6	899.0	900.2	900.2	900.2	900.2	900.2
22.5°	879.6	881.9	884.3	885.8	886.2	886.5	886.9	887.3
25°	857.1	859.7	862.3	863.7	863.9	864.2	864.4	864.7
27.5°	831.7	834.1	836.7	838.0	838.3	838.6	838.9	839.1
30°	814.1	816.7	819.3	820.9	821.4	821.8	822.3	822.8
32.5°	796.0	799.0	801.9	803.8	804.2	804.7	805.2	805.7
35°	767.2	770.5	773.9	775.9	776.6	777.3	778.1	778.8
37.5°	737.2	740.6	744.0	746.1	746.8	747.6	748.3	749.1
40°	716.1	719.7	723.3	725.5	726.5	727.4	728.4	729.3
42.5°	695.4	699.3	703.3	705.7	706.4	707.2	708.0	708.7
45°	663.4	667.4	671.5	674.1	675.3	676.5	677.7	678.8
47.5°	629.4	633.7	637.9	640.7	642.2	643.6	645.0	646.4
50°	605.7	610.5	615.2	618.3	619.8	621.3	622.7	624.1
52.5°	581.7	586.4	591.2	594.3	595.7	597.1	598.5	600.1
55°	545.5	550.4	555.1	558.3	559.7	561.1	562.5	563.9
57.5°	507.7	513.3	519.0	522.5	523.8	525.1	526.5	527.9
60°	481.5	487.0	492.4	496.1	498.1	500.0	501.9	503.8
62.5°	455.7	461.2	466.7	470.4	472.3	474.2	476.1	478.0
65°	415.9	421.8	427.8	431.7	433.6	435.6	437.4	439.3
67.5°	376.7	382.7	388.8	392.7	394.7	396.5	398.4	400.2
70°	349.1	355.6	362.0	366.1	367.7	369.4	371.0	372.7
72.5°	323.0	329.2	335.5	339.5	341.3	343.3	345.1	347.0
75°	283.0	289.6	296.4	300.7	303.0	305.1	307.2	309.3
77.5°	245.8	252.6	259.3	263.9	266.2	268.4	270.7	273.1
80°	221.7	228.8	236.0	240.4	242.4	244.3	246.2	248.1
82.5°	197.9	205.3	212.7	217.4	219.4	221.6	223.7	225.8
85°	164.7	171.9	179.0	183.8	186.2	188.5	191.0	193.4
87.5°	140.2	147.3	154.4	159.1	161.3	163.4	165.6	167.7
90°	138.7	146.6	154.5	159.6	161.9	164.1	166.3	168.5
92.5°	145.5	152.9	160.2	164.9	167.0	169.2	171.3	173.4
95°	164.3	171.3	178.2	182.8	184.9	187.0	189.1	191.4
97.5°	190.6	197.4	204.3	208.7	210.8	212.9	214.9	216.9
100°	209.8	216.6	223.4	227.6	229.3	231.0	232.7	234.3
102.5°	230.7	237.3	244.1	248.4	250.4	252.5	254.4	256.4
105°	262.3	268.7	275.2	279.6	282.0	284.4	286.8	289.2
107.5°	297.5	303.9	310.2	314.3	315.9	317.6	319.3	320.9
110°	321.1	326.3	331.4	335.3	337.6	340.0	342.4	344.9



TEST NUMBER: P332784-840

CATALOG NUMBER: S124DIW-S795D770U840-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	346.4	351.6	356.8	360.4	362.4	364.5	366.5	368.5
115°	386.0	391.0	396.1	399.4	400.9	402.4	403.9	405.5
117.5°	423.2	427.7	432.0	435.0	436.6	438.2	439.8	441.3
120°	448.6	452.5	456.5	459.6	461.8	464.0	466.4	468.6
122.5°	474.8	479.1	483.2	485.9	487.1	488.2	489.3	490.4
125°	513.7	517.9	522.1	524.7	525.8	526.9	528.1	529.2
127.5°	549.5	553.4	557.4	560.1	561.4	562.8	564.1	565.5
130°	575.1	579.2	583.1	585.4	586.2	586.9	587.7	588.5
132.5°	599.6	603.3	607.0	609.6	610.7	611.9	613.0	614.2
135°	635.0	638.4	642.0	644.2	645.1	646.0	646.9	647.9
137.5°	670.2	673.3	676.3	678.5	679.8	681.2	682.4	683.7
140°	693.8	696.8	699.7	701.7	702.7	703.8	704.8	705.8
142.5°	716.8	719.4	722.2	724.0	725.0	725.9	726.9	727.9
145°	752.0	753.3	754.6	755.5	755.9	756.4	756.8	757.3
147.5°	784.3	784.3	784.4	784.7	785.3	785.9	786.5	787.1
150°	805.8	805.8	805.8	805.7	805.5	805.3	805.2	805.0
152.5°	826.3	826.7	827.1	827.1	826.7	826.3	825.8	825.4
155°	855.1	855.7	856.4	856.4	855.7	855.1	854.3	853.7
157.5°	880.3	880.8	881.3	881.3	880.7	880.2	879.6	879.0
160°	896.0	896.5	897.0	896.8	896.0	895.0	894.2	893.4
162.5°	909.9	910.8	911.7	911.7	910.9	910.1	909.3	908.4
165°	928.4	929.4	930.4	930.6	929.9	929.2	928.6	927.9
167.5°	944.0	944.9	945.9	945.9	944.9	943.9	942.9	941.8
170°	952.4	953.4	954.4	954.3	953.1	952.0	950.8	949.7
172.5°	958.7	959.8	960.9	960.9	959.7	958.6	957.4	956.2
175°	965.4	966.6	967.8	967.8	966.6	965.4	964.3	963.1
177.5°	969.2	970.1	971.1	971.0	969.9	968.9	967.8	966.7
180°	969.1	969.1	969.1	969.1	969.1	969.1	969.1	969.1

(END OF REPORT)