

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: P332796-840

Luminaire Tested: **S124DIW-S795D1340U840-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332796-840
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-S795D1340U840-4F0-1E-UDD-D1
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 795 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1340 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7973.2 lumens
Efficiency: N/A
Efficacy: 129.9 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: Semi-Indirect

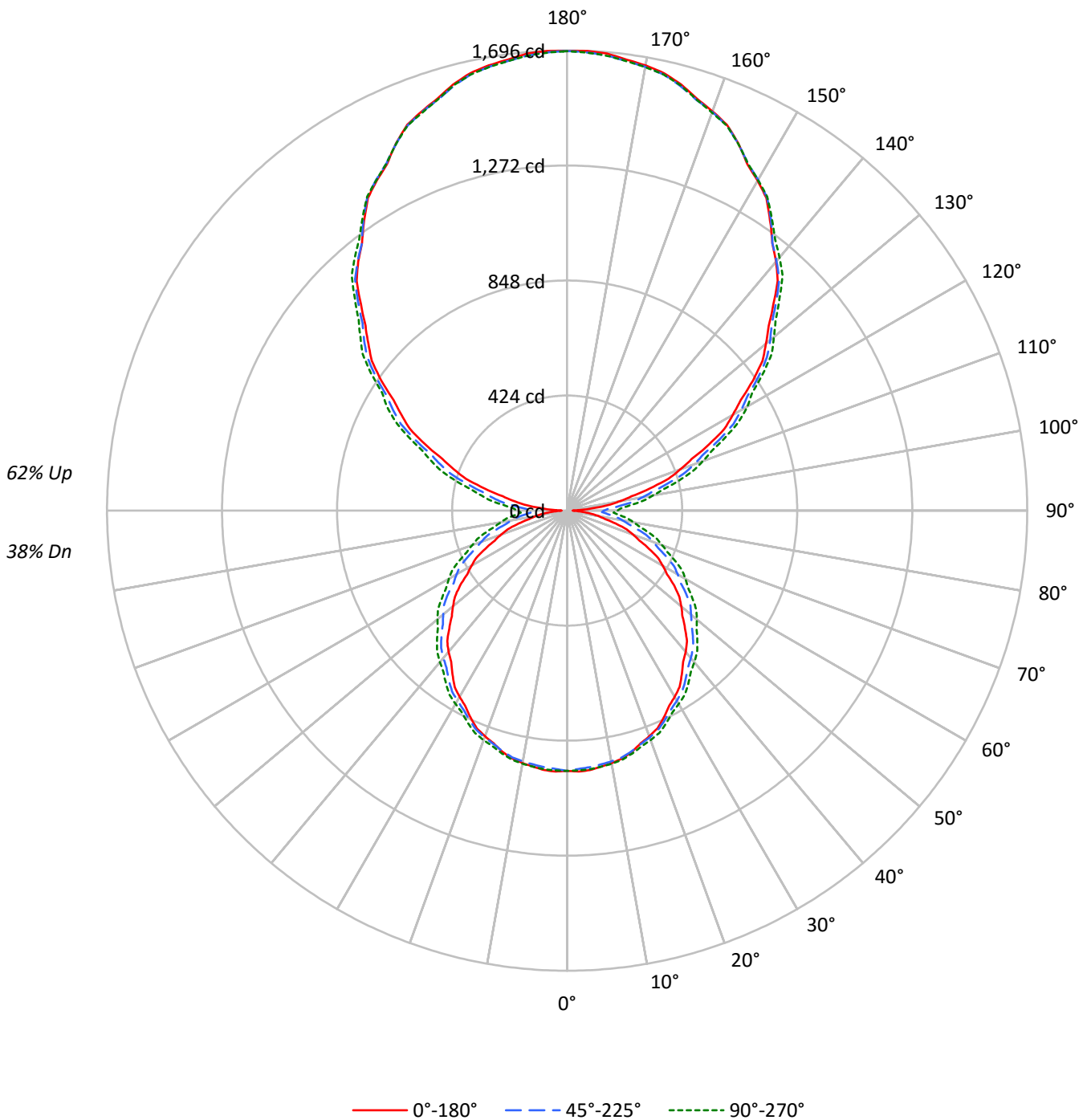
Input Watts (W): 61.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	0
RCR																		
0	104	104	104	104	95	95	95	95	77	77	77	60	60	60	45	45	45	38
1	94	90	86	82	85	81	78	75	66	63	61	52	50	48	39	37	36	30
2	86	78	72	66	77	71	65	61	57	53	50	45	42	40	33	32	30	25
3	78	68	61	55	70	62	55	50	50	46	42	39	36	33	29	27	25	21
4	71	60	52	46	64	55	48	42	44	39	35	35	31	28	26	24	21	17
5	65	53	45	39	59	49	41	36	40	34	30	31	27	24	23	21	19	15
6	60	48	39	34	54	43	36	31	35	30	26	28	24	21	21	18	16	13
7	55	43	35	29	50	39	32	27	32	27	23	25	21	19	19	16	14	12
8	51	39	31	26	46	35	29	24	29	24	20	23	19	16	18	15	13	10
9	47	35	28	23	43	32	26	21	27	21	18	21	17	15	16	13	11	9
10	44	32	25	20	40	30	23	19	24	19	16	20	16	13	15	12	10	8

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



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	90.8	1.1
10°-20°	260.3	3.3
20°-30°	393.5	4.9
30°-40°	476.1	6.0
40°-50°	503.4	6.3
50°-60°	473.7	5.9
60°-70°	393.1	4.9
70°-80°	276.1	3.5
80°-90°	161.1	2.0
90°-100°	204.4	2.6
100°-110°	399.5	5.0
110°-120°	607.6	7.6
120°-130°	766.5	9.6
130°-140°	842.9	10.6
140°-150°	819.5	10.3
150°-160°	687.3	8.6
160°-170°	457.3	5.7
170°-180°	160.1	2.0
0°-30°	744.6	9.3
0°-40°	1220.8	15.3
0°-60°	2197.9	27.6
0°-90°	3028.2	38.0
90°-120°	1211.5	15.2
90°-150°	3640.3	45.7
90°-180°	4945.0	62.0
0°-180°	7973.2	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°	21	78	135	173	185	16
95°	92	140	193	225	236	99
105°	315	339	383	412	426	335
115°	577	588	619	640	647	570
125°	836	836	860	877	882	745
135°	1075	1083	1090	1104	1107	831
145°	1304	1308	1310	1314	1315	816
155°	1493	1493	1492	1496	1492	687
165°	1625	1621	1619	1626	1621	458
175°	1691	1685	1683	1691	1683	160
180°	1693	1693	1693	1693	1693	



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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°	32.6	42.9	53.3	63.7	74.1	84.7	95.6	106.5	117.5	128.5	135.7
90°	21.1	33.8	46.7	59.4	72.1	84.8	97.4	110.0	122.6	135.1	143.8
92.5°	44.3	56.7	68.9	81.1	93.4	105.4	117.3	129.3	141.2	153.1	160.9
95°	92.5	103.0	113.5	124.0	134.5	145.7	157.5	169.4	181.2	193.0	200.3
97.5°	150.0	158.9	167.6	176.5	185.4	195.9	208.0	220.0	232.2	244.2	251.6
100°	195.2	202.6	210.0	217.3	224.7	234.3	246.2	258.1	270.0	282.1	289.0
102.5°	243.4	249.2	255.2	261.1	267.0	275.7	287.2	298.7	310.2	321.7	328.8
105°	314.8	319.9	325.0	330.0	335.1	342.6	352.6	362.6	372.6	382.6	389.4
107.5°	391.9	396.2	400.4	404.7	408.9	415.4	423.8	432.4	440.9	449.5	456.2
110°	443.4	447.4	451.2	455.1	459.1	465.1	473.1	481.2	489.3	497.4	502.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	497.1	500.1	503.2	506.2	509.4	514.6	522.0	529.5	536.9	544.4	549.6
115°	577.4	579.7	581.8	583.9	586.0	590.7	597.7	604.8	611.9	618.8	623.9
117.5°	654.3	655.8	657.3	658.8	660.4	664.5	671.2	677.8	684.6	691.3	695.3
120°	704.8	706.6	708.5	710.3	712.3	716.2	722.3	728.3	734.4	740.4	743.8
122.5°	758.2	758.8	759.4	760.0	760.6	764.0	770.1	776.3	782.3	788.5	792.3
125°	836.0	835.7	835.5	835.3	835.0	837.7	843.3	849.1	854.7	860.4	864.3
127.5°	907.3	907.9	908.5	909.2	909.8	912.1	916.3	920.4	924.5	928.6	932.3
130°	956.6	957.4	958.0	958.6	959.2	961.4	965.2	969.1	972.9	976.7	980.4
132.5°	1008.0	1008.5	1008.9	1009.3	1009.7	1011.2	1014.0	1016.8	1019.7	1022.5	1026.0
135°	1074.8	1076.5	1078.2	1080.1	1081.8	1083.5	1085.1	1086.8	1088.4	1090.1	1093.4
137.5°	1148.6	1149.2	1149.8	1150.3	1150.9	1151.9	1153.2	1154.4	1155.7	1157.0	1159.7
140°	1197.9	1198.2	1198.6	1198.9	1199.2	1199.5	1199.8	1200.0	1200.2	1200.5	1203.4
142.5°	1242.0	1242.6	1243.1	1243.6	1244.3	1244.3	1244.0	1243.5	1243.1	1242.7	1245.5
145°	1304.2	1305.1	1306.1	1307.0	1307.9	1308.5	1308.8	1309.1	1309.4	1309.7	1310.8
147.5°	1366.0	1367.2	1368.4	1369.5	1370.7	1371.1	1370.9	1370.7	1370.4	1370.2	1370.2
150°	1403.7	1404.6	1405.6	1406.5	1407.4	1407.9	1407.9	1407.9	1407.9	1407.9	1407.9
152.5°	1438.6	1439.2	1439.8	1440.5	1441.1	1441.6	1441.8	1442.0	1442.3	1442.5	1443.2
155°	1493.0	1493.0	1493.0	1493.0	1493.0	1492.9	1492.6	1492.3	1492.0	1491.8	1492.9
157.5°	1539.1	1538.6	1538.1	1537.5	1537.0	1536.7	1536.7	1536.6	1536.6	1536.5	1537.4
160°	1566.4	1566.1	1565.8	1565.5	1565.2	1564.9	1564.6	1564.4	1564.1	1563.8	1564.6
162.5°	1591.5	1590.7	1590.0	1589.2	1588.5	1588.0	1587.7	1587.4	1587.1	1586.8	1588.4
165°	1625.3	1624.5	1623.6	1622.7	1621.8	1621.1	1620.5	1619.9	1619.3	1618.7	1620.5
167.5°	1651.2	1650.0	1648.8	1647.6	1646.4	1645.8	1645.9	1645.9	1646.0	1646.0	1647.8
170°	1665.9	1664.5	1663.0	1661.5	1660.1	1659.5	1659.8	1660.1	1660.4	1660.6	1662.4
172.5°	1676.4	1675.2	1674.0	1672.7	1671.5	1670.9	1671.0	1671.0	1671.1	1671.1	1673.1
175°	1690.8	1689.3	1687.9	1686.5	1685.0	1684.1	1683.8	1683.5	1683.2	1682.9	1685.0
177.5°	1695.5	1694.4	1693.1	1692.0	1690.8	1690.3	1690.3	1690.3	1690.3	1690.3	1691.9
180°	1693.4	1693.4	1693.4	1693.4	1693.4	1693.4	1693.4	1693.4	1693.4	1693.4	1693.4



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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°	143.0	150.3	157.5	162.3	164.5	166.7	169.0	171.2
90°	152.5	161.2	169.9	175.4	177.9	180.4	182.9	185.4
92.5°	168.6	176.4	184.2	189.1	191.5	193.7	195.9	198.2
95°	207.6	214.9	222.3	227.0	229.1	231.3	233.5	235.6
97.5°	258.8	266.1	273.5	278.1	280.1	282.2	284.3	286.3
100°	296.1	303.1	310.1	314.5	316.2	317.8	319.5	321.1
102.5°	335.9	343.0	350.0	354.6	356.7	358.8	360.8	362.9
105°	396.3	403.1	410.0	414.8	417.6	420.3	423.1	425.9
107.5°	462.8	469.5	476.2	480.4	482.0	483.7	485.3	487.1
110°	507.2	512.1	516.9	520.8	523.6	526.4	529.2	532.0



TEST NUMBER: P332796-840

CATALOG NUMBER: S124DIW-S795D1340U840-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	554.7	560.0	565.1	568.8	570.9	572.9	575.0	577.1
115°	628.8	633.8	638.7	641.9	643.3	644.7	646.0	647.4
117.5°	699.2	703.2	707.2	709.8	711.1	712.5	713.8	715.2
120°	747.1	750.3	753.7	756.6	759.1	761.5	764.1	766.6
122.5°	796.1	799.9	803.7	805.9	806.6	807.2	807.9	808.6
125°	868.3	872.3	876.3	878.6	879.5	880.3	881.2	882.0
127.5°	936.0	939.8	943.5	945.9	947.1	948.3	949.4	950.6
130°	984.1	987.8	991.6	993.6	993.8	994.1	994.3	994.6
132.5°	1029.6	1033.1	1036.6	1038.8	1039.9	1040.8	1041.8	1042.7
135°	1096.6	1099.8	1103.1	1105.0	1105.6	1106.1	1106.7	1107.2
137.5°	1162.5	1165.2	1167.9	1169.9	1171.3	1172.7	1174.1	1175.4
140°	1206.1	1208.9	1211.7	1213.7	1214.5	1215.4	1216.3	1217.2
142.5°	1248.1	1250.8	1253.4	1255.3	1256.2	1257.2	1258.1	1259.0
145°	1311.9	1313.1	1314.2	1314.8	1314.9	1315.0	1315.1	1315.1
147.5°	1370.1	1370.1	1370.0	1370.2	1370.7	1371.2	1371.7	1372.1
150°	1407.9	1407.9	1407.9	1407.8	1407.4	1407.1	1406.8	1406.6
152.5°	1443.9	1444.6	1445.3	1445.2	1444.5	1443.7	1443.0	1442.2
155°	1494.1	1495.2	1496.4	1496.4	1495.2	1494.1	1492.9	1491.8
157.5°	1538.2	1539.1	1540.0	1539.9	1538.9	1537.9	1537.0	1536.0
160°	1565.5	1566.4	1567.2	1566.9	1565.5	1564.1	1562.6	1561.2
162.5°	1589.9	1591.5	1593.1	1593.2	1591.6	1590.2	1588.8	1587.3
165°	1622.2	1624.0	1625.8	1626.1	1624.9	1623.7	1622.6	1621.3
167.5°	1649.5	1651.2	1652.9	1652.9	1651.1	1649.3	1647.6	1645.8
170°	1664.2	1665.9	1667.7	1667.5	1665.5	1663.4	1661.4	1659.4
172.5°	1675.1	1677.1	1679.1	1679.0	1677.0	1675.0	1672.9	1670.9
175°	1687.0	1689.0	1691.1	1691.1	1689.0	1687.0	1685.0	1682.9
177.5°	1693.5	1695.2	1696.8	1696.7	1694.9	1692.9	1691.1	1689.2
180°	1693.4	1693.4	1693.4	1693.4	1693.4	1693.4	1693.4	1693.4

(END OF REPORT)