

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: P332796-935

Luminaire Tested: **S124DIW-S795D1340U935-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332796-935
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-S795D1340U935-4F0-1E-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: 6797.9 lumens
Efficiency: N/A
Efficacy: 110.7 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

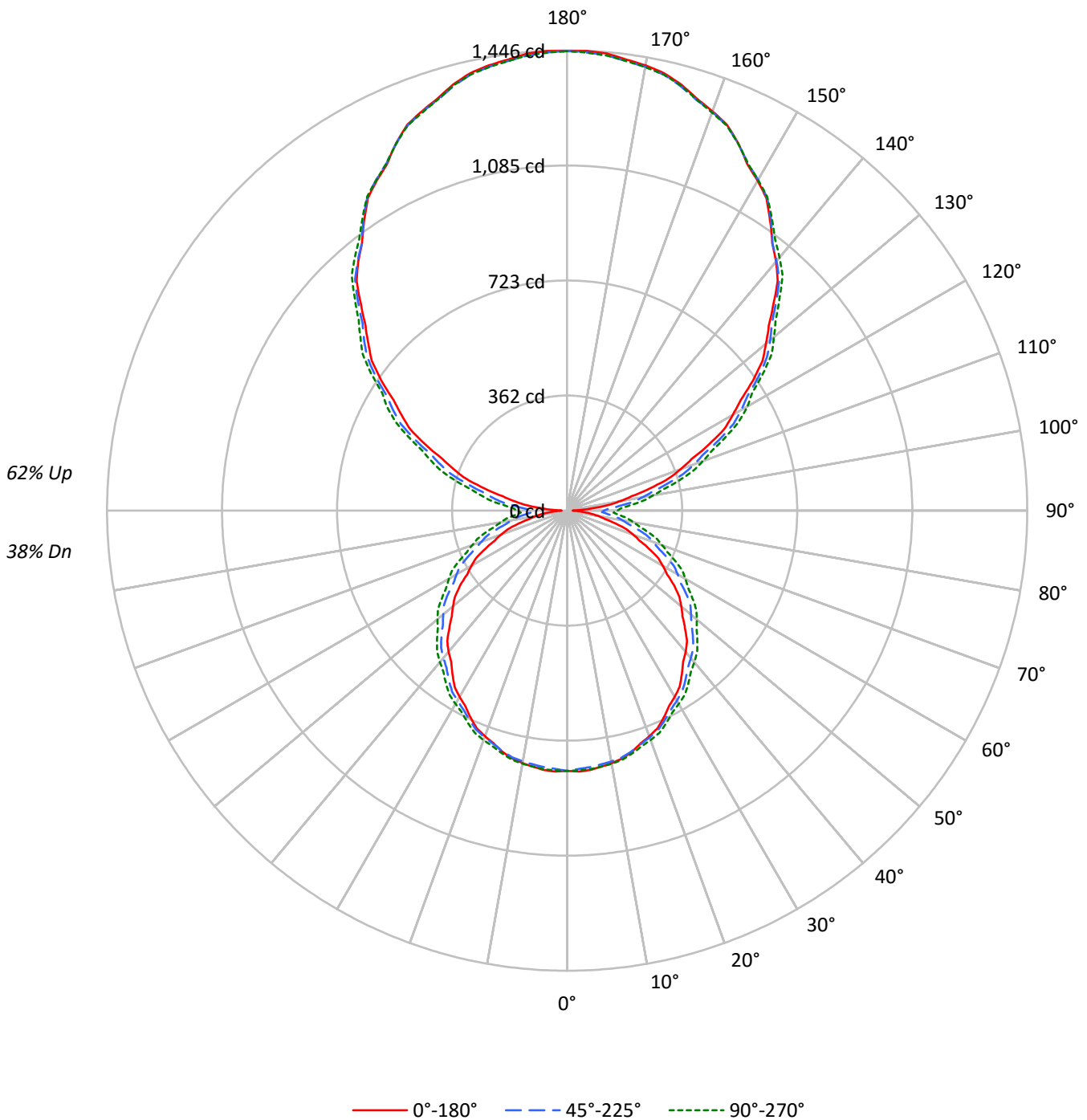
Input Watts (W): 61.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	6603	6603	6603
5°	6622	6453	6471
10°	6582	6347	6342
15°	6524	6225	6190
20°	6435	6090	6044
25°	6334	5939	5882
30°	6226	5788	5714
35°	6103	5635	5569
40°	6004	5488	5417
45°	5858	5352	5286
50°	5735	5197	5149
55°	5608	5051	4987
60°	5409	4863	4840
65°	5191	4662	4657
70°	4927	4433	4447
75°	4561	4182	4255
80°	4149	3940	4067
85°	3636	3724	3960



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	77.4	1.1
10°-20°	221.9	3.3
20°-30°	335.5	4.9
30°-40°	405.9	6.0
40°-50°	429.2	6.3
50°-60°	403.9	5.9
60°-70°	335.1	4.9
70°-80°	235.4	3.5
80°-90°	137.4	2.0
90°-100°	174.2	2.6
100°-110°	340.6	5.0
110°-120°	518.1	7.6
120°-130°	653.5	9.6
130°-140°	718.6	10.6
140°-150°	698.7	10.3
150°-160°	586.0	8.6
160°-170°	389.9	5.7
170°-180°	136.5	2.0
0°-30°	634.9	9.3
0°-40°	1040.8	15.3
0°-60°	1873.9	27.6
0°-90°	2581.8	38.0
90°-120°	1032.9	15.2
90°-150°	3103.7	45.7
90°-180°	4216.0	62.0
0°-180°	6797.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	818	818	818	818	818	
5°	819	816	810	816	816	78
15°	785	786	783	791	790	221
25°	718	723	726	736	737	331
35°	628	639	648	661	664	393
45°	524	541	559	574	579	405
55°	410	430	457	475	481	365
65°	284	313	344	366	374	281
75°	158	192	230	255	264	168
85°	49	87	128	155	165	52
90°	18	67	115	147	158	14
95°	79	119	164	192	201	84
105°	268	289	326	352	363	285
115°	492	502	528	546	552	486
125°	713	713	734	748	752	635
135°	916	923	929	941	944	709
145°	1112	1115	1117	1121	1121	696
155°	1273	1273	1272	1276	1272	586
165°	1386	1382	1380	1386	1382	390
175°	1442	1436	1435	1442	1435	137
180°	1444	1444	1444	1444	1444	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	817.9	817.9	817.9	817.9	817.9	817.9	817.9	817.9	817.9	817.9	817.9
2.5°	820.8	820.3	819.8	819.3	818.8	817.9	816.6	815.3	814.0	812.7	813.8
5°	818.7	818.1	817.5	816.9	816.3	815.3	813.8	812.4	811.0	809.6	811.2
7.5°	811.8	811.4	811.1	810.7	810.3	809.5	808.4	807.2	806.0	804.9	806.7
10°	805.9	805.7	805.6	805.3	805.1	804.5	803.5	802.5	801.4	800.4	802.3
12.5°	797.9	797.8	797.8	797.7	797.7	797.4	796.7	795.9	795.2	794.5	796.3
15°	784.9	785.1	785.2	785.5	785.7	785.5	784.9	784.3	783.6	783.0	784.9
17.5°	767.1	767.7	768.3	769.0	769.6	769.7	769.6	769.6	769.4	769.3	771.2
20°	754.7	755.3	755.9	756.5	757.1	757.5	757.7	757.9	758.1	758.3	760.3
22.5°	740.7	741.5	742.3	743.0	743.8	744.4	744.8	745.1	745.5	745.9	747.9
25°	718.0	719.2	720.5	721.7	722.9	723.8	724.4	725.0	725.7	726.3	728.5
27.5°	692.8	694.5	696.3	698.1	699.9	701.3	702.2	703.1	704.0	705.0	707.1
30°	675.9	677.5	679.2	680.8	682.4	683.9	685.4	686.7	688.2	689.6	691.8
32.5°	657.5	659.5	661.5	663.4	665.4	667.1	668.7	670.3	671.9	673.5	676.1
35°	628.3	630.7	633.2	635.6	638.0	640.2	642.3	644.4	646.4	648.4	651.3
37.5°	598.7	601.6	604.4	607.2	610.0	612.7	615.2	617.7	620.3	622.8	625.7
40°	579.7	582.4	585.0	587.6	590.3	593.1	595.9	598.7	601.6	604.4	607.5
42.5°	557.8	560.7	563.7	566.6	569.6	572.7	576.1	579.5	582.8	586.1	589.5
45°	523.8	527.7	531.6	535.5	539.3	543.2	547.1	551.0	554.7	558.6	562.1
47.5°	491.5	495.4	499.4	503.4	507.4	511.6	516.1	520.6	525.0	529.5	533.1
50°	468.0	472.4	476.9	481.4	485.9	490.3	494.8	499.3	503.8	508.2	512.4
52.5°	444.5	449.0	453.5	458.0	462.4	467.3	472.3	477.5	482.7	487.8	491.8
55°	410.3	414.6	418.9	423.1	427.4	432.6	438.7	444.8	450.9	457.0	461.1
57.5°	372.0	377.3	382.6	387.9	393.1	398.8	404.9	411.0	417.1	423.1	427.9
60°	347.1	352.4	357.7	363.0	368.2	374.3	381.0	387.7	394.4	401.1	405.8
62.5°	322.9	328.7	334.5	340.3	346.0	352.3	359.0	365.8	372.5	379.2	383.8
65°	283.9	290.4	297.0	303.4	310.0	316.7	323.6	330.5	337.4	344.3	349.4
67.5°	246.3	253.3	260.2	267.1	274.1	281.2	288.6	296.0	303.4	310.8	316.0
70°	220.7	227.6	234.5	241.5	248.4	255.7	263.5	271.2	278.9	286.6	292.1
72.5°	195.8	202.9	210.0	217.1	224.1	231.8	240.0	248.2	256.5	264.7	270.0
75°	157.6	165.1	172.5	180.1	187.6	195.7	204.2	212.8	221.4	229.9	235.6
77.5°	121.8	129.8	137.8	145.8	153.7	162.2	171.2	180.1	189.1	198.0	203.8
80°	99.8	108.0	116.1	124.2	132.4	140.9	149.9	158.9	167.8	176.8	182.9
82.5°	77.8	86.3	94.8	103.2	111.7	120.5	129.4	138.4	147.3	156.3	162.5
85°	48.6	57.1	65.6	74.2	82.7	91.6	100.7	109.9	119.1	128.2	134.3
87.5°	27.8	36.6	45.5	54.3	63.2	72.2	81.5	90.8	100.2	109.5	115.7
90°	18.0	28.8	39.8	50.6	61.5	72.3	83.0	93.8	104.5	115.2	122.6
92.5°	37.8	48.3	58.7	69.1	79.6	89.9	100.0	110.2	120.4	130.5	137.2
95°	78.9	87.8	96.8	105.7	114.7	124.2	134.3	144.4	154.5	164.5	170.7
97.5°	127.9	135.4	142.9	150.5	158.1	167.0	177.4	187.6	197.9	208.2	214.5
100°	166.4	172.7	179.0	185.3	191.6	199.8	209.9	220.1	230.2	240.5	246.4
102.5°	207.5	212.5	217.6	222.6	227.6	235.1	244.9	254.7	264.5	274.3	280.3
105°	268.4	272.8	277.1	281.4	285.7	292.1	300.7	309.2	317.7	326.2	332.0
107.5°	334.2	337.8	341.4	345.0	348.6	354.1	361.4	368.7	375.9	383.2	388.9
110°	378.1	381.4	384.7	388.1	391.4	396.6	403.4	410.3	417.2	424.0	428.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	423.8	426.4	429.0	431.6	434.3	438.8	445.1	451.4	457.8	464.2	468.6
115°	492.3	494.2	496.0	497.8	499.6	503.6	509.6	515.7	521.7	527.6	531.9
117.5°	557.8	559.1	560.4	561.7	563.0	566.5	572.2	577.9	583.7	589.4	592.8
120°	600.9	602.4	604.1	605.6	607.3	610.6	615.8	621.0	626.1	631.3	634.1
122.5°	646.4	647.0	647.5	648.0	648.5	651.3	656.6	661.9	667.0	672.3	675.5
125°	712.7	712.5	712.3	712.1	711.9	714.2	719.0	723.9	728.8	733.6	736.9
127.5°	773.5	774.0	774.6	775.2	775.7	777.7	781.2	784.7	788.2	791.7	794.9
130°	815.6	816.2	816.7	817.3	817.8	819.7	822.9	826.2	829.5	832.8	835.9
132.5°	859.5	859.8	860.1	860.5	860.8	862.1	864.5	866.9	869.4	871.8	874.8
135°	916.4	917.8	919.3	920.8	922.3	923.8	925.1	926.6	928.0	929.4	932.2
137.5°	979.3	979.8	980.3	980.8	981.3	982.1	983.2	984.2	985.3	986.4	988.8
140°	1021.3	1021.6	1021.9	1022.2	1022.4	1022.7	1023.0	1023.1	1023.3	1023.6	1026.0
142.5°	1058.9	1059.5	1059.9	1060.3	1060.8	1060.8	1060.6	1060.2	1059.9	1059.5	1061.9
145°	1112.0	1112.8	1113.5	1114.3	1115.1	1115.6	1115.9	1116.1	1116.4	1116.6	1117.6
147.5°	1164.7	1165.6	1166.7	1167.6	1168.6	1169.0	1168.8	1168.6	1168.4	1168.2	1168.2
150°	1196.8	1197.6	1198.4	1199.2	1200.0	1200.3	1200.3	1200.3	1200.3	1200.3	1200.3
152.5°	1226.5	1227.0	1227.5	1228.1	1228.6	1229.1	1229.2	1229.4	1229.7	1229.9	1230.5
155°	1272.9	1272.9	1272.9	1272.9	1272.9	1272.8	1272.6	1272.3	1272.0	1271.9	1272.8
157.5°	1312.3	1311.8	1311.4	1310.9	1310.4	1310.2	1310.2	1310.1	1310.1	1310.0	1310.8
160°	1335.5	1335.2	1335.0	1334.7	1334.5	1334.2	1333.9	1333.8	1333.5	1333.3	1333.9
162.5°	1356.9	1356.2	1355.6	1355.0	1354.4	1353.9	1353.7	1353.4	1353.1	1352.9	1354.3
165°	1385.7	1385.0	1384.2	1383.5	1382.8	1382.2	1381.6	1381.1	1380.6	1380.1	1381.6
167.5°	1407.8	1406.8	1405.8	1404.7	1403.7	1403.2	1403.3	1403.3	1403.3	1403.3	1404.9
170°	1420.3	1419.1	1417.9	1416.6	1415.4	1414.9	1415.1	1415.4	1415.7	1415.8	1417.4
172.5°	1429.3	1428.2	1427.2	1426.2	1425.1	1424.6	1424.7	1424.7	1424.8	1424.8	1426.5
175°	1441.6	1440.3	1439.1	1437.9	1436.6	1435.8	1435.6	1435.4	1435.1	1434.9	1436.6
177.5°	1445.5	1444.6	1443.6	1442.6	1441.6	1441.1	1441.1	1441.1	1441.1	1441.1	1442.5
180°	1443.8	1443.8	1443.8	1443.8	1443.8	1443.8	1443.8	1443.8	1443.8	1443.8	1443.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	817.9	817.9	817.9	817.9	817.9	817.9	817.9	817.9
2.5°	814.9	816.1	817.3	817.8	817.6	817.4	817.3	817.1
5°	812.9	814.5	816.1	816.8	816.6	816.4	816.2	816.0
7.5°	808.5	810.3	812.2	813.0	812.8	812.5	812.4	812.2
10°	804.1	805.9	807.8	808.6	808.4	808.1	808.0	807.8
12.5°	797.9	799.6	801.2	802.0	802.0	801.9	801.9	801.8
15°	786.7	788.5	790.3	791.2	791.0	790.7	790.6	790.3
17.5°	773.0	774.9	776.8	777.7	777.5	777.3	777.1	777.0
20°	762.3	764.4	766.5	767.5	767.5	767.5	767.5	767.5
22.5°	749.9	751.9	754.0	755.2	755.5	755.8	756.1	756.5
25°	730.7	733.0	735.2	736.4	736.6	736.8	737.0	737.3
27.5°	709.1	711.2	713.3	714.5	714.7	715.0	715.2	715.4
30°	694.1	696.3	698.5	699.9	700.3	700.7	701.1	701.5
32.5°	678.6	681.2	683.7	685.3	685.6	686.0	686.5	686.9
35°	654.1	656.9	659.8	661.5	662.1	662.7	663.4	664.0
37.5°	628.5	631.5	634.3	636.1	636.7	637.4	638.0	638.7
40°	610.5	613.6	616.6	618.5	619.4	620.2	621.0	621.8
42.5°	592.9	596.2	599.6	601.7	602.3	603.0	603.6	604.2
45°	565.6	569.0	572.5	574.7	575.8	576.8	577.8	578.8
47.5°	536.7	540.3	543.9	546.2	547.5	548.7	549.9	551.1
50°	516.4	520.5	524.5	527.2	528.4	529.7	530.9	532.1
52.5°	495.9	500.0	504.0	506.7	507.9	509.1	510.3	511.6
55°	465.1	469.2	473.3	476.0	477.2	478.4	479.6	480.8
57.5°	432.8	437.6	442.5	445.5	446.6	447.7	448.9	450.0
60°	410.5	415.2	419.8	423.0	424.6	426.3	427.9	429.6
62.5°	388.5	393.2	397.9	401.1	402.7	404.3	405.9	407.5
65°	354.6	359.6	364.7	368.1	369.7	371.3	372.9	374.5
67.5°	321.2	326.3	331.5	334.8	336.5	338.0	339.7	341.2
70°	297.6	303.2	308.7	312.1	313.5	315.0	316.3	317.8
72.5°	275.3	280.7	286.0	289.5	291.0	292.7	294.2	295.8
75°	241.3	246.9	252.7	256.4	258.3	260.1	261.9	263.7
77.5°	209.6	215.3	221.1	225.0	227.0	228.9	230.8	232.8
80°	189.0	195.1	201.2	205.0	206.6	208.3	209.9	211.5
82.5°	168.8	175.0	181.3	185.4	187.1	188.9	190.7	192.5
85°	140.4	146.5	152.7	156.7	158.8	160.7	162.8	164.9
87.5°	121.9	128.1	134.3	138.4	140.3	142.2	144.0	145.9
90°	130.0	137.4	144.8	149.6	151.7	153.8	155.9	158.1
92.5°	143.8	150.4	157.0	161.3	163.2	165.1	167.0	169.0
95°	177.0	183.2	189.5	193.6	195.4	197.2	199.1	200.9
97.5°	220.7	226.9	233.2	237.1	238.8	240.6	242.4	244.1
100°	252.4	258.4	264.4	268.1	269.6	271.0	272.4	273.8
102.5°	286.4	292.4	298.4	302.3	304.1	305.9	307.6	309.4
105°	337.9	343.7	349.6	353.6	356.0	358.3	360.8	363.1
107.5°	394.6	400.3	406.0	409.6	411.0	412.4	413.8	415.3
110°	432.4	436.6	440.7	444.0	446.4	448.8	451.2	453.6



TEST NUMBER: P332796-935

CATALOG NUMBER: S124DIW-S795D1340U935-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	472.9	477.4	481.8	484.9	486.7	488.4	490.3	492.1
115°	536.1	540.4	544.6	547.3	548.5	549.7	550.8	552.0
117.5°	596.2	599.5	603.0	605.2	606.3	607.4	608.6	609.8
120°	637.0	639.7	642.6	645.1	647.2	649.3	651.4	653.6
122.5°	678.7	682.0	685.2	687.1	687.7	688.2	688.8	689.4
125°	740.3	743.7	747.1	749.1	749.8	750.5	751.3	752.0
127.5°	798.1	801.2	804.4	806.5	807.4	808.5	809.4	810.5
130°	839.0	842.2	845.4	847.1	847.3	847.6	847.7	848.0
132.5°	877.8	880.8	883.8	885.7	886.6	887.3	888.2	889.0
135°	935.0	937.7	940.5	942.1	942.6	943.1	943.6	944.0
137.5°	991.1	993.4	995.7	997.5	998.7	999.8	1001.0	1002.1
140°	1028.3	1030.7	1033.1	1034.7	1035.4	1036.2	1037.0	1037.8
142.5°	1064.1	1066.4	1068.7	1070.2	1071.0	1071.9	1072.6	1073.4
145°	1118.5	1119.6	1120.5	1121.0	1121.1	1121.2	1121.3	1121.3
147.5°	1168.1	1168.1	1168.0	1168.2	1168.6	1169.1	1169.5	1169.8
150°	1200.3	1200.3	1200.3	1200.2	1200.0	1199.7	1199.5	1199.3
152.5°	1231.1	1231.7	1232.3	1232.2	1231.6	1230.9	1230.3	1229.6
155°	1273.8	1274.8	1275.8	1275.8	1274.8	1273.8	1272.8	1271.9
157.5°	1311.5	1312.3	1313.0	1312.9	1312.1	1311.2	1310.4	1309.6
160°	1334.7	1335.5	1336.2	1335.9	1334.7	1333.5	1332.2	1331.0
162.5°	1355.6	1356.9	1358.2	1358.3	1357.0	1355.8	1354.6	1353.3
165°	1383.1	1384.6	1386.1	1386.4	1385.3	1384.3	1383.4	1382.3
167.5°	1406.4	1407.8	1409.3	1409.3	1407.7	1406.2	1404.7	1403.2
170°	1418.8	1420.3	1421.9	1421.7	1420.0	1418.2	1416.5	1414.8
172.5°	1428.1	1429.9	1431.6	1431.5	1429.8	1428.1	1426.3	1424.6
175°	1438.3	1440.0	1441.8	1441.8	1440.0	1438.3	1436.6	1434.9
177.5°	1443.9	1445.3	1446.7	1446.6	1445.0	1443.4	1441.8	1440.2
180°	1443.8	1443.8	1443.8	1443.8	1443.8	1443.8	1443.8	1443.8

(END OF REPORT)