

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: P332796-830

Luminaire Tested: **S124DIW-S795D1340U830-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332796-830
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-S795D1340U830-4F0-1E-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: 7441.7 lumens
Efficiency: N/A
Efficacy: 121.2 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: Semi-Indirect

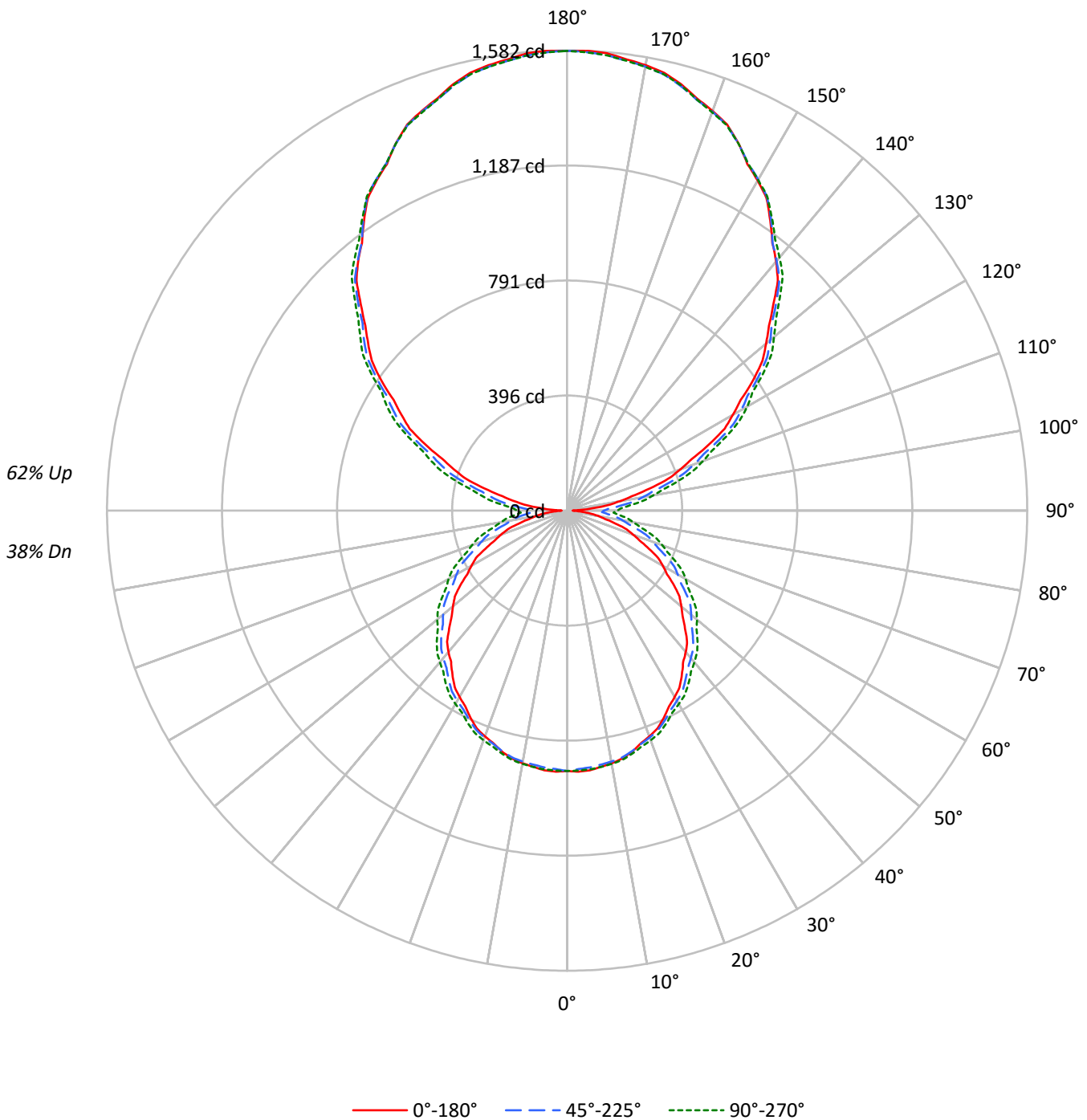
Input Watts (W): 61.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	7228	7228	7228
5°	7250	7064	7083
10°	7205	6948	6943
15°	7141	6814	6777
20°	7044	6667	6616
25°	6934	6501	6439
30°	6815	6336	6256
35°	6681	6168	6097
40°	6573	6008	5930
45°	6413	5859	5787
50°	6278	5689	5636
55°	6138	5529	5459
60°	5920	5324	5298
65°	5683	5104	5098
70°	5394	4853	4868
75°	4992	4579	4659
80°	4540	4312	4453
85°	3980	4075	4334



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	84.8	1.1
10°-20°	242.9	3.3
20°-30°	367.3	4.9
30°-40°	444.4	6.0
40°-50°	469.8	6.3
50°-60°	442.2	5.9
60°-70°	366.8	4.9
70°-80°	257.7	3.5
80°-90°	150.4	2.0
90°-100°	190.7	2.6
100°-110°	372.9	5.0
110°-120°	567.1	7.6
120°-130°	715.4	9.6
130°-140°	786.7	10.6
140°-150°	764.8	10.3
150°-160°	641.5	8.6
160°-170°	426.8	5.7
170°-180°	149.5	2.0
0°-30°	695.0	9.3
0°-40°	1139.4	15.3
0°-60°	2051.4	27.6
0°-90°	2826.3	38.0
90°-120°	1130.7	15.2
90°-150°	3397.6	45.7
90°-180°	4615.0	62.0
0°-180°	7441.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	895	895	895	895	895	
5°	896	893	886	894	893	85
15°	859	860	857	866	865	242
25°	786	792	795	806	807	362
35°	688	700	710	723	727	431
45°	573	593	612	628	634	443
55°	449	471	500	520	526	400
65°	311	343	377	401	410	308
75°	172	210	252	279	289	183
85°	53	95	140	169	180	57
90°	20	73	126	161	173	15
95°	86	131	180	210	220	92
105°	294	316	357	385	398	312
115°	539	549	578	598	604	532
125°	780	781	803	819	823	695
135°	1003	1010	1018	1030	1033	776
145°	1217	1221	1222	1227	1228	762
155°	1394	1393	1392	1397	1392	641
165°	1517	1513	1511	1518	1513	427
175°	1578	1572	1571	1578	1571	150
180°	1580	1580	1580	1580	1580	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	895.3	895.3	895.3	895.3	895.3	895.3	895.3	895.3	895.3	895.3	895.3
2.5°	898.5	898.0	897.4	896.9	896.4	895.4	893.9	892.5	891.1	889.7	890.9
5°	896.3	895.6	894.9	894.3	893.6	892.5	890.9	889.4	887.8	886.3	888.1
7.5°	888.6	888.3	887.9	887.5	887.0	886.2	885.0	883.6	882.3	881.1	883.1
10°	882.2	882.0	881.8	881.6	881.4	880.7	879.6	878.4	877.3	876.2	878.3
12.5°	873.5	873.4	873.4	873.3	873.3	872.9	872.1	871.3	870.5	869.8	871.7
15°	859.2	859.4	859.6	859.9	860.1	859.9	859.2	858.6	857.8	857.1	859.2
17.5°	839.7	840.4	841.0	841.8	842.4	842.6	842.5	842.4	842.3	842.2	844.2
20°	826.1	826.8	827.5	828.1	828.8	829.2	829.4	829.6	829.9	830.1	832.4
22.5°	810.9	811.7	812.6	813.4	814.3	814.9	815.3	815.7	816.1	816.5	818.7
25°	786.0	787.3	788.7	790.0	791.4	792.4	793.1	793.7	794.4	795.0	797.5
27.5°	758.4	760.3	762.2	764.2	766.2	767.7	768.7	769.7	770.7	771.8	774.0
30°	739.9	741.7	743.5	745.3	747.1	748.7	750.3	751.8	753.4	754.9	757.3
32.5°	719.8	722.0	724.2	726.2	728.4	730.3	732.1	733.8	735.6	737.3	740.1
35°	687.8	690.4	693.1	695.8	698.4	700.9	703.1	705.4	707.6	709.8	712.9
37.5°	655.4	658.6	661.7	664.7	667.8	670.7	673.4	676.2	679.0	681.7	684.9
40°	634.6	637.5	640.4	643.3	646.2	649.2	652.3	655.4	658.6	661.7	665.1
42.5°	610.6	613.8	617.1	620.3	623.6	627.0	630.7	634.3	638.0	641.6	645.4
45°	573.4	577.7	581.9	586.2	590.4	594.7	598.9	603.1	607.3	611.5	615.4
47.5°	538.0	542.3	546.7	551.1	555.4	560.1	565.0	569.9	574.8	579.7	583.6
50°	512.3	517.2	522.1	527.0	531.9	536.8	541.7	546.6	551.5	556.4	560.9
52.5°	486.6	491.5	496.4	501.3	506.2	511.5	517.1	522.7	528.4	534.0	538.4
55°	449.1	453.8	458.5	463.2	467.9	473.5	480.2	486.9	493.6	500.3	504.7
57.5°	407.3	413.0	418.9	424.6	430.4	436.6	443.3	449.9	456.6	463.2	468.4
60°	379.9	385.8	391.5	397.4	403.1	409.7	417.1	424.4	431.8	439.1	444.2
62.5°	353.5	359.9	366.2	372.5	378.8	385.7	393.0	400.4	407.7	415.1	420.2
65°	310.8	317.9	325.1	332.2	339.3	346.7	354.2	361.8	369.4	376.9	382.5
67.5°	269.7	277.3	284.8	292.4	300.0	307.8	315.9	324.0	332.2	340.3	345.9
70°	241.6	249.2	256.7	264.4	271.9	279.9	288.4	296.9	305.3	313.8	319.8
72.5°	214.3	222.1	229.9	237.6	245.3	253.7	262.8	271.7	280.8	289.7	295.6
75°	172.5	180.7	188.9	197.2	205.4	214.2	223.6	232.9	242.3	251.7	257.9
77.5°	133.4	142.0	150.8	159.6	168.2	177.6	187.4	197.2	207.0	216.8	223.1
80°	109.2	118.2	127.1	136.0	145.0	154.3	164.1	173.9	183.7	193.5	200.2
82.5°	85.2	94.4	103.8	113.0	122.2	131.9	141.7	151.5	161.3	171.1	177.9
85°	53.2	62.5	71.8	81.2	90.6	100.3	110.3	120.3	130.4	140.3	147.0
87.5°	30.4	40.1	49.8	59.5	69.2	79.1	89.3	99.4	109.7	119.9	126.7
90°	19.7	31.6	43.5	55.4	67.3	79.2	90.9	102.6	114.4	126.1	134.2
92.5°	41.4	52.9	64.3	75.7	87.2	98.4	109.5	120.6	131.8	142.9	150.1
95°	86.3	96.1	105.9	115.7	125.5	136.0	147.0	158.1	169.1	180.1	186.9
97.5°	140.0	148.3	156.5	164.8	173.1	182.9	194.2	205.4	216.7	227.9	234.8
100°	182.2	189.1	196.0	202.8	209.7	218.7	229.8	240.9	252.0	263.3	269.8
102.5°	227.2	232.6	238.2	243.6	249.2	257.3	268.1	278.8	289.5	300.3	306.9
105°	293.8	298.6	303.3	308.0	312.7	319.8	329.1	338.5	347.8	357.1	363.4
107.5°	365.8	369.8	373.7	377.7	381.6	387.7	395.6	403.6	411.5	419.5	425.7
110°	413.9	417.5	421.1	424.8	428.5	434.1	441.6	449.1	456.7	464.2	468.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	463.9	466.7	469.7	472.5	475.4	480.3	487.2	494.2	501.1	508.1	512.9
115°	538.9	541.0	543.0	545.0	547.0	551.3	557.9	564.5	571.1	577.6	582.3
117.5°	610.7	612.1	613.5	614.9	616.3	620.2	626.4	632.6	638.9	645.2	648.9
120°	657.8	659.5	661.3	663.0	664.8	668.5	674.1	679.8	685.4	691.1	694.2
122.5°	707.7	708.2	708.8	709.4	709.9	713.0	718.8	724.5	730.2	735.9	739.5
125°	780.2	780.0	779.8	779.6	779.3	781.8	787.1	792.5	797.8	803.0	806.7
127.5°	846.8	847.3	847.9	848.6	849.1	851.3	855.2	859.0	862.9	866.7	870.2
130°	892.9	893.5	894.1	894.7	895.2	897.3	900.9	904.5	908.0	911.6	915.0
132.5°	940.8	941.2	941.6	942.0	942.4	943.8	946.4	949.0	951.7	954.3	957.6
135°	1003.1	1004.8	1006.4	1008.0	1009.7	1011.3	1012.8	1014.4	1015.9	1017.5	1020.5
137.5°	1072.0	1072.6	1073.2	1073.7	1074.2	1075.1	1076.3	1077.4	1078.6	1079.9	1082.4
140°	1118.0	1118.3	1118.7	1119.0	1119.3	1119.6	1119.8	1120.0	1120.2	1120.5	1123.1
142.5°	1159.2	1159.8	1160.3	1160.7	1161.3	1161.3	1161.0	1160.6	1160.3	1159.9	1162.4
145°	1217.3	1218.1	1219.0	1219.8	1220.7	1221.3	1221.5	1221.8	1222.1	1222.4	1223.4
147.5°	1275.0	1276.0	1277.1	1278.2	1279.3	1279.7	1279.5	1279.3	1279.0	1278.8	1278.8
150°	1310.1	1311.0	1311.9	1312.8	1313.6	1314.0	1314.0	1314.0	1314.0	1314.0	1314.0
152.5°	1342.7	1343.2	1343.8	1344.4	1345.0	1345.5	1345.7	1345.9	1346.1	1346.3	1347.0
155°	1393.5	1393.5	1393.5	1393.5	1393.5	1393.4	1393.1	1392.8	1392.5	1392.3	1393.4
157.5°	1436.5	1436.1	1435.6	1435.0	1434.5	1434.3	1434.3	1434.2	1434.2	1434.1	1434.9
160°	1462.0	1461.7	1461.4	1461.1	1460.8	1460.6	1460.3	1460.1	1459.8	1459.5	1460.3
162.5°	1485.4	1484.7	1484.0	1483.3	1482.6	1482.1	1481.9	1481.6	1481.3	1481.0	1482.5
165°	1516.9	1516.2	1515.3	1514.5	1513.7	1513.1	1512.5	1511.9	1511.4	1510.8	1512.5
167.5°	1541.2	1540.0	1538.9	1537.8	1536.6	1536.1	1536.2	1536.2	1536.3	1536.3	1537.9
170°	1554.8	1553.5	1552.2	1550.8	1549.4	1548.9	1549.2	1549.4	1549.7	1549.9	1551.6
172.5°	1564.6	1563.5	1562.4	1561.2	1560.1	1559.5	1559.6	1559.6	1559.7	1559.7	1561.6
175°	1578.1	1576.7	1575.4	1574.0	1572.6	1571.8	1571.6	1571.3	1571.0	1570.7	1572.6
177.5°	1582.4	1581.4	1580.3	1579.2	1578.1	1577.6	1577.6	1577.6	1577.6	1577.6	1579.1
180°	1580.5	1580.5	1580.5	1580.5	1580.5	1580.5	1580.5	1580.5	1580.5	1580.5	1580.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	895.3	895.3	895.3	895.3	895.3	895.3	895.3	895.3
2.5°	892.1	893.4	894.7	895.2	895.0	894.8	894.7	894.5
5°	889.9	891.6	893.3	894.2	893.9	893.7	893.5	893.2
7.5°	885.0	887.0	889.1	889.9	889.8	889.5	889.3	889.1
10°	880.2	882.2	884.3	885.1	885.0	884.7	884.5	884.3
12.5°	873.5	875.3	877.1	878.0	878.0	877.9	877.9	877.8
15°	861.2	863.2	865.2	866.1	865.9	865.6	865.4	865.2
17.5°	846.2	848.3	850.4	851.3	851.1	850.9	850.7	850.6
20°	834.5	836.8	839.1	840.2	840.2	840.2	840.2	840.2
22.5°	821.0	823.1	825.4	826.7	827.1	827.4	827.7	828.1
25°	799.9	802.4	804.8	806.2	806.3	806.6	806.8	807.1
27.5°	776.3	778.5	780.9	782.1	782.4	782.7	783.0	783.2
30°	759.8	762.2	764.7	766.2	766.7	767.0	767.5	768.0
32.5°	742.9	745.7	748.5	750.2	750.5	751.0	751.5	752.0
35°	716.0	719.2	722.3	724.2	724.8	725.5	726.2	726.9
37.5°	688.1	691.3	694.4	696.4	697.0	697.8	698.4	699.2
40°	668.4	671.8	675.0	677.1	678.1	678.9	679.9	680.7
42.5°	649.0	652.7	656.4	658.6	659.3	660.1	660.8	661.5
45°	619.2	622.9	626.7	629.1	630.3	631.4	632.5	633.6
47.5°	587.5	591.4	595.4	597.9	599.4	600.7	602.0	603.3
50°	565.3	569.8	574.2	577.1	578.4	579.9	581.2	582.5
52.5°	542.9	547.3	551.8	554.7	556.0	557.3	558.6	560.1
55°	509.2	513.7	518.1	521.0	522.4	523.7	525.0	526.3
57.5°	473.8	479.1	484.4	487.7	488.9	490.1	491.4	492.7
60°	449.4	454.5	459.6	463.1	464.9	466.7	468.4	470.2
62.5°	425.3	430.5	435.5	439.0	440.8	442.6	444.3	446.1
65°	388.1	393.7	399.3	402.9	404.7	406.5	408.2	410.0
67.5°	351.6	357.2	362.9	366.6	368.3	370.0	371.8	373.5
70°	325.8	331.9	337.9	341.7	343.2	344.8	346.3	347.9
72.5°	301.4	307.3	313.1	316.9	318.6	320.4	322.1	323.9
75°	264.1	270.3	276.6	280.7	282.8	284.7	286.7	288.7
77.5°	229.4	235.7	242.0	246.3	248.5	250.5	252.7	254.9
80°	206.9	213.6	220.3	224.4	226.2	228.0	229.8	231.6
82.5°	184.7	191.6	198.5	202.9	204.8	206.8	208.8	210.8
85°	153.7	160.4	167.1	171.5	173.8	176.0	178.2	180.5
87.5°	133.5	140.3	147.0	151.5	153.5	155.6	157.7	159.8
90°	142.3	150.4	158.5	163.7	166.1	168.3	170.7	173.1
92.5°	157.4	164.7	171.9	176.5	178.7	180.8	182.9	185.0
95°	193.8	200.6	207.5	211.9	213.9	215.8	217.9	219.9
97.5°	241.6	248.4	255.2	259.6	261.5	263.3	265.3	267.2
100°	276.4	282.9	289.5	293.5	295.1	296.6	298.2	299.7
102.5°	313.5	320.1	326.7	330.9	332.9	334.9	336.8	338.7
105°	369.9	376.3	382.7	387.1	389.7	392.3	394.9	397.5
107.5°	432.0	438.2	444.4	448.4	449.9	451.5	453.0	454.6
110°	473.3	478.0	482.5	486.1	488.7	491.3	493.9	496.5



TEST NUMBER: P332796-830

CATALOG NUMBER: S124DIW-S795D1340U830-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	517.7	522.6	527.4	530.8	532.8	534.7	536.7	538.7
115°	586.9	591.5	596.2	599.1	600.4	601.7	602.9	604.3
117.5°	652.6	656.3	660.1	662.5	663.7	665.0	666.2	667.5
120°	697.3	700.3	703.4	706.2	708.5	710.8	713.1	715.5
122.5°	743.0	746.6	750.1	752.1	752.8	753.4	754.0	754.7
125°	810.4	814.2	817.8	820.0	820.9	821.6	822.5	823.2
127.5°	873.6	877.1	880.6	882.9	883.9	885.0	886.1	887.2
130°	918.5	922.0	925.5	927.4	927.6	927.8	928.0	928.3
132.5°	960.9	964.2	967.5	969.6	970.5	971.4	972.3	973.2
135°	1023.5	1026.5	1029.5	1031.3	1031.9	1032.4	1032.9	1033.4
137.5°	1085.0	1087.5	1090.1	1091.9	1093.3	1094.5	1095.8	1097.0
140°	1125.7	1128.3	1131.0	1132.7	1133.5	1134.3	1135.2	1136.0
142.5°	1164.9	1167.4	1169.9	1171.6	1172.4	1173.4	1174.2	1175.1
145°	1224.5	1225.6	1226.6	1227.2	1227.3	1227.4	1227.5	1227.5
147.5°	1278.7	1278.7	1278.7	1278.8	1279.3	1279.8	1280.3	1280.6
150°	1314.0	1314.0	1314.0	1313.9	1313.6	1313.3	1313.1	1312.9
152.5°	1347.6	1348.3	1349.0	1348.9	1348.2	1347.5	1346.8	1346.0
155°	1394.5	1395.5	1396.7	1396.7	1395.5	1394.5	1393.4	1392.3
157.5°	1435.7	1436.5	1437.4	1437.3	1436.3	1435.4	1434.5	1433.6
160°	1461.1	1462.0	1462.7	1462.4	1461.1	1459.8	1458.4	1457.1
162.5°	1483.9	1485.4	1486.9	1487.0	1485.5	1484.2	1482.9	1481.5
165°	1514.1	1515.7	1517.4	1517.7	1516.6	1515.4	1514.4	1513.3
167.5°	1539.5	1541.2	1542.8	1542.8	1541.1	1539.4	1537.8	1536.1
170°	1553.2	1554.8	1556.5	1556.3	1554.4	1552.6	1550.7	1548.8
172.5°	1563.4	1565.3	1567.2	1567.1	1565.2	1563.3	1561.4	1559.5
175°	1574.5	1576.4	1578.4	1578.4	1576.4	1574.5	1572.6	1570.7
177.5°	1580.6	1582.2	1583.7	1583.6	1581.9	1580.1	1578.4	1576.6
180°	1580.5	1580.5	1580.5	1580.5	1580.5	1580.5	1580.5	1580.5

(END OF REPORT)