

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: P332801-830

Luminaire Tested: **S124DIW-S795D1560U830-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332801-830
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-S795D1560U830-4F0-1E-UDD-D
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 795 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1560 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8935.9 lumens
Efficiency: N/A
Efficacy: 131.2 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

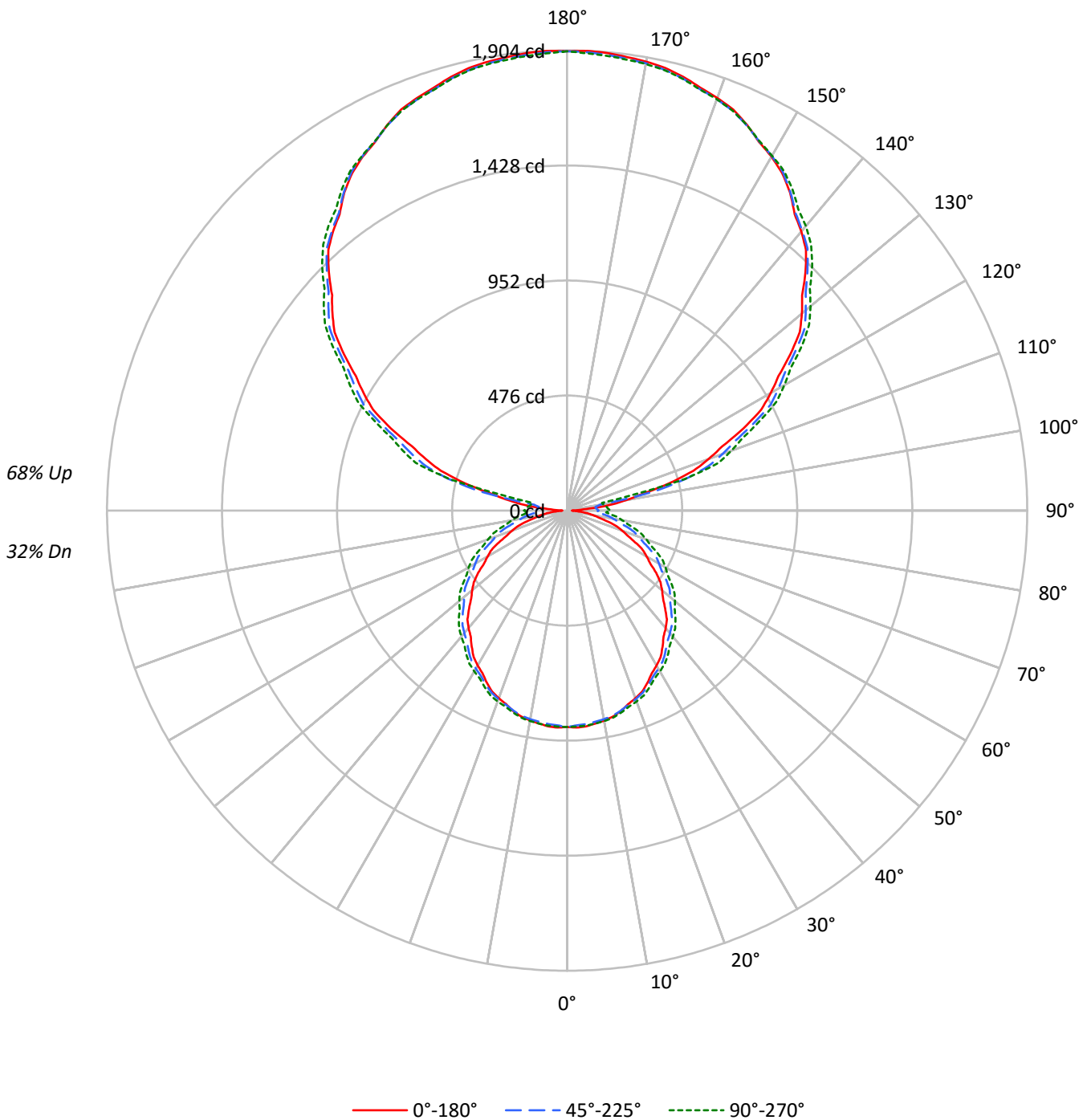
Input Watts (W): 68.1
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P332801-830

CATALOG NUMBER: S124DIW-S795D1560U830-4F0-1E-UDD-D

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	103	103	103	103	92	92	92	92	73	73	73	55	55	55	39	39	39	39	39	39	32	
1	93	89	85	81	83	80	76	73	63	61	59	48	46	45	34	33	32	34	33	32	25	
2	84	77	71	65	76	69	64	59	55	51	48	41	39	37	29	28	26	29	28	26	21	
3	77	67	60	54	69	61	54	49	48	44	40	36	33	31	26	24	22	26	24	22	17	
4	70	59	51	45	63	53	47	41	42	38	34	32	29	26	23	21	19	23	21	19	15	
5	64	53	45	39	57	47	41	35	38	33	29	29	25	22	20	18	16	20	18	16	12	
6	59	47	39	33	53	42	35	30	34	29	25	26	22	19	18	16	14	18	16	14	11	
7	54	42	34	29	49	38	31	26	31	25	22	23	20	17	17	14	12	17	14	12	10	
8	50	38	31	25	45	35	28	23	28	23	19	21	18	15	15	13	11	15	13	11	9	
9	47	35	27	22	42	31	25	21	25	20	17	20	16	13	14	12	10	14	12	10	8	
10	44	32	25	20	39	29	23	18	23	18	15	18	15	12	13	11	9	13	11	9	7	

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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CATALOG NUMBER: S124DIW-S795D1560U830-4F0-1E-UDD-D

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	84.8	0.9
10°-20°	242.9	2.7
20°-30°	367.3	4.1
30°-40°	444.4	5.0
40°-50°	469.8	5.3
50°-60°	442.2	4.9
60°-70°	366.8	4.1
70°-80°	257.7	2.9
80°-90°	151.2	1.7
90°-100°	151.5	1.7
100°-110°	478.4	5.4
110°-120°	835.8	9.4
120°-130°	1030.6	11.5
130°-140°	1087.2	12.2
140°-150°	1009.0	11.3
150°-160°	812.0	9.1
160°-170°	523.7	5.9
170°-180°	180.5	2.0
0°-30°	695.0	7.8
0°-40°	1139.4	12.8
0°-60°	2051.4	23.0
0°-90°	2827.0	31.6
90°-120°	1465.7	16.4
90°-150°	4592.6	51.4
90°-180°	6109.0	68.4
0°-180°	8935.9	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	76	130	167	179	14
95°	91	79	118	153	165	111
105°	437	466	510	543	504	458
115°	805	819	849	873	881	792
125°	1127	1133	1154	1176	1185	1006
135°	1395	1394	1406	1425	1434	1075
145°	1607	1610	1610	1618	1625	1004
155°	1761	1762	1758	1763	1760	812
165°	1858	1851	1851	1861	1849	525
175°	1900	1892	1893	1904	1889	181
180°	1900	1900	1900	1900	1900	



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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°	30.5	40.3	50.1	59.9	69.7	79.6	89.9	100.2	110.5	120.7	127.6
90°	20.3	32.7	45.1	57.5	69.8	82.1	94.2	106.3	118.4	130.5	138.8
92.5°	33.2	41.4	49.6	57.8	66.0	76.2	88.2	100.4	112.4	124.6	132.7
95°	91.2	87.8	84.5	81.1	77.7	80.7	90.1	99.6	109.1	118.5	126.4
97.5°	177.9	190.9	203.9	216.9	230.0	223.4	197.2	171.0	144.8	118.6	124.6
100°	244.1	255.6	267.1	278.6	290.0	278.3	243.5	208.5	173.6	138.7	139.4
102.5°	319.1	328.5	337.7	346.9	356.2	362.2	365.0	367.9	370.7	373.5	321.4
105°	436.9	443.2	449.6	455.9	462.2	470.3	480.1	490.0	499.8	509.6	518.0
107.5°	547.8	552.4	557.0	561.7	566.2	573.5	583.4	593.4	603.3	613.3	620.1
110°	622.1	626.1	630.2	634.2	638.3	645.2	654.9	664.6	674.3	684.0	689.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	694.0	698.5	702.9	707.5	711.9	718.3	726.6	735.0	743.3	751.6	756.4
115°	804.8	807.8	810.8	813.7	816.6	821.5	828.3	835.2	842.0	848.8	854.3
117.5°	905.6	908.0	910.5	912.9	915.4	920.3	927.7	935.0	942.4	949.6	954.1
120°	973.0	974.9	976.9	978.7	980.7	984.8	990.9	997.0	1003.1	1009.4	1014.5
122.5°	1036.7	1037.6	1038.4	1039.3	1040.2	1044.0	1050.5	1057.1	1063.6	1070.2	1075.0
125°	1126.9	1127.9	1129.0	1130.0	1131.1	1134.1	1139.0	1144.0	1148.9	1153.9	1159.0
127.5°	1213.1	1213.2	1213.3	1213.4	1213.5	1216.4	1222.1	1227.9	1233.6	1239.3	1243.1
130°	1268.0	1268.1	1268.2	1268.3	1268.4	1270.7	1275.3	1279.8	1284.2	1288.7	1293.1
132.5°	1319.2	1319.6	1319.9	1320.2	1320.6	1322.8	1326.8	1330.9	1334.9	1339.0	1343.1
135°	1395.0	1394.7	1394.3	1394.0	1393.7	1395.0	1397.8	1400.6	1403.4	1406.3	1410.4
137.5°	1462.9	1462.8	1462.7	1462.6	1462.5	1463.6	1465.7	1467.8	1470.0	1472.2	1476.1
140°	1507.2	1507.7	1508.1	1508.4	1508.9	1509.5	1510.4	1511.3	1512.1	1513.0	1516.8
142.5°	1546.2	1547.4	1548.4	1549.5	1550.7	1551.3	1551.5	1551.8	1552.0	1552.3	1555.5
145°	1607.1	1607.9	1608.6	1609.4	1610.1	1610.4	1610.4	1610.4	1610.4	1610.4	1612.1
147.5°	1655.8	1657.4	1658.9	1660.4	1662.0	1662.6	1662.3	1662.0	1661.6	1661.3	1661.8
150°	1691.0	1692.1	1693.1	1694.1	1695.2	1695.5	1695.3	1695.0	1694.6	1694.3	1694.3
152.5°	1719.8	1720.8	1721.7	1722.7	1723.6	1723.9	1723.3	1722.7	1722.1	1721.6	1722.1
155°	1761.1	1761.4	1761.7	1762.1	1762.4	1762.1	1761.1	1760.2	1759.3	1758.2	1759.5
157.5°	1796.1	1795.9	1795.7	1795.5	1795.4	1794.7	1793.6	1792.5	1791.5	1790.4	1792.1
160°	1816.6	1815.6	1814.7	1813.7	1812.8	1812.1	1811.8	1811.5	1811.2	1810.8	1812.8
162.5°	1834.8	1833.5	1832.3	1831.2	1829.9	1829.2	1828.8	1828.5	1828.2	1827.9	1829.8
165°	1857.8	1856.1	1854.6	1853.0	1851.4	1850.7	1850.7	1850.7	1850.7	1850.7	1853.1
167.5°	1875.9	1874.3	1872.6	1871.0	1869.3	1868.5	1868.3	1868.1	1867.9	1867.7	1870.5
170°	1886.2	1884.3	1882.4	1880.5	1878.6	1877.8	1878.1	1878.5	1878.8	1879.1	1881.6
172.5°	1893.0	1891.1	1889.2	1887.3	1885.5	1884.6	1885.0	1885.3	1885.6	1885.9	1888.4
175°	1900.4	1898.5	1896.6	1894.7	1892.8	1892.1	1892.3	1892.6	1893.0	1893.3	1896.1
177.5°	1903.8	1902.1	1900.3	1898.5	1896.8	1896.1	1896.6	1897.1	1897.6	1898.1	1900.2
180°	1900.4	1900.4	1900.4	1900.4	1900.4	1900.4	1900.4	1900.4	1900.4	1900.4	1900.4



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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°	134.4	141.3	148.1	152.6	154.7	156.7	158.8	160.9
90°	147.2	155.6	163.9	169.4	171.7	174.2	176.5	179.0
92.5°	140.9	149.1	157.3	162.3	164.2	166.2	168.1	169.9
95°	134.3	142.2	150.1	155.2	157.6	159.9	162.2	164.6
97.5°	130.5	136.6	142.6	146.8	149.0	151.2	153.4	155.7
100°	140.1	140.6	141.3	142.6	144.5	146.3	148.2	150.1
102.5°	269.4	217.3	165.1	140.0	141.8	143.6	145.4	147.2
105°	526.5	534.9	543.3	542.7	533.1	523.5	514.0	504.4
107.5°	627.0	633.9	640.7	645.5	648.4	651.2	654.0	656.9
110°	695.5	701.3	707.0	711.2	714.0	716.7	719.4	722.2



TEST NUMBER: P332801-830

CATALOG NUMBER: S124DIW-S795D1560U830-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	761.3	766.1	770.9	774.8	777.8	780.7	783.7	786.7
115°	859.9	865.3	870.9	874.5	876.0	877.6	879.1	880.7
117.5°	958.7	963.2	967.7	970.7	972.4	974.1	975.7	977.4
120°	1019.5	1024.5	1029.6	1032.8	1034.0	1035.1	1036.2	1037.4
122.5°	1079.8	1084.7	1089.5	1092.4	1093.3	1094.3	1095.3	1096.3
125°	1164.1	1169.3	1174.5	1178.0	1179.6	1181.3	1182.9	1184.6
127.5°	1247.0	1250.8	1254.6	1257.2	1258.4	1259.7	1260.9	1262.3
130°	1297.4	1301.7	1306.1	1308.9	1310.2	1311.5	1313.0	1314.3
132.5°	1347.3	1351.4	1355.6	1358.2	1359.3	1360.4	1361.5	1362.5
135°	1414.7	1418.8	1423.1	1426.2	1428.0	1430.0	1432.0	1434.0
137.5°	1480.1	1483.9	1487.9	1490.3	1491.3	1492.2	1493.2	1494.0
140°	1520.6	1524.5	1528.3	1531.0	1532.4	1533.8	1535.2	1536.7
142.5°	1558.8	1562.0	1565.2	1567.4	1568.3	1569.3	1570.4	1571.3
145°	1613.7	1615.4	1617.0	1618.6	1620.1	1621.6	1623.2	1624.8
147.5°	1662.2	1662.6	1663.0	1663.8	1664.8	1665.8	1666.9	1667.9
150°	1694.3	1694.3	1694.3	1694.5	1694.8	1695.1	1695.4	1695.7
152.5°	1722.6	1723.1	1723.6	1723.7	1723.5	1723.3	1723.2	1723.0
155°	1760.8	1762.1	1763.3	1763.5	1762.6	1761.6	1760.7	1759.7
157.5°	1793.7	1795.4	1797.0	1797.0	1795.4	1793.7	1792.1	1790.4
160°	1814.7	1816.6	1818.4	1818.4	1816.6	1814.7	1812.8	1810.8
162.5°	1831.7	1833.6	1835.5	1835.3	1833.2	1831.1	1828.9	1826.7
165°	1855.7	1858.2	1860.8	1860.6	1857.8	1854.9	1852.1	1849.3
167.5°	1873.3	1876.0	1878.9	1878.7	1875.5	1872.4	1869.2	1866.0
170°	1884.1	1886.7	1889.2	1888.9	1885.7	1882.5	1879.4	1876.2
172.5°	1890.9	1893.5	1896.0	1895.5	1892.2	1888.8	1885.4	1881.9
175°	1898.9	1901.9	1904.7	1904.2	1900.4	1896.6	1892.8	1889.0
177.5°	1902.1	1904.2	1906.2	1905.7	1902.7	1899.6	1896.6	1893.6
180°	1900.4	1900.4	1900.4	1900.4	1900.4	1900.4	1900.4	1900.4

(END OF REPORT)