

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: P332804-830

Luminaire Tested: **S124DIW-S795D1560U830-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332804-830
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-S795D1560U830-4F0-1E-UDD-F1
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 795 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 1560 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8314.5 lumens
Efficiency: N/A
Efficacy: 122.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: Semi-Indirect

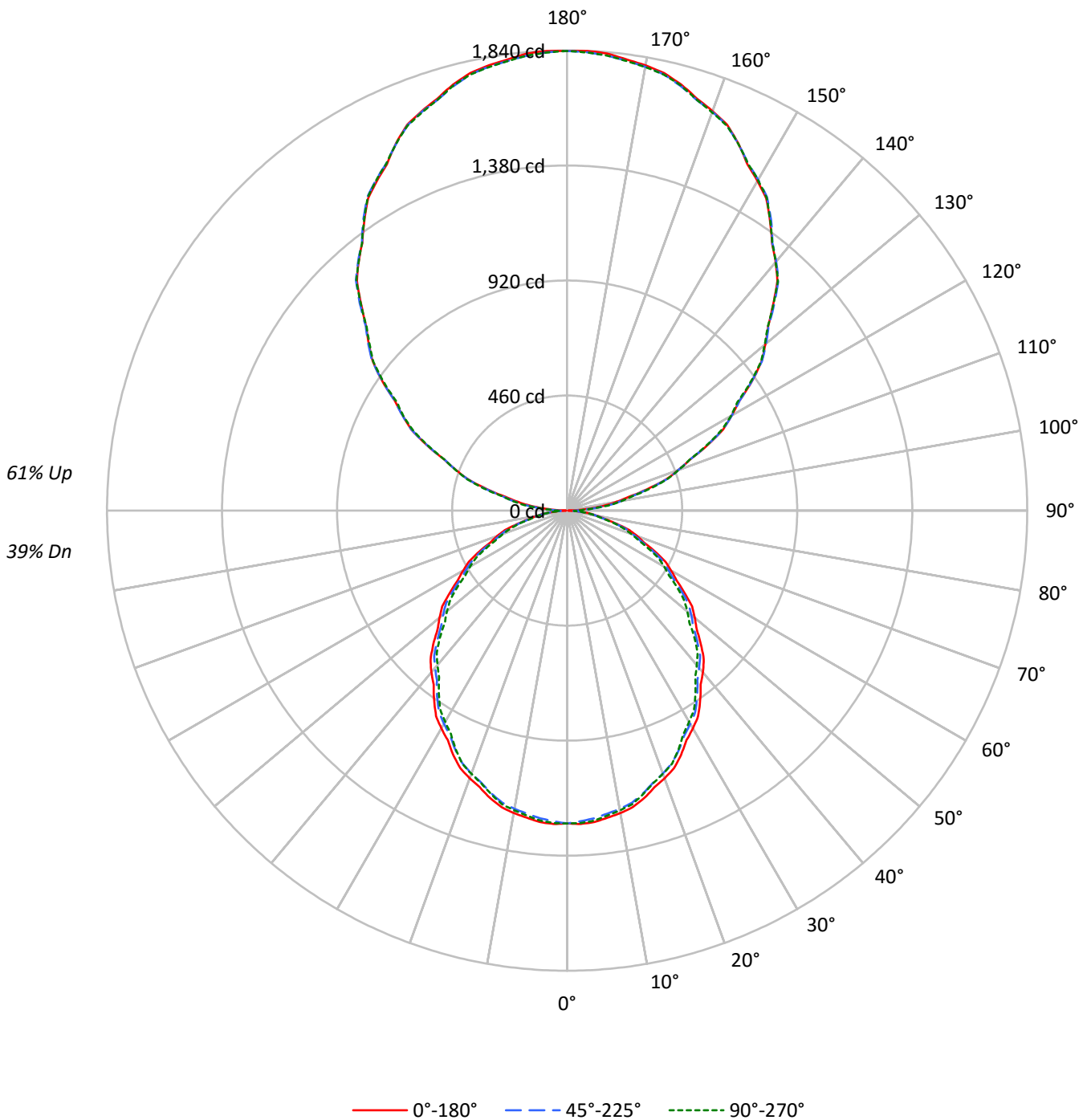
Input Watts (W): 68.1
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	104	104	104	104	95	95	95	95	77	77	77	61	61	61	46	46	46
1	95	91	87	84	86	83	79	77	67	65	63	53	52	50	40	39	38
2	87	79	73	68	78	72	67	63	59	55	52	47	44	42	35	34	32
3	79	70	63	57	71	64	57	52	52	48	44	41	38	36	31	29	28
4	72	62	54	48	65	56	50	44	46	41	37	37	33	30	28	26	24
5	66	55	47	41	60	50	43	38	41	36	32	33	29	26	25	23	21
6	61	49	41	35	55	45	38	33	37	32	28	30	26	23	23	20	18
7	56	44	36	31	51	41	34	29	34	28	25	27	23	20	21	18	16
8	52	40	33	27	47	37	30	25	31	25	22	25	21	18	19	16	14
9	49	37	29	24	44	34	27	23	28	23	19	23	19	16	18	15	13
10	45	33	26	22	41	31	24	20	26	21	17	21	17	15	16	14	12

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10101	10101	10101
5°	10131	10009	10083
10°	10067	9928	9977
15°	9947	9787	9812
20°	9784	9613	9620
25°	9600	9413	9386
30°	9374	9177	9093
35°	9140	8932	8814
40°	8896	8652	8495
45°	8643	8379	8218
50°	8361	8133	7882
55°	8058	7817	7562
60°	7753	7463	7237
65°	7412	7125	6837
70°	7027	6675	6413
75°	6441	6129	5973
80°	5732	5500	5360
85°	5011	4826	4733



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	117.8	1.4
10°-20°	332.0	4.0
20°-30°	488.6	5.9
30°-40°	568.1	6.8
40°-50°	568.1	6.8
50°-60°	496.9	6.0
60°-70°	369.0	4.4
70°-80°	209.7	2.5
80°-90°	66.0	0.8
90°-100°	121.2	1.5
100°-110°	359.1	4.3
110°-120°	609.4	7.3
120°-130°	803.6	9.7
130°-140°	902.4	10.9
140°-150°	886.8	10.7
150°-160°	745.9	9.0
160°-170°	496.2	6.0
170°-180°	173.8	2.1
0°-30°	938.5	11.3
0°-40°	1506.5	18.1
0°-60°	2571.5	30.9
0°-90°	3216.2	38.7
90°-120°	1089.7	13.1
90°-150°	3682.5	44.3
90°-180°	5098.0	61.3
0°-180°	8314.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1251	1251	1251	1251	1251	
5°	1250	1246	1235	1245	1244	119
15°	1190	1185	1171	1176	1174	335
25°	1078	1070	1057	1057	1054	496
35°	927	920	906	899	894	580
45°	757	749	734	723	720	583
55°	572	569	555	544	537	513
65°	388	383	373	363	358	384
75°	206	202	196	193	192	219
85°	54	54	52	52	51	60
90°	4	20	31	40	43	8
95°	85	98	108	112	112	95
105°	331	333	338	342	347	351
115°	620	619	617	615	614	611
125°	902	902	901	898	895	804
135°	1164	1172	1172	1170	1165	900
145°	1414	1420	1421	1420	1416	885
155°	1620	1620	1619	1624	1619	745
165°	1764	1760	1757	1764	1759	497
175°	1835	1828	1826	1835	1826	174
180°	1838	1838	1838	1838	1838	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2
2.5°	1254.4	1253.9	1253.3	1252.8	1252.3	1251.0	1249.1	1247.1	1245.1	1243.2	1244.9
5°	1250.2	1249.3	1248.4	1247.5	1246.6	1244.9	1242.5	1240.0	1237.6	1235.1	1237.6
7.5°	1238.6	1237.7	1236.8	1235.9	1235.0	1233.2	1230.5	1227.8	1225.0	1222.3	1224.3
10°	1228.1	1227.3	1226.3	1225.5	1224.6	1222.7	1219.7	1216.9	1214.0	1211.1	1212.9
12.5°	1214.5	1213.6	1212.7	1211.8	1211.0	1208.9	1205.9	1202.8	1199.8	1196.7	1198.6
15°	1190.1	1189.1	1188.3	1187.3	1186.5	1184.4	1181.0	1177.7	1174.3	1171.0	1172.3
17.5°	1160.6	1159.4	1158.3	1157.3	1156.1	1154.0	1150.8	1147.6	1144.4	1141.3	1142.2
20°	1138.9	1137.7	1136.7	1135.6	1134.4	1132.2	1128.9	1125.5	1122.2	1118.9	1119.6
22.5°	1115.7	1114.2	1112.7	1111.3	1109.7	1107.4	1104.0	1100.7	1097.3	1094.0	1095.2
25°	1077.7	1076.2	1074.6	1073.1	1071.5	1069.1	1066.0	1062.9	1059.8	1056.7	1056.9
27.5°	1034.4	1032.8	1031.2	1029.6	1028.0	1025.8	1022.8	1020.0	1017.1	1014.2	1013.6
30°	1005.6	1003.8	1002.0	1000.2	998.4	996.1	993.2	990.3	987.4	984.5	983.6
32.5°	975.1	973.5	971.9	970.3	968.7	966.3	963.3	960.2	957.2	954.0	953.0
35°	927.4	925.8	924.3	922.7	921.1	918.8	915.7	912.6	909.5	906.3	904.7
37.5°	877.0	875.6	874.2	872.8	871.3	868.9	865.6	862.2	858.9	855.5	853.8
40°	844.1	842.4	840.6	838.8	837.0	834.4	831.1	827.7	824.4	821.0	818.9
42.5°	808.9	807.8	806.7	805.7	804.6	802.2	798.5	794.8	791.1	787.4	784.9
45°	757.0	755.4	753.8	752.2	750.7	748.1	744.6	741.0	737.4	733.9	731.4
47.5°	702.6	701.5	700.5	699.4	698.3	696.2	692.9	689.6	686.3	683.0	680.1
50°	665.7	664.8	663.9	663.0	662.1	660.2	657.0	653.9	650.7	647.6	644.5
52.5°	629.6	628.6	627.5	626.4	625.3	623.1	619.8	616.5	613.2	609.9	607.2
55°	572.5	571.7	571.1	570.4	569.8	567.9	564.8	561.7	558.6	555.4	552.7
57.5°	517.9	517.2	516.4	515.7	514.9	512.9	509.9	506.8	503.8	500.7	498.1
60°	480.2	479.1	478.0	476.9	475.8	473.7	470.9	468.0	465.1	462.2	460.1
62.5°	443.4	442.4	441.5	440.5	439.6	437.6	434.5	431.4	428.4	425.3	423.5
65°	388.0	386.9	385.8	384.7	383.5	381.8	379.7	377.4	375.1	373.0	370.7
67.5°	332.2	331.2	330.2	329.1	328.2	326.6	324.4	322.3	320.2	318.0	315.8
70°	297.7	296.2	294.6	293.0	291.5	289.8	288.0	286.3	284.5	282.8	281.0
72.5°	260.9	259.3	257.8	256.2	254.6	253.2	251.8	250.2	248.8	247.4	246.0
75°	206.5	205.4	204.3	203.2	202.1	201.0	199.8	198.7	197.7	196.5	195.6
77.5°	154.6	154.1	153.6	153.2	152.6	151.9	150.9	150.0	148.9	148.0	147.7
80°	123.3	122.6	122.0	121.3	120.6	120.1	119.6	119.2	118.8	118.3	117.8
82.5°	92.8	92.6	92.2	91.9	91.6	91.4	91.3	91.2	91.1	91.0	90.8
85°	54.1	54.1	54.1	54.1	54.1	53.9	53.4	53.1	52.6	52.1	52.1
87.5°	21.7	22.2	22.7	23.3	23.8	24.2	24.5	24.9	25.2	25.5	25.9
90°	4.2	7.7	11.2	14.7	18.2	21.2	23.7	26.2	28.7	31.3	33.2
92.5°	30.4	34.4	38.4	42.3	46.4	49.2	51.0	52.8	54.5	56.3	57.4
95°	85.3	88.1	91.0	93.8	96.6	99.2	101.4	103.6	105.8	108.0	109.0
97.5°	148.9	151.2	153.4	155.8	158.1	160.5	163.1	165.6	168.2	170.8	171.9
100°	199.0	200.2	201.5	202.7	204.1	206.0	209.0	211.8	214.6	217.4	218.1
102.5°	251.3	251.8	252.3	252.8	253.3	254.9	257.4	260.0	262.6	265.2	266.1
105°	331.1	331.5	331.8	332.1	332.4	333.2	334.4	335.7	337.0	338.3	339.2
107.5°	415.0	415.4	415.8	416.1	416.5	416.8	417.0	417.2	417.4	417.5	418.4
110°	471.8	472.5	473.1	473.7	474.4	474.6	474.2	473.9	473.5	473.3	472.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	530.9	531.1	531.2	531.3	531.5	531.2	530.7	530.1	529.5	529.0	528.9
115°	619.6	619.6	619.6	619.6	619.6	619.3	618.7	618.0	617.5	616.8	616.5
117.5°	703.2	703.4	703.7	704.0	704.3	704.2	703.7	703.2	702.8	702.4	701.3
120°	758.9	760.2	761.5	762.7	763.9	764.1	763.2	762.2	761.3	760.3	758.7
122.5°	816.9	817.4	817.9	818.4	818.9	819.0	818.5	818.0	817.7	817.2	816.1
125°	902.5	902.5	902.5	902.5	902.5	902.3	902.0	901.6	901.4	901.1	900.4
127.5°	980.1	981.0	981.9	982.9	983.8	984.1	983.5	983.1	982.6	982.0	981.4
130°	1034.6	1035.6	1036.5	1037.5	1038.4	1038.9	1038.9	1038.9	1038.9	1038.9	1038.3
132.5°	1090.3	1091.1	1091.7	1092.4	1093.2	1093.3	1093.1	1092.9	1092.6	1092.3	1091.7
135°	1163.9	1165.8	1167.7	1169.7	1171.6	1172.5	1172.5	1172.5	1172.5	1172.5	1171.9
137.5°	1244.2	1245.0	1245.9	1246.8	1247.6	1248.4	1248.9	1249.3	1249.9	1250.4	1249.5
140°	1297.6	1298.2	1298.8	1299.5	1300.0	1300.4	1300.4	1300.4	1300.4	1300.4	1300.0
142.5°	1346.4	1347.1	1347.7	1348.3	1349.0	1349.2	1348.9	1348.7	1348.4	1348.1	1348.1
145°	1414.1	1415.3	1416.6	1417.9	1419.2	1419.9	1420.2	1420.6	1420.9	1421.2	1420.9
147.5°	1481.2	1482.7	1484.2	1485.7	1487.2	1487.9	1487.6	1487.3	1487.1	1486.9	1486.6
150°	1522.1	1523.3	1524.7	1525.9	1527.2	1527.8	1527.8	1527.8	1527.8	1527.8	1527.8
152.5°	1560.8	1561.5	1562.3	1563.0	1563.8	1564.3	1564.5	1564.8	1565.1	1565.3	1566.0
155°	1620.1	1620.1	1620.1	1620.1	1620.1	1620.0	1619.7	1619.4	1619.1	1618.7	1620.0
157.5°	1670.2	1669.6	1669.1	1668.5	1667.9	1667.6	1667.5	1667.5	1667.5	1667.4	1668.3
160°	1699.8	1699.4	1699.1	1698.8	1698.5	1698.2	1697.9	1697.5	1697.2	1697.0	1697.9
162.5°	1727.0	1726.3	1725.4	1724.6	1723.7	1723.2	1722.9	1722.6	1722.2	1721.9	1723.6
165°	1763.7	1762.7	1761.8	1760.9	1759.9	1759.2	1758.5	1757.8	1757.3	1756.6	1758.5
167.5°	1791.9	1790.5	1789.2	1787.9	1786.6	1785.9	1786.0	1786.0	1786.1	1786.2	1788.1
170°	1807.8	1806.2	1804.6	1803.0	1801.5	1800.8	1801.1	1801.5	1801.8	1802.0	1803.9
172.5°	1819.1	1817.8	1816.5	1815.1	1813.8	1813.2	1813.3	1813.4	1813.4	1813.5	1815.6
175°	1834.8	1833.2	1831.6	1830.0	1828.4	1827.5	1827.2	1826.8	1826.6	1826.3	1828.4
177.5°	1839.8	1838.6	1837.4	1836.1	1834.8	1834.2	1834.2	1834.2	1834.2	1834.2	1836.0
180°	1837.6	1837.6	1837.6	1837.6	1837.6	1837.6	1837.6	1837.6	1837.6	1837.6	1837.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2
2.5°	1246.7	1248.5	1250.3	1251.1	1250.9	1250.8	1250.6	1250.4
5°	1240.0	1242.5	1244.9	1245.9	1245.5	1245.1	1244.6	1244.2
7.5°	1226.2	1228.2	1230.1	1231.0	1230.8	1230.5	1230.2	1229.9
10°	1214.7	1216.4	1218.2	1218.9	1218.4	1218.0	1217.6	1217.1
12.5°	1200.6	1202.5	1204.5	1205.1	1204.6	1203.9	1203.2	1202.7
15°	1173.7	1175.0	1176.3	1176.7	1176.0	1175.4	1174.7	1174.0
17.5°	1143.0	1143.9	1144.7	1144.9	1144.4	1144.0	1143.6	1143.1
20°	1120.2	1120.9	1121.5	1121.6	1121.2	1120.8	1120.3	1119.8
22.5°	1096.4	1097.6	1098.8	1099.0	1098.2	1097.4	1096.6	1095.8
25°	1057.2	1057.3	1057.6	1057.2	1056.4	1055.5	1054.6	1053.7
27.5°	1013.1	1012.6	1012.0	1011.3	1010.1	1009.0	1007.9	1006.7
30°	982.7	981.8	980.9	980.0	978.8	977.7	976.6	975.5
32.5°	951.9	950.8	949.8	948.7	947.5	946.4	945.3	944.2
35°	903.2	901.6	900.0	898.7	897.6	896.5	895.4	894.3
37.5°	852.2	850.5	848.9	847.3	845.7	844.3	842.8	841.3
40°	816.6	814.5	812.2	810.5	809.4	808.3	807.2	806.1
42.5°	782.2	779.7	777.0	775.4	774.7	773.9	773.2	772.4
45°	729.0	726.5	724.1	722.6	721.8	721.1	720.5	719.8
47.5°	677.4	674.7	671.8	669.7	668.0	666.3	664.6	662.9
50°	641.4	638.3	635.2	632.9	631.6	630.3	629.0	627.6
52.5°	604.5	601.6	598.9	596.7	595.0	593.3	591.6	589.9
55°	550.1	547.4	544.7	542.7	541.4	540.1	538.7	537.3
57.5°	495.6	493.0	490.5	488.6	487.3	486.0	484.7	483.4
60°	458.2	456.2	454.1	452.6	451.5	450.3	449.2	448.2
62.5°	421.6	419.8	418.0	416.5	415.4	414.2	413.2	412.1
65°	368.5	366.3	364.0	362.4	361.3	360.1	359.0	357.9
67.5°	313.8	311.6	309.4	308.2	307.9	307.6	307.3	307.0
70°	279.2	277.4	275.6	274.4	273.7	273.1	272.4	271.7
72.5°	244.6	243.2	241.8	240.7	240.0	239.3	238.7	238.0
75°	194.7	193.8	192.9	192.4	192.2	191.9	191.7	191.5
77.5°	147.4	147.1	146.9	146.5	145.9	145.3	144.8	144.2
80°	117.4	117.0	116.5	116.2	115.9	115.7	115.6	115.3
82.5°	90.5	90.2	89.9	89.7	89.5	89.3	89.1	88.8
85°	52.1	52.1	52.1	52.0	51.8	51.6	51.4	51.1
87.5°	26.3	26.7	27.1	27.2	27.4	27.5	27.6	27.8
90°	35.1	36.9	38.8	40.2	40.7	41.4	42.0	42.6
92.5°	58.5	59.7	60.8	61.5	61.9	62.3	62.7	63.1
95°	109.9	110.8	111.8	112.3	112.3	112.3	112.3	112.3
97.5°	173.1	174.3	175.4	176.0	176.0	176.0	176.0	176.0
100°	218.7	219.3	220.0	220.3	220.3	220.3	220.3	220.3
102.5°	266.9	267.9	268.7	269.3	269.6	269.8	270.0	270.3
105°	340.2	341.1	342.0	343.0	343.9	344.9	345.8	346.8
107.5°	419.3	420.2	421.1	421.5	421.4	421.4	421.3	421.2
110°	472.0	471.4	470.7	470.9	471.8	472.8	473.7	474.7



TEST NUMBER: P332804-830

CATALOG NUMBER: S124DIW-S795D1560U830-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	528.7	528.6	528.5	528.5	528.7	528.9	529.0	529.2
115°	616.1	615.9	615.6	615.2	614.9	614.6	614.3	614.0
117.5°	700.2	699.2	698.0	697.2	696.5	696.0	695.3	694.7
120°	757.1	755.6	754.0	753.6	754.2	754.8	755.4	756.1
122.5°	815.0	814.0	812.9	811.8	810.7	809.5	808.4	807.3
125°	899.8	899.2	898.5	897.9	897.2	896.6	896.0	895.3
127.5°	980.8	980.1	979.5	978.9	978.5	978.0	977.4	976.9
130°	1037.6	1037.0	1036.3	1035.4	1034.2	1032.9	1031.6	1030.4
132.5°	1091.1	1090.4	1089.8	1089.2	1088.7	1088.3	1087.7	1087.2
135°	1171.2	1170.6	1170.0	1169.1	1168.2	1167.2	1166.3	1165.4
137.5°	1248.8	1247.9	1247.1	1246.8	1247.0	1247.2	1247.4	1247.5
140°	1299.8	1299.5	1299.1	1298.8	1298.5	1298.2	1297.9	1297.6
142.5°	1348.0	1347.9	1347.9	1347.8	1347.7	1347.7	1347.6	1347.6
145°	1420.6	1420.2	1419.9	1419.3	1418.3	1417.4	1416.5	1415.5
147.5°	1486.4	1486.1	1485.8	1485.5	1485.3	1485.0	1484.6	1484.3
150°	1527.8	1527.8	1527.8	1527.7	1527.3	1527.0	1526.7	1526.4
152.5°	1566.8	1567.5	1568.3	1568.3	1567.4	1566.7	1565.8	1565.0
155°	1621.3	1622.5	1623.8	1623.8	1622.5	1621.3	1620.0	1618.7
157.5°	1669.2	1670.2	1671.1	1671.0	1670.0	1669.0	1667.8	1666.8
160°	1698.8	1699.8	1700.7	1700.3	1698.8	1697.2	1695.6	1694.0
162.5°	1725.3	1727.0	1728.7	1728.8	1727.2	1725.7	1724.1	1722.5
165°	1760.4	1762.3	1764.2	1764.5	1763.2	1762.0	1760.7	1759.4
167.5°	1790.0	1791.9	1793.8	1793.8	1791.8	1789.8	1787.8	1785.8
170°	1805.9	1807.8	1809.7	1809.5	1807.3	1805.1	1802.9	1800.6
172.5°	1817.8	1819.9	1822.0	1822.0	1819.8	1817.6	1815.3	1813.2
175°	1830.7	1832.9	1835.1	1835.1	1832.9	1830.7	1828.4	1826.3
177.5°	1837.8	1839.5	1841.3	1841.2	1839.1	1837.1	1835.1	1833.1
180°	1837.6	1837.6	1837.6	1837.6	1837.6	1837.6	1837.6	1837.6

(END OF REPORT)