

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: P333069-840

Luminaire Tested: **S124RDIW-S795D1340U840-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P333069-840
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: S124RDIW-S795D1340U840-4F0-1E-UDD-F
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 795 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1340 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8663.5 lumens
Efficiency: N/A
Efficacy: 141.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: Semi-Indirect

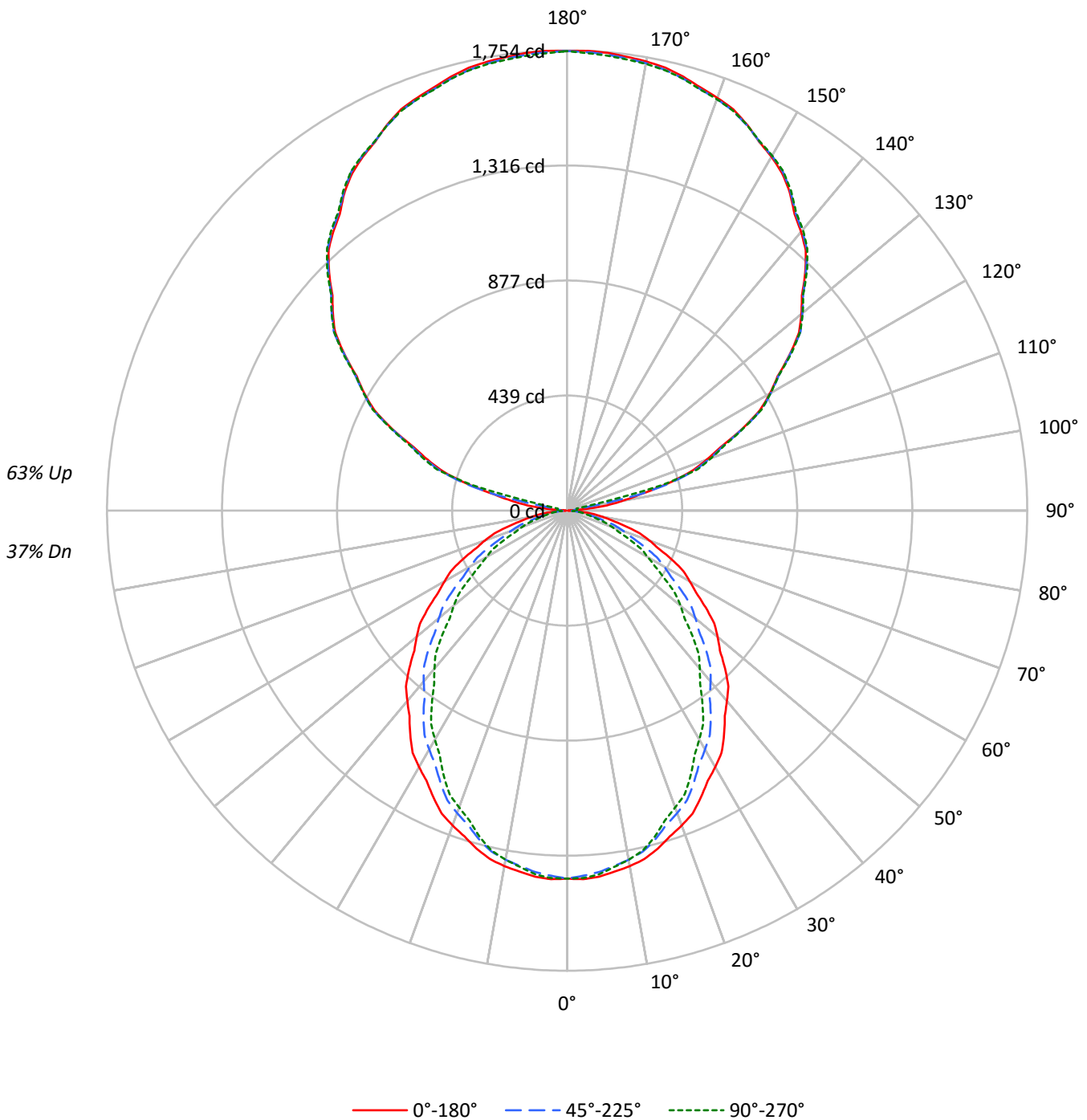
Input Watts (W): 61.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	0	
RCR																						
0	104	104	104	104	94	94	94	94	76	76	76	60	60	60	45	45	45	37				
1	95	91	87	84	86	83	80	77	67	65	63	53	51	50	40	39	38	32				
2	87	80	74	69	79	72	67	63	59	55	52	47	44	42	35	34	32	27				
3	79	70	63	57	72	64	58	53	52	48	44	41	38	36	31	29	28	23				
4	73	62	54	49	66	57	50	45	46	42	38	37	34	31	28	26	24	20				
5	67	55	47	42	60	51	44	39	42	37	33	33	30	27	25	23	21	17				
6	61	50	42	36	55	45	39	34	37	32	28	30	26	23	23	21	19	15				
7	57	45	37	32	51	41	34	29	34	29	25	27	24	21	21	18	17	14				
8	53	41	33	28	48	37	31	26	31	26	22	25	21	19	19	17	15	12				
9	49	37	30	25	44	34	28	23	28	23	20	23	19	17	18	15	13	11				
10	46	34	27	22	41	31	25	21	26	21	18	21	18	15	17	14	12	10				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11326	11326	11326
5°	11351	11212	11281
10°	11280	11077	11077
15°	11150	10845	10764
20°	10972	10539	10345
25°	10745	10180	9922
30°	10523	9803	9392
35°	10279	9411	8861
40°	9985	8965	8286
45°	9712	8524	7702
50°	9403	8013	7082
55°	9071	7484	6410
60°	8707	6902	5724
65°	8373	6178	5049
70°	7886	5375	4286
75°	7271	4457	3484
80°	6341	3394	3199
85°	5372	3084	2881



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	131.8	1.5
10°-20°	367.5	4.2
20°-30°	530.6	6.1
30°-40°	601.5	6.9
40°-50°	580.8	6.7
50°-60°	483.0	5.6
60°-70°	333.5	3.8
70°-80°	169.1	2.0
80°-90°	48.4	0.6
90°-100°	59.9	0.7
100°-110°	381.9	4.4
110°-120°	730.6	8.4
120°-130°	927.4	10.7
130°-140°	992.3	11.5
140°-150°	927.9	10.7
150°-160°	748.3	8.6
160°-170°	482.6	5.6
170°-180°	166.3	1.9
0°-30°	1029.9	11.9
0°-40°	1631.4	18.8
0°-60°	2695.2	31.1
0°-90°	3246.2	37.5
90°-120°	1172.4	13.5
90°-150°	4020.0	46.4
90°-180°	5417.0	62.5
0°-180°	8663.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1403	1403	1403	1403	1403	
5°	1401	1396	1384	1394	1392	133
15°	1334	1324	1298	1295	1288	376
25°	1206	1186	1143	1125	1114	556
35°	1043	1008	955	919	899	651
45°	851	810	747	696	675	656
55°	644	600	532	478	455	576
65°	438	391	323	279	264	433
75°	233	193	143	119	112	246
85°	58	38	33	31	31	65
90°	4	18	29	36	39	6
95°	72	30	29	36	38	93
105°	394	402	409	417	373	413
115°	736	740	739	741	741	724
125°	1035	1040	1037	1041	1043	924
135°	1284	1283	1288	1290	1293	989
145°	1480	1484	1484	1485	1488	925
155°	1623	1624	1620	1625	1622	748
165°	1712	1706	1706	1715	1704	484
175°	1751	1744	1745	1755	1741	167
180°	1751	1751	1751	1751	1751	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1402.9	1402.9	1402.9	1402.9	1402.9	1402.9	1402.9	1402.9	1402.9	1402.9	1402.9
2.5°	1406.3	1405.5	1404.7	1404.0	1403.2	1401.8	1399.7	1397.7	1395.5	1393.4	1395.5
5°	1400.7	1399.8	1398.8	1397.9	1396.8	1395.0	1392.1	1389.3	1386.3	1383.5	1385.9
7.5°	1388.1	1387.0	1386.0	1385.0	1384.0	1381.7	1378.0	1374.2	1370.5	1366.8	1368.3
10°	1376.0	1374.8	1373.6	1372.4	1371.2	1368.5	1364.2	1359.9	1355.6	1351.3	1352.2
12.5°	1360.5	1359.2	1357.8	1356.3	1355.0	1351.8	1346.8	1341.6	1336.6	1331.5	1332.1
15°	1334.1	1332.0	1329.8	1327.7	1325.5	1321.5	1315.5	1309.5	1303.5	1297.6	1297.1
17.5°	1302.1	1299.0	1295.9	1292.8	1289.7	1284.5	1277.4	1270.2	1263.0	1255.9	1254.6
20°	1277.2	1274.0	1271.0	1267.9	1264.8	1259.2	1251.0	1242.9	1234.8	1226.7	1224.8
22.5°	1249.7	1246.2	1242.7	1239.2	1235.8	1229.6	1220.9	1212.2	1203.6	1194.9	1192.0
25°	1206.3	1201.9	1197.7	1193.4	1189.1	1182.0	1172.3	1162.5	1152.7	1142.9	1138.8
27.5°	1160.7	1155.4	1149.9	1144.6	1139.1	1131.3	1120.7	1110.3	1099.8	1089.4	1084.4
30°	1128.9	1123.0	1117.0	1111.1	1105.1	1096.5	1085.3	1074.1	1062.8	1051.6	1045.6
32.5°	1095.4	1088.7	1082.0	1075.2	1068.5	1059.3	1047.7	1036.1	1024.5	1012.9	1006.0
35°	1043.0	1035.4	1027.7	1020.1	1012.5	1002.7	990.8	978.8	966.8	954.9	946.8
37.5°	986.9	979.1	971.2	963.3	955.4	944.9	931.7	918.5	905.2	892.0	882.9
40°	947.5	939.6	931.7	923.8	915.9	905.1	891.5	878.0	864.3	850.7	840.7
42.5°	909.6	901.3	893.1	884.8	876.6	865.4	851.2	837.0	822.8	808.6	798.4
45°	850.7	841.9	833.0	824.3	815.4	803.9	789.5	775.2	760.8	746.6	734.9
47.5°	789.9	780.8	771.7	762.5	753.5	741.4	726.6	711.7	696.8	681.9	669.7
50°	748.7	739.4	730.0	720.7	711.4	699.1	683.9	668.6	653.3	638.0	626.1
52.5°	706.6	697.5	688.3	679.2	670.1	657.7	642.1	626.4	610.8	595.1	583.0
55°	644.5	634.9	625.4	615.8	606.3	593.8	578.2	562.7	547.2	531.7	519.3
57.5°	583.1	573.1	563.2	553.3	543.3	530.7	515.4	500.2	484.9	469.6	457.1
60°	539.3	529.7	520.2	510.6	501.0	488.7	473.3	458.1	442.8	427.5	415.1
62.5°	499.7	489.8	479.9	469.9	460.0	447.2	431.5	415.9	400.2	384.6	373.0
65°	438.3	428.0	417.7	407.5	397.2	384.5	369.1	353.9	338.6	323.4	313.1
67.5°	374.5	364.7	354.8	345.0	335.1	323.2	308.9	294.8	280.5	266.4	257.5
70°	334.1	324.1	314.0	304.0	294.0	282.2	268.5	254.9	241.4	227.7	219.8
72.5°	291.1	282.1	273.0	263.9	254.8	243.9	231.1	218.1	205.3	192.5	185.7
75°	233.1	224.3	215.4	206.6	197.7	187.7	176.5	165.3	154.1	142.9	137.3
77.5°	174.2	166.7	159.3	151.8	144.2	135.9	126.9	117.9	108.8	99.7	96.4
80°	136.4	129.5	122.6	115.6	108.8	101.7	94.5	87.4	80.2	73.0	72.3
82.5°	103.8	97.5	91.1	84.7	78.4	73.1	69.1	64.9	60.8	56.8	56.1
85°	58.0	53.2	48.5	43.7	38.9	36.2	35.4	34.7	34.0	33.3	32.8
87.5°	20.5	19.7	18.8	17.9	17.0	16.7	17.0	17.3	17.5	17.8	18.0
90°	3.9	7.2	10.3	13.5	16.8	19.5	21.8	24.1	26.5	28.8	30.6
92.5°	16.5	16.7	16.9	17.1	17.2	18.5	20.8	23.1	25.4	27.8	29.5
95°	72.0	62.1	52.2	42.3	32.4	27.7	28.0	28.3	28.5	28.8	30.6
97.5°	153.0	159.2	165.3	171.5	177.6	164.5	132.0	99.6	67.1	34.5	34.7
100°	214.8	220.0	225.3	230.6	235.8	218.3	178.1	137.9	97.8	57.7	52.7
102.5°	284.0	287.8	291.6	295.5	299.3	298.6	293.4	288.2	283.0	277.7	224.3
105°	394.3	396.0	397.8	399.5	401.2	402.8	404.3	405.8	407.2	408.7	411.3
107.5°	496.7	497.6	498.5	499.3	500.2	501.6	503.6	505.5	507.6	509.6	510.8
110°	565.8	566.7	567.6	568.5	569.4	570.7	572.4	574.1	575.9	577.6	578.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	632.9	634.5	636.1	637.6	639.2	640.4	641.3	642.1	642.9	643.7	643.6
115°	736.1	737.0	737.9	738.7	739.6	739.9	739.6	739.3	739.0	738.7	739.3
117.5°	829.1	830.3	831.4	832.6	833.7	834.7	835.4	836.0	836.6	837.3	837.2
120°	892.0	893.1	894.3	895.5	896.7	897.1	896.9	896.6	896.3	896.0	896.6
122.5°	950.7	951.4	952.1	952.8	953.5	954.0	954.4	954.8	955.2	955.6	956.0
125°	1034.8	1035.9	1037.1	1038.2	1039.5	1039.8	1039.2	1038.5	1037.9	1037.4	1038.2
127.5°	1114.4	1114.7	1115.0	1115.3	1115.6	1116.4	1117.7	1119.0	1120.4	1121.8	1121.6
130°	1165.8	1166.1	1166.4	1166.6	1166.9	1167.5	1168.4	1169.2	1170.1	1171.0	1171.3
132.5°	1212.9	1213.5	1214.0	1214.5	1215.0	1215.9	1217.0	1218.0	1219.1	1220.2	1220.5
135°	1283.6	1283.3	1283.0	1282.8	1282.5	1282.9	1284.0	1285.3	1286.5	1287.6	1288.2
137.5°	1346.3	1346.4	1346.5	1346.7	1346.8	1347.5	1348.7	1350.0	1351.3	1352.5	1353.2
140°	1387.2	1387.8	1388.3	1388.9	1389.5	1390.1	1390.6	1391.2	1391.8	1392.4	1393.2
142.5°	1423.8	1424.8	1425.9	1426.9	1428.1	1428.7	1429.1	1429.4	1429.8	1430.1	1430.8
145°	1480.2	1481.0	1481.9	1482.8	1483.6	1484.1	1484.1	1484.1	1484.1	1484.1	1484.4
147.5°	1524.9	1526.5	1528.2	1529.8	1531.5	1532.2	1531.9	1531.6	1531.3	1531.0	1531.2
150°	1557.4	1558.6	1559.7	1560.9	1562.1	1562.5	1562.3	1562.0	1561.7	1561.4	1561.4
152.5°	1584.7	1585.6	1586.5	1587.4	1588.4	1588.6	1588.1	1587.5	1587.0	1586.5	1587.0
155°	1623.0	1623.2	1623.5	1623.8	1624.1	1623.8	1623.0	1622.0	1621.1	1620.3	1621.4
157.5°	1655.2	1655.0	1654.8	1654.6	1654.5	1653.9	1652.8	1651.8	1650.9	1649.9	1651.4
160°	1674.0	1673.1	1672.2	1671.3	1670.5	1669.9	1669.6	1669.3	1669.0	1668.8	1670.5
162.5°	1690.7	1689.6	1688.6	1687.5	1686.4	1685.7	1685.4	1685.1	1684.8	1684.5	1686.2
165°	1712.0	1710.5	1709.1	1707.6	1706.2	1705.5	1705.5	1705.5	1705.5	1705.5	1707.8
167.5°	1728.8	1727.3	1725.8	1724.2	1722.7	1721.8	1721.7	1721.5	1721.3	1721.1	1723.7
170°	1738.2	1736.5	1734.6	1732.9	1731.2	1730.5	1730.7	1731.0	1731.3	1731.6	1733.9
172.5°	1744.4	1742.7	1741.0	1739.2	1737.5	1736.8	1737.1	1737.4	1737.6	1737.9	1740.2
175°	1751.3	1749.5	1747.8	1746.1	1744.2	1743.5	1743.8	1744.1	1744.4	1744.7	1747.4
177.5°	1754.4	1752.8	1751.1	1749.5	1747.9	1747.3	1747.8	1748.3	1748.7	1749.2	1751.0
180°	1751.3	1751.3	1751.3	1751.3	1751.3	1751.3	1751.3	1751.3	1751.3	1751.3	1751.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1402.9	1402.9	1402.9	1402.9	1402.9	1402.9	1402.9	1402.9
2.5°	1397.7	1399.7	1401.8	1402.8	1402.6	1402.4	1402.2	1402.0
5°	1388.3	1390.7	1393.1	1394.0	1393.5	1393.1	1392.6	1392.1
7.5°	1369.8	1371.4	1372.9	1373.2	1372.5	1371.7	1371.0	1370.2
10°	1353.2	1354.1	1355.1	1355.1	1354.1	1353.2	1352.2	1351.3
12.5°	1332.7	1333.2	1333.8	1333.4	1332.1	1330.8	1329.4	1328.1
15°	1296.7	1296.2	1295.7	1294.6	1292.9	1291.2	1289.6	1287.9
17.5°	1253.2	1251.9	1250.5	1248.6	1246.1	1243.5	1241.0	1238.5
20°	1222.8	1220.9	1219.0	1216.6	1213.5	1210.3	1207.2	1204.2
22.5°	1189.2	1186.3	1183.5	1180.7	1178.2	1175.7	1173.2	1170.6
25°	1134.8	1130.7	1126.7	1123.5	1121.1	1118.7	1116.3	1113.9
27.5°	1079.3	1074.4	1069.3	1065.1	1061.7	1058.2	1054.8	1051.4
30°	1039.7	1033.7	1027.7	1022.8	1019.1	1015.2	1011.4	1007.5
32.5°	999.1	992.2	985.2	980.0	976.3	972.7	969.1	965.4
35°	938.7	930.6	922.5	916.3	912.0	907.7	903.3	899.1
37.5°	873.8	864.7	855.7	849.0	844.8	840.4	836.2	831.8
40°	830.7	820.6	810.6	803.4	799.2	794.9	790.6	786.3
42.5°	788.2	778.0	767.8	760.4	755.9	751.4	747.0	742.5
45°	723.2	711.4	699.7	691.8	687.4	683.2	678.8	674.6
47.5°	657.6	645.5	633.4	624.9	620.3	615.5	610.8	606.0
50°	614.2	602.3	590.3	582.1	577.5	573.0	568.5	563.9
52.5°	570.9	558.8	546.5	538.2	533.4	528.7	524.0	519.3
55°	506.9	494.4	482.1	473.6	469.1	464.5	460.0	455.4
57.5°	444.4	431.8	419.2	411.2	407.8	404.3	400.9	397.5
60°	402.7	390.3	377.9	369.7	366.0	362.1	358.3	354.5
62.5°	361.6	350.2	338.7	331.4	328.4	325.4	322.2	319.2
65°	302.8	292.6	282.3	275.7	272.9	269.9	267.1	264.3
67.5°	248.7	239.9	231.1	225.1	222.0	218.7	215.6	212.5
70°	212.0	204.1	196.2	191.1	188.7	186.3	183.9	181.6
72.5°	179.0	172.3	165.5	161.1	159.0	156.7	154.5	152.3
75°	131.9	126.4	120.9	117.4	116.0	114.6	113.1	111.7
77.5°	93.3	90.1	86.8	85.0	84.6	84.2	83.8	83.3
80°	71.6	70.9	70.2	69.7	69.5	69.2	69.0	68.8
82.5°	55.6	55.1	54.6	54.2	54.0	53.7	53.5	53.3
85°	32.3	31.9	31.4	31.1	31.1	31.1	31.1	31.1
87.5°	18.1	18.3	18.4	18.7	19.0	19.3	19.6	19.9
90°	32.3	34.0	35.9	37.0	37.6	38.2	38.7	39.3
92.5°	31.3	33.0	34.7	35.6	35.9	36.0	36.1	36.2
95°	32.3	34.0	35.9	36.9	37.1	37.4	37.7	38.0
97.5°	34.9	35.1	35.2	35.5	35.9	36.1	36.4	36.7
100°	47.8	42.8	37.9	35.5	35.9	36.1	36.4	36.7
102.5°	171.0	117.5	64.1	37.5	37.6	37.6	37.7	37.8
105°	413.9	416.6	419.2	415.3	404.8	394.3	383.7	373.3
107.5°	512.1	513.4	514.6	515.8	516.9	518.1	519.2	520.3
110°	578.9	579.4	580.0	580.7	581.6	582.5	583.3	584.2



TEST NUMBER: P333069-840

CATALOG NUMBER: S124RDIW-S795D1340U840-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	643.4	643.3	643.2	643.7	644.8	645.9	647.0	648.1
115°	739.9	740.5	741.0	741.3	741.3	741.3	741.3	741.3
117.5°	837.0	836.9	836.8	836.7	836.6	836.5	836.4	836.2
120°	897.1	897.7	898.3	898.3	897.7	897.1	896.6	896.0
122.5°	956.3	956.7	957.0	956.9	956.3	955.7	955.2	954.6
125°	1039.2	1040.1	1040.9	1041.5	1041.8	1042.1	1042.4	1042.7
127.5°	1121.5	1121.3	1121.1	1120.8	1120.6	1120.3	1120.1	1119.9
130°	1171.5	1171.8	1172.2	1172.4	1172.4	1172.4	1172.4	1172.4
132.5°	1220.8	1221.1	1221.4	1221.4	1221.2	1221.0	1220.7	1220.5
135°	1288.8	1289.3	1289.9	1290.5	1291.1	1291.6	1292.2	1292.8
137.5°	1353.8	1354.4	1355.1	1355.3	1355.1	1355.0	1354.8	1354.6
140°	1394.1	1395.0	1395.8	1396.4	1396.7	1397.0	1397.4	1397.7
142.5°	1431.4	1432.0	1432.7	1433.0	1433.1	1433.1	1433.2	1433.2
145°	1484.6	1484.9	1485.2	1485.7	1486.2	1486.8	1487.4	1488.0
147.5°	1531.5	1531.7	1531.9	1532.2	1532.5	1532.8	1533.0	1533.3
150°	1561.4	1561.4	1561.4	1561.5	1561.8	1562.1	1562.4	1562.7
152.5°	1587.4	1587.9	1588.3	1588.5	1588.3	1588.1	1588.0	1587.8
155°	1622.7	1623.8	1625.0	1625.1	1624.3	1623.4	1622.4	1621.6
157.5°	1652.9	1654.5	1656.0	1656.0	1654.5	1652.9	1651.4	1649.9
160°	1672.2	1674.0	1675.8	1675.8	1674.0	1672.2	1670.5	1668.8
162.5°	1688.0	1689.7	1691.4	1691.3	1689.4	1687.4	1685.4	1683.4
165°	1710.1	1712.4	1714.8	1714.5	1712.0	1709.4	1706.8	1704.1
167.5°	1726.3	1728.8	1731.4	1731.2	1728.3	1725.4	1722.5	1719.6
170°	1736.3	1738.6	1740.9	1740.6	1737.8	1734.8	1731.9	1729.0
172.5°	1742.5	1744.9	1747.3	1746.9	1743.6	1740.5	1737.4	1734.2
175°	1750.0	1752.6	1755.2	1754.7	1751.3	1747.8	1744.2	1740.8
177.5°	1752.9	1754.7	1756.7	1756.2	1753.3	1750.6	1747.8	1744.9
180°	1751.3	1751.3	1751.3	1751.3	1751.3	1751.3	1751.3	1751.3

(END OF REPORT)