

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: P332954-840

Luminaire Tested: **S124RDIP-S795D1205U840-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332954-840
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-18,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124RDIP-S795D1205U840-4F0-1E-UDD-F4
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 795 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1205 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7588.5 lumens
Efficiency: N/A
Efficacy: 133.4 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: General Diffuse

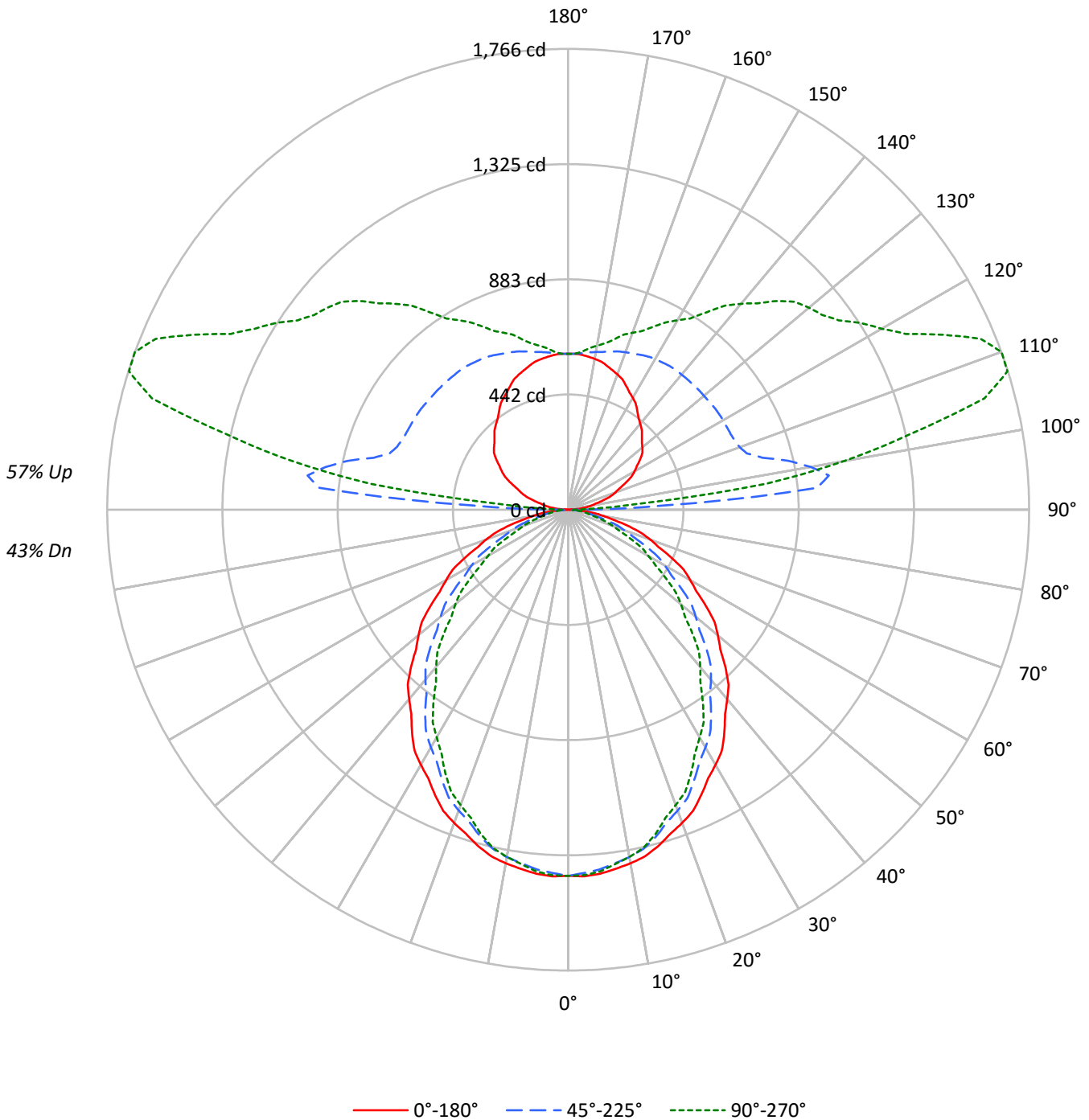
Input Watts (W): 56.9
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	105	105	105	105	96	96	96	96	79	79	79	64	64	64	49	49	49	43				
1	96	92	88	85	88	84	81	78	70	68	66	56	55	54	44	43	42	36				
2	88	81	75	70	80	74	69	65	61	58	55	50	47	45	39	37	36	31				
3	80	71	64	58	73	65	59	54	54	50	46	44	41	38	35	33	31	26				
4	74	63	55	49	67	58	51	46	48	43	39	39	36	33	31	29	27	23				
5	68	56	48	42	62	52	45	40	43	38	34	36	32	29	28	25	23	20				
6	62	50	43	37	57	47	40	34	39	34	30	32	28	25	26	23	21	18				
7	58	46	38	32	53	42	35	30	35	30	26	29	25	22	23	21	18	16				
8	53	41	34	29	49	38	32	27	32	27	23	27	23	20	22	19	17	14				
9	50	38	30	25	45	35	28	24	30	25	21	25	21	18	20	17	15	13				
10	46	35	28	23	42	32	26	21	27	22	19	23	19	16	18	16	14	12				

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	1.7
10°-20°	367.5	4.8
20°-30°	530.6	7.0
30°-40°	601.5	7.9
40°-50°	580.8	7.7
50°-60°	483.0	6.4
60°-70°	333.5	4.4
70°-80°	169.1	2.2
80°-90°	46.7	0.6
90°-100°	431.4	5.7
100°-110°	897.9	11.8
110°-120°	804.2	10.6
120°-130°	676.5	8.9
130°-140°	564.1	7.4
140°-150°	430.9	5.7
150°-160°	302.9	4.0
160°-170°	178.2	2.3
170°-180°	58.0	0.8
0°-30°	1029.9	13.6
0°-40°	1631.4	21.5
0°-60°	2695.2	35.5
0°-90°	3244.5	42.8
90°-120°	2133.5	28.1
90°-150°	3805.0	50.1
90°-180°	4344.0	57.2
0°-180°	7588.5	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°	1	9	21	23	25	5
95°	39	122	956	474	286	43
105°	137	199	770	1658	1651	146
115°	242	303	686	1319	1585	240
125°	337	400	683	1122	1265	300
135°	400	476	677	996	1131	309
145°	461	528	674	840	924	289
155°	524	566	655	742	773	242
165°	572	589	628	665	675	161
175°	596	597	602	610	608	57
180°	597	597	597	597	597	



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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°	20.0	19.0	18.1	16.9	15.6	14.6	15.9	15.7	16.0	16.3	15.9
90°	1.2	3.5	7.1	8.2	9.4	9.4	16.5	16.5	18.8	21.1	20.0
92.5°	13.3	19.5	30.5	44.8	62.0	86.3	146.0	237.0	325.8	372.2	310.0
95°	38.7	42.2	54.0	69.3	97.4	146.7	248.7	441.2	721.6	956.3	983.4
97.5°	69.5	69.5	79.6	93.6	117.9	159.2	237.7	396.7	675.4	1007.3	1235.5
100°	89.2	89.2	97.4	111.5	133.8	171.4	240.5	373.1	612.6	943.4	1243.9
102.5°	108.0	109.9	117.1	130.3	151.6	187.3	249.9	366.6	570.3	863.6	1173.5
105°	137.3	140.8	146.7	160.8	181.9	215.9	272.3	369.6	533.9	769.8	1045.5
107.5°	169.7	172.0	177.9	192.9	213.1	246.7	298.3	387.0	527.4	717.2	942.3
110°	191.3	193.6	199.4	213.6	234.7	266.4	318.0	400.1	529.3	699.4	890.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	212.0	214.3	221.1	234.2	255.4	287.0	336.8	414.2	534.8	690.9	861.5
115°	241.8	245.3	253.5	265.2	287.5	319.2	366.1	436.6	545.6	686.5	834.4
117.5°	272.7	276.0	283.3	296.2	317.1	349.9	394.6	459.3	557.1	685.3	822.1
120°	293.4	295.7	304.0	316.8	336.8	369.6	414.2	475.2	565.6	685.3	815.6
122.5°	312.1	314.5	322.8	334.7	356.5	388.4	433.0	490.3	574.1	684.4	808.1
125°	336.8	341.4	348.5	361.4	383.7	416.6	458.8	512.8	586.7	683.0	795.6
127.5°	358.6	362.3	370.8	385.6	408.8	441.9	482.7	532.3	596.8	680.3	778.9
130°	370.8	375.5	384.9	402.5	424.7	458.8	498.8	544.5	604.3	679.4	768.6
132.5°	383.0	386.8	399.0	415.7	439.8	472.0	511.9	556.7	610.9	678.5	759.2
135°	400.1	404.9	416.6	436.6	461.2	491.7	530.4	572.7	620.8	677.1	745.2
137.5°	417.3	421.7	434.6	453.6	479.3	508.4	544.5	583.9	626.6	676.8	733.0
140°	429.5	433.0	446.0	465.9	490.5	518.7	553.9	591.4	631.4	675.9	726.4
142.5°	442.6	446.2	458.1	477.2	500.8	528.1	562.3	597.0	635.1	675.9	720.7
145°	461.2	464.7	476.5	492.8	515.1	541.0	571.5	603.2	637.2	673.6	711.1
147.5°	482.0	483.2	493.5	510.5	529.0	552.2	580.9	608.5	638.3	669.3	702.5
150°	495.2	496.3	505.7	519.9	537.5	559.8	585.5	611.4	638.3	666.5	695.9
152.5°	507.4	507.7	517.1	530.2	545.9	566.3	589.4	613.3	636.5	661.9	688.3
155°	524.5	525.7	532.7	544.5	557.4	575.0	594.9	614.9	633.7	654.8	677.1
157.5°	541.2	541.2	547.8	556.9	568.2	582.1	599.0	614.9	630.7	647.5	665.6
160°	551.5	551.5	556.2	564.4	573.8	586.7	600.8	614.9	627.8	641.9	657.1
162.5°	560.9	560.0	563.7	571.0	579.5	589.6	602.7	614.9	625.0	636.2	649.6
165°	571.5	571.5	573.8	579.7	585.5	592.6	603.2	612.6	619.6	627.8	637.2
167.5°	582.1	580.9	582.1	586.5	589.8	595.2	602.9	609.8	614.0	619.4	625.9
170°	586.7	585.5	586.7	590.3	592.6	596.1	602.0	607.8	610.2	613.7	618.4
172.5°	591.4	590.3	590.5	593.1	594.5	597.0	601.1	606.0	606.4	608.0	611.9
175°	596.1	594.9	594.9	596.1	597.3	597.3	599.7	603.2	602.0	602.0	604.3
177.5°	598.2	597.3	596.3	597.3	597.3	597.3	598.2	600.1	598.2	598.2	599.2
180°	597.3	597.3	597.3	597.3	597.3	597.3	597.3	597.3	597.3	597.3	597.3



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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°	15.9	16.0	16.0	16.0	16.4	16.8	16.8	17.0
90°	21.1	22.3	23.4	23.4	24.6	25.9	24.6	24.6
92.5°	230.5	173.4	138.0	114.5	100.7	94.3	90.4	90.4
95°	869.5	687.6	530.4	416.6	359.1	322.8	301.5	286.3
97.5°	1284.8	1217.1	1102.4	979.9	895.5	825.0	789.7	765.4
100°	1415.2	1438.7	1381.2	1294.3	1192.2	1120.6	1085.5	1076.1
102.5°	1408.7	1525.0	1541.7	1505.5	1442.9	1391.0	1353.9	1346.5
105°	1314.2	1517.3	1633.5	1681.5	1683.9	1674.6	1658.1	1651.0
107.5°	1180.2	1396.4	1560.0	1664.7	1722.6	1749.4	1761.1	1764.2
110°	1099.5	1302.5	1472.7	1601.7	1685.1	1734.3	1755.5	1766.1



TEST NUMBER: P332954-840

CATALOG NUMBER: S124RDIP-S795D1205U840-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	1040.4	1219.9	1380.7	1509.7	1604.4	1664.0	1693.5	1710.7
115°	981.0	1125.4	1262.6	1375.3	1468.0	1538.4	1576.0	1585.4
117.5°	951.9	1071.4	1179.3	1274.9	1353.9	1413.1	1451.1	1458.3
120°	938.8	1047.9	1141.8	1225.1	1292.0	1343.6	1374.1	1387.0
122.5°	927.5	1032.9	1118.3	1191.3	1247.9	1292.0	1317.8	1330.7
125°	908.3	1009.2	1090.1	1154.7	1201.6	1235.7	1258.0	1265.0
127.5°	884.7	981.3	1062.0	1123.3	1170.4	1200.7	1219.5	1226.5
130°	866.1	958.8	1038.5	1100.8	1148.8	1178.1	1196.9	1204.0
132.5°	846.3	933.4	1011.3	1073.5	1120.6	1153.8	1171.5	1178.6
135°	819.1	895.3	966.9	1025.6	1072.6	1105.4	1124.2	1131.3
137.5°	794.5	859.0	919.3	972.3	1016.2	1048.6	1064.1	1072.6
140°	780.3	835.5	888.3	937.6	978.7	1004.5	1020.9	1030.3
142.5°	767.2	815.8	861.1	903.8	940.2	964.1	978.7	985.2
145°	748.7	788.6	823.7	856.7	886.0	905.9	917.7	923.5
147.5°	733.5	765.1	793.2	819.1	840.7	857.8	866.8	868.8
150°	724.1	751.0	774.5	795.6	814.4	829.6	836.7	837.9
152.5°	713.7	736.9	758.5	775.9	791.8	804.3	808.5	809.7
155°	698.2	717.0	734.6	748.7	760.4	769.8	773.4	773.4
157.5°	681.6	697.3	712.1	723.4	732.3	739.3	741.4	741.4
160°	671.3	684.1	697.0	706.4	713.5	720.5	721.6	721.6
162.5°	660.9	672.0	682.1	690.4	695.6	702.7	703.9	702.9
165°	646.6	653.6	661.9	667.7	672.4	677.1	675.9	674.8
167.5°	632.8	638.1	644.7	648.2	650.6	653.6	653.4	652.5
170°	624.3	627.8	632.5	636.0	638.3	639.5	638.3	638.3
172.5°	616.7	619.4	622.2	624.7	626.1	627.3	626.1	624.3
175°	606.7	607.8	610.2	610.2	610.2	612.6	610.2	607.8
177.5°	600.1	601.1	601.1	602.0	601.1	602.0	600.1	598.2
180°	597.3	597.3	597.3	597.3	597.3	597.3	597.3	597.3

(END OF REPORT)