

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: P332934

Luminaire Tested: **SA4XXRDIP-C795D590U835-4F0-1E-UDD-F**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P332934
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-6,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA4XXRDIP-C795D590U835-4F0-1E-UDD-F
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 795 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 590 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

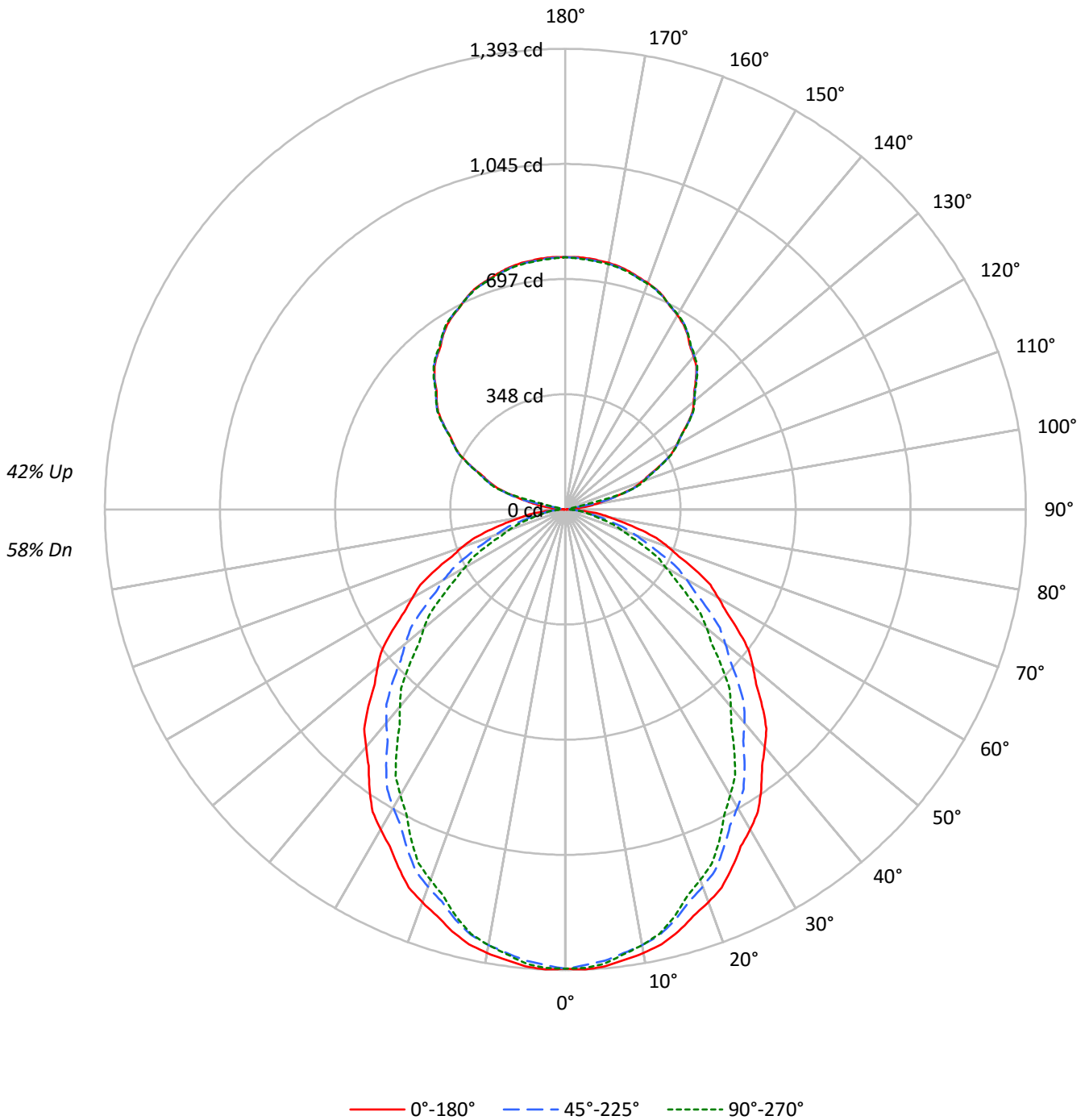
Lumens per Lamp: N/A
Luminaire Lumens: 5570.9 lumens
Efficiency: N/A
Efficacy: 138.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 40.3
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





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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	109	109	109	109	102	102	102	102	88	88	88	75	75	75	63	63	63	58
1	100	96	92	88	93	89	86	83	77	75	73	66	65	63	56	55	54	49
2	91	84	78	73	85	78	73	69	68	64	61	59	56	53	50	48	46	42
3	83	74	67	61	77	69	63	58	60	55	51	52	48	45	44	42	39	36
4	76	66	58	52	71	62	55	49	54	48	44	47	42	39	40	37	34	31
5	70	59	51	45	65	55	48	42	48	43	38	42	38	34	36	33	30	27
6	65	53	45	39	60	50	42	37	44	38	33	38	33	30	33	29	27	24
7	60	48	40	34	56	45	38	33	40	34	30	35	30	27	30	26	24	21
8	56	43	36	30	52	41	34	29	36	31	26	32	27	24	28	24	21	19
9	52	40	32	27	49	38	31	26	33	28	24	29	25	22	26	22	19	17
10	49	37	29	25	45	35	28	24	31	25	22	27	23	20	24	20	18	16

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11215	11215	11215
5°	11240	11102	11171
10°	11170	10969	10969
15°	11041	10739	10659
20°	10865	10436	10244
25°	10640	10081	9825
30°	10421	9707	9300
35°	10178	9319	8774
40°	9887	8878	8205
45°	9618	8440	7626
50°	9311	7935	7013
55°	8983	7410	6348
60°	8622	6835	5667
65°	8290	6117	4999
70°	7808	5323	4244
75°	7199	4414	3450
80°	6281	3361	3166
85°	5317	3057	2853



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	130.5	2.3
10°-20°	363.9	6.5
20°-30°	525.5	9.4
30°-40°	595.6	10.7
40°-50°	575.2	10.3
50°-60°	478.3	8.6
60°-70°	330.3	5.9
70°-80°	167.4	3.0
80°-90°	45.2	0.8
90°-100°	26.1	0.5
100°-110°	166.3	3.0
110°-120°	318.2	5.7
120°-130°	403.9	7.2
130°-140°	432.1	7.8
140°-150°	404.1	7.3
150°-160°	325.9	5.8
160°-170°	210.2	3.8
170°-180°	72.4	1.3
0°-30°	1019.8	18.3
0°-40°	1615.5	29.0
0°-60°	2668.9	47.9
0°-90°	3211.7	57.7
90°-120°	510.6	9.2
90°-150°	1750.6	31.4
90°-180°	2359.0	42.3
0°-180°	5570.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1389	1389	1389	1389	1389	
5°	1387	1382	1370	1380	1378	132
15°	1321	1311	1285	1282	1275	372
25°	1194	1174	1132	1114	1103	550
35°	1033	998	946	910	890	645
45°	842	802	739	689	668	649
55°	638	594	526	473	451	571
65°	434	387	320	276	262	428
75°	231	191	142	118	111	244
85°	57	37	33	31	31	65
90°	2	8	12	16	17	4
95°	31	13	12	16	16	40
105°	172	175	178	182	163	180
115°	321	322	322	323	323	315
125°	451	453	452	453	454	402
135°	559	559	561	562	563	431
145°	645	646	646	647	648	403
155°	707	707	706	708	706	326
165°	746	743	743	747	742	211
175°	763	759	760	764	758	73
180°	763	763	763	763	763	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1389.2	1389.2	1389.2	1389.2	1389.2	1389.2	1389.2	1389.2	1389.2	1389.2	1389.2
2.5°	1392.6	1391.8	1391.0	1390.3	1389.5	1388.1	1386.0	1384.0	1381.9	1379.8	1381.9
5°	1387.0	1386.1	1385.1	1384.2	1383.2	1381.4	1378.5	1375.7	1372.8	1370.0	1372.4
7.5°	1374.5	1373.5	1372.5	1371.5	1370.5	1368.2	1364.5	1360.8	1357.1	1353.4	1354.9
10°	1362.6	1361.4	1360.2	1359.0	1357.8	1355.1	1350.9	1346.6	1342.4	1338.1	1339.0
12.5°	1347.2	1345.9	1344.5	1343.1	1341.8	1338.6	1333.6	1328.5	1323.5	1318.5	1319.1
15°	1321.1	1319.0	1316.8	1314.7	1312.6	1308.6	1302.6	1296.7	1290.8	1284.9	1284.4
17.5°	1289.4	1286.3	1283.2	1280.2	1277.1	1272.0	1264.9	1257.8	1250.7	1243.6	1242.3
20°	1264.7	1261.6	1258.6	1255.5	1252.4	1246.9	1238.8	1230.8	1222.7	1214.7	1212.8
22.5°	1237.5	1234.0	1230.6	1227.1	1223.7	1217.6	1209.0	1200.4	1191.8	1183.2	1180.4
25°	1194.5	1190.2	1186.0	1181.7	1177.5	1170.5	1160.8	1151.1	1141.4	1131.7	1127.7
27.5°	1149.4	1144.1	1138.7	1133.4	1128.0	1120.2	1109.8	1099.5	1089.1	1078.8	1073.8
30°	1117.9	1112.0	1106.1	1100.2	1094.3	1085.8	1074.7	1063.6	1052.4	1041.3	1035.4
32.5°	1084.7	1078.1	1071.4	1064.7	1058.1	1049.0	1037.5	1026.0	1014.5	1003.0	996.2
35°	1032.8	1025.3	1017.7	1010.1	1002.6	992.9	981.1	969.2	957.4	945.6	937.6
37.5°	977.3	969.5	961.7	953.9	946.1	935.7	922.6	909.5	896.4	883.3	874.3
40°	938.2	930.4	922.6	914.8	907.0	896.3	882.8	869.4	855.9	842.4	832.5
42.5°	900.7	892.5	884.4	876.2	868.0	856.9	842.9	828.8	814.8	800.7	790.6
45°	842.4	833.7	824.9	816.2	807.4	796.0	781.8	767.6	753.4	739.3	727.7
47.5°	782.2	773.2	764.2	755.1	746.1	734.2	719.5	704.7	690.0	675.2	663.2
50°	741.4	732.2	722.9	713.7	704.5	692.3	677.2	662.1	646.9	631.8	620.0
52.5°	699.7	690.7	681.6	672.6	663.6	651.3	635.8	620.3	604.8	589.3	577.3
55°	638.2	628.7	619.3	609.8	600.4	588.0	572.6	557.2	541.9	526.5	514.2
57.5°	577.4	567.5	557.7	547.9	538.0	525.5	510.4	495.3	480.2	465.0	452.6
60°	534.0	524.5	515.1	505.6	496.1	483.9	468.7	453.6	438.5	423.3	411.0
62.5°	494.8	485.0	475.2	465.3	455.5	442.8	427.3	411.8	396.3	380.8	369.4
65°	434.0	423.8	413.6	403.5	393.3	380.7	365.5	350.4	335.3	320.2	310.0
67.5°	370.8	361.1	351.3	341.6	331.8	320.0	305.9	291.9	277.8	263.8	255.0
70°	330.8	320.9	310.9	301.0	291.1	279.4	265.9	252.4	239.0	225.5	217.7
72.5°	288.3	279.3	270.3	261.3	252.3	241.5	228.8	216.0	203.3	190.6	183.9
75°	230.8	222.1	213.3	204.6	195.8	185.9	174.8	163.7	152.6	141.5	136.0
77.5°	172.5	165.1	157.7	150.3	142.8	134.6	125.7	116.7	107.7	98.7	95.5
80°	135.1	128.2	121.4	114.5	107.7	100.7	93.6	86.5	79.4	72.3	71.6
82.5°	102.8	96.5	90.2	83.9	77.6	72.4	68.4	64.3	60.2	56.2	55.6
85°	57.4	52.7	48.0	43.3	38.5	35.8	35.1	34.4	33.7	33.0	32.5
87.5°	19.9	18.7	17.4	16.2	15.0	14.4	14.4	14.4	14.4	14.4	14.4
90°	1.7	3.1	4.5	5.9	7.3	8.5	9.5	10.5	11.5	12.5	13.3
92.5°	7.2	7.3	7.3	7.4	7.5	8.0	9.1	10.1	11.1	12.1	12.9
95°	31.4	27.1	22.8	18.4	14.1	12.0	12.2	12.3	12.4	12.5	13.3
97.5°	66.6	69.3	72.0	74.7	77.4	71.6	57.5	43.4	29.2	15.1	15.1
100°	93.5	95.8	98.1	100.4	102.7	95.1	77.6	60.1	42.6	25.1	22.9
102.5°	123.7	125.3	127.0	128.7	130.4	130.1	127.8	125.5	123.2	120.9	97.7
105°	171.7	172.5	173.2	174.0	174.7	175.4	176.1	176.7	177.3	178.0	179.1
107.5°	216.3	216.7	217.1	217.4	217.8	218.4	219.3	220.2	221.0	221.9	222.5
110°	246.4	246.8	247.2	247.6	247.9	248.5	249.3	250.0	250.8	251.6	251.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	275.6	276.3	277.0	277.7	278.4	278.9	279.2	279.6	280.0	280.3	280.3
115°	320.6	321.0	321.3	321.7	322.1	322.2	322.1	322.0	321.8	321.7	322.0
117.5°	361.1	361.6	362.1	362.6	363.1	363.5	363.8	364.1	364.3	364.6	364.6
120°	388.5	389.0	389.5	390.0	390.5	390.7	390.6	390.4	390.3	390.2	390.4
122.5°	414.0	414.3	414.6	414.9	415.2	415.5	415.7	415.8	416.0	416.2	416.3
125°	450.6	451.1	451.7	452.2	452.7	452.8	452.5	452.3	452.0	451.8	452.2
127.5°	485.3	485.4	485.6	485.7	485.8	486.2	486.8	487.3	487.9	488.5	488.4
130°	507.7	507.8	507.9	508.1	508.2	508.4	508.8	509.2	509.6	510.0	510.1
132.5°	528.2	528.4	528.7	528.9	529.1	529.5	530.0	530.4	530.9	531.4	531.5
135°	559.0	558.9	558.8	558.6	558.5	558.7	559.2	559.7	560.2	560.7	561.0
137.5°	586.3	586.3	586.4	586.4	586.5	586.8	587.3	587.9	588.5	589.0	589.3
140°	604.1	604.3	604.6	604.8	605.1	605.3	605.6	605.9	606.1	606.4	606.7
142.5°	620.1	620.5	621.0	621.4	621.9	622.2	622.3	622.5	622.6	622.8	623.1
145°	644.6	645.0	645.3	645.7	646.1	646.3	646.3	646.3	646.3	646.3	646.4
147.5°	664.1	664.8	665.5	666.2	666.9	667.2	667.1	667.0	666.8	666.7	666.8
150°	678.2	678.7	679.3	679.8	680.3	680.5	680.3	680.2	680.1	679.9	679.9
152.5°	690.1	690.5	690.9	691.3	691.7	691.8	691.6	691.4	691.1	690.9	691.1
155°	706.8	706.9	707.0	707.1	707.3	707.1	706.8	706.4	706.0	705.6	706.1
157.5°	720.8	720.7	720.6	720.6	720.5	720.2	719.8	719.4	718.9	718.5	719.2
160°	729.0	728.6	728.2	727.9	727.5	727.2	727.1	727.0	726.8	726.7	727.5
162.5°	736.3	735.8	735.3	734.9	734.4	734.1	733.9	733.8	733.7	733.6	734.3
165°	745.5	744.9	744.3	743.6	743.0	742.7	742.7	742.7	742.7	742.7	743.7
167.5°	752.8	752.2	751.5	750.9	750.2	749.8	749.8	749.7	749.6	749.5	750.7
170°	757.0	756.2	755.4	754.7	753.9	753.6	753.7	753.8	754.0	754.1	755.1
172.5°	759.7	758.9	758.2	757.4	756.7	756.3	756.5	756.6	756.7	756.8	757.9
175°	762.7	761.9	761.1	760.4	759.6	759.3	759.4	759.6	759.7	759.8	760.9
177.5°	764.0	763.3	762.6	761.9	761.2	760.9	761.1	761.3	761.5	761.7	762.6
180°	762.7	762.7	762.7	762.7	762.7	762.7	762.7	762.7	762.7	762.7	762.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1389.2	1389.2	1389.2	1389.2	1389.2	1389.2	1389.2	1389.2
2.5°	1384.0	1386.0	1388.1	1389.1	1388.9	1388.7	1388.5	1388.3
5°	1374.7	1377.1	1379.5	1380.4	1379.9	1379.5	1379.0	1378.5
7.5°	1356.4	1358.0	1359.5	1359.8	1359.1	1358.3	1357.6	1356.8
10°	1340.0	1340.9	1341.9	1341.9	1340.9	1340.0	1339.0	1338.1
12.5°	1319.7	1320.2	1320.8	1320.4	1319.1	1317.8	1316.4	1315.1
15°	1284.0	1283.5	1283.0	1282.0	1280.3	1278.6	1277.0	1275.3
17.5°	1241.0	1239.7	1238.3	1236.4	1233.9	1231.4	1228.9	1226.4
20°	1210.9	1209.0	1207.1	1204.7	1201.6	1198.5	1195.4	1192.4
22.5°	1177.6	1174.7	1171.9	1169.2	1166.7	1164.2	1161.7	1159.2
25°	1123.7	1119.7	1115.7	1112.5	1110.1	1107.8	1105.4	1103.0
27.5°	1068.8	1063.9	1058.9	1054.7	1051.3	1047.9	1044.5	1041.1
30°	1029.5	1023.6	1017.7	1012.8	1009.1	1005.3	1001.5	997.7
32.5°	989.3	982.5	975.6	970.4	966.8	963.2	959.6	956.0
35°	929.5	921.5	913.5	907.3	903.1	898.8	894.5	890.3
37.5°	865.3	856.3	847.3	840.7	836.5	832.2	828.0	823.7
40°	822.6	812.6	802.7	795.6	791.4	787.1	782.9	778.6
42.5°	780.5	770.4	760.3	753.0	748.5	744.1	739.7	735.2
45°	716.1	704.5	692.9	685.0	680.7	676.5	672.2	668.0
47.5°	651.2	639.2	627.2	618.8	614.2	609.5	604.8	600.1
50°	608.2	596.4	584.5	576.4	571.9	567.4	562.9	558.4
52.5°	565.3	553.3	541.2	532.9	528.2	523.5	518.9	514.2
55°	501.9	489.6	477.4	469.0	464.5	460.0	455.5	451.0
57.5°	440.1	427.6	415.1	407.2	403.8	400.4	397.0	393.6
60°	398.8	386.5	374.2	366.1	362.4	358.6	354.8	351.0
62.5°	358.1	346.8	335.4	328.2	325.2	322.2	319.1	316.1
65°	299.8	289.7	279.5	273.0	270.2	267.3	264.5	261.7
67.5°	246.3	237.6	228.8	222.9	219.8	216.6	213.5	210.4
70°	209.9	202.1	194.3	189.2	186.9	184.5	182.1	179.8
72.5°	177.3	170.6	163.9	159.5	157.4	155.2	153.0	150.8
75°	130.6	125.2	119.7	116.3	114.9	113.5	112.0	110.6
77.5°	92.4	89.2	86.0	84.2	83.8	83.4	83.0	82.5
80°	70.9	70.2	69.5	69.0	68.8	68.5	68.3	68.1
82.5°	55.1	54.6	54.1	53.7	53.5	53.2	53.0	52.8
85°	32.0	31.6	31.1	30.8	30.8	30.8	30.8	30.8
87.5°	14.3	14.3	14.3	14.4	14.6	14.9	15.1	15.3
90°	14.1	14.8	15.6	16.1	16.4	16.6	16.9	17.1
92.5°	13.6	14.4	15.1	15.5	15.6	15.6	15.7	15.7
95°	14.1	14.8	15.6	16.0	16.2	16.3	16.4	16.5
97.5°	15.2	15.3	15.4	15.5	15.6	15.7	15.8	16.0
100°	20.8	18.6	16.5	15.5	15.6	15.7	15.8	16.0
102.5°	74.4	51.2	27.9	16.3	16.4	16.4	16.4	16.4
105°	180.3	181.4	182.5	180.8	176.3	171.7	167.1	162.6
107.5°	223.0	223.6	224.1	224.6	225.1	225.6	226.1	226.6
110°	252.1	252.3	252.6	252.9	253.3	253.6	254.0	254.4



TEST NUMBER: P332934

CATALOG NUMBER: SA4XXRDIP-C795D590U835-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	280.2	280.2	280.1	280.3	280.8	281.3	281.8	282.2
115°	322.2	322.5	322.7	322.9	322.9	322.9	322.9	322.9
117.5°	364.5	364.5	364.4	364.4	364.3	364.3	364.2	364.2
120°	390.7	390.9	391.2	391.2	390.9	390.7	390.4	390.2
122.5°	416.5	416.6	416.8	416.7	416.5	416.2	416.0	415.7
125°	452.5	452.9	453.3	453.6	453.7	453.8	453.9	454.1
127.5°	488.4	488.3	488.2	488.1	488.0	487.9	487.8	487.7
130°	510.2	510.3	510.5	510.5	510.5	510.5	510.5	510.5
132.5°	531.7	531.8	531.9	531.9	531.8	531.7	531.6	531.5
135°	561.2	561.5	561.7	562.0	562.2	562.5	562.8	563.0
137.5°	589.6	589.9	590.1	590.2	590.2	590.1	590.0	589.9
140°	607.1	607.5	607.9	608.1	608.3	608.4	608.5	608.6
142.5°	623.3	623.6	623.9	624.1	624.1	624.1	624.1	624.2
145°	646.5	646.7	646.8	647.0	647.2	647.5	647.8	648.0
147.5°	666.9	667.0	667.1	667.2	667.4	667.5	667.6	667.7
150°	679.9	679.9	679.9	680.0	680.1	680.3	680.4	680.5
152.5°	691.3	691.5	691.7	691.8	691.7	691.6	691.5	691.5
155°	706.6	707.1	707.6	707.7	707.3	706.9	706.6	706.2
157.5°	719.8	720.5	721.1	721.1	720.5	719.8	719.2	718.5
160°	728.2	729.0	729.8	729.8	729.0	728.2	727.5	726.7
162.5°	735.1	735.8	736.6	736.6	735.7	734.8	734.0	733.1
165°	744.7	745.7	746.8	746.7	745.5	744.4	743.3	742.1
167.5°	751.8	752.9	754.0	753.9	752.7	751.4	750.1	748.9
170°	756.1	757.1	758.2	758.0	756.8	755.5	754.2	753.0
172.5°	758.9	759.9	760.9	760.7	759.4	758.0	756.6	755.2
175°	762.1	763.2	764.4	764.2	762.7	761.1	759.6	758.1
177.5°	763.4	764.2	765.0	764.8	763.6	762.4	761.1	759.9
180°	762.7	762.7	762.7	762.7	762.7	762.7	762.7	762.7

(END OF REPORT)