

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: P332929

Luminaire Tested: **SA4XXRDIP-C795D365U835-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P332929
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA4XXRDIP-C795D365U835-4F0-1E-UDD-F1
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 795 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 365 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

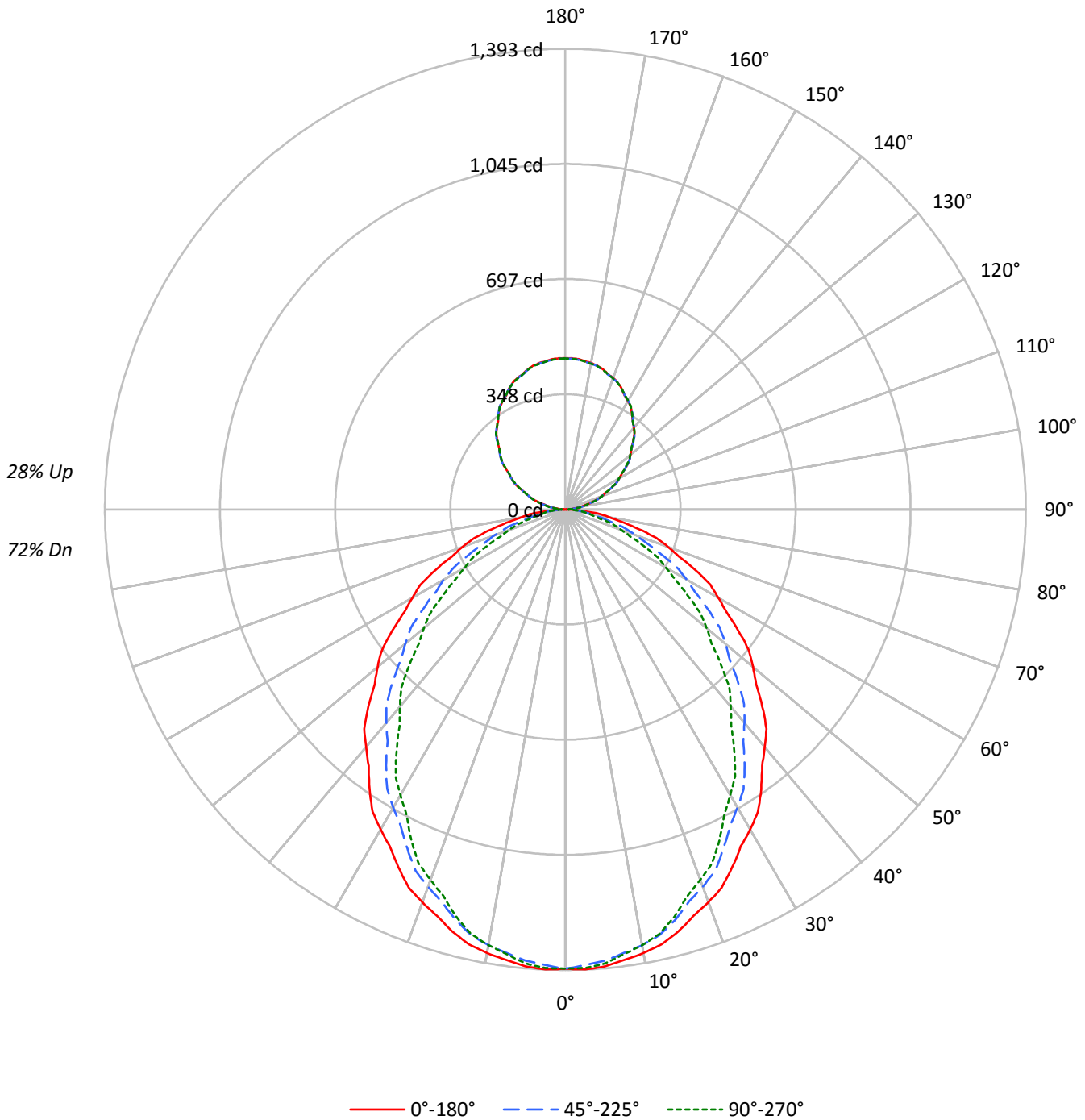
Lumens per Lamp: N/A
Luminaire Lumens: 4478.5 lumens
Efficiency: N/A
Efficacy: 128.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 35
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	112	112	112	112	106	106	106	106	95	95	95	85	85	85	76	76	76	76	76	76	72	
1	103	99	95	91	98	94	90	87	84	82	79	76	74	72	68	66	65	65	65	65	61	
2	94	87	81	75	89	82	77	72	74	70	66	67	64	61	60	58	55	55	55	55	52	
3	86	77	69	63	81	73	66	61	66	61	56	60	55	52	54	50	48	48	48	48	44	
4	79	68	60	54	75	65	58	52	59	53	48	53	49	45	48	44	41	41	41	41	38	
5	73	61	53	47	69	58	51	45	53	47	42	48	43	39	44	39	36	36	36	36	33	
6	67	55	47	41	64	53	45	39	48	42	37	44	38	34	40	35	32	32	32	32	30	
7	62	50	42	36	59	48	40	35	44	37	33	40	35	31	36	32	29	29	29	29	26	
8	58	45	38	32	55	44	36	31	40	34	29	37	31	28	33	29	26	26	26	26	24	
9	54	42	34	29	51	40	33	28	37	31	26	34	29	25	31	27	23	23	23	23	21	
10	51	38	31	26	48	37	30	25	34	28	24	31	26	23	29	24	21	21	21	21	20	

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	2.9
10°-20°	363.9	8.1
20°-30°	525.5	11.7
30°-40°	595.6	13.3
40°-50°	575.2	12.8
50°-60°	478.3	10.7
60°-70°	330.3	7.4
70°-80°	167.4	3.7
80°-90°	44.3	1.0
90°-100°	30.1	0.7
100°-110°	89.3	2.0
110°-120°	151.5	3.4
120°-130°	199.8	4.5
130°-140°	224.4	5.0
140°-150°	220.5	4.9
150°-160°	185.4	4.1
160°-170°	123.4	2.8
170°-180°	43.2	1.0
0°-30°	1019.8	22.8
0°-40°	1615.5	36.1
0°-60°	2668.9	59.6
0°-90°	3210.9	71.7
90°-120°	270.9	6.0
90°-150°	915.6	20.4
90°-180°	1268.0	28.3
0°-180°	4478.5	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°	1	5	8	10	11	4
95°	21	24	27	28	28	24
105°	82	83	84	85	86	87
115°	154	154	153	153	153	152
125°	224	224	224	223	223	200
135°	289	291	292	291	290	224
145°	352	353	353	353	352	220
155°	403	403	402	404	402	185
165°	438	438	437	439	438	124
175°	456	454	454	456	454	43
180°	457	457	457	457	457	



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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°	19.8	18.4	17.1	15.8	14.4	13.7	13.7	13.6	13.5	13.5	13.4
90°	1.1	1.9	2.8	3.7	4.5	5.3	5.9	6.5	7.1	7.8	8.2
92.5°	7.6	8.6	9.5	10.5	11.5	12.2	12.7	13.1	13.6	14.0	14.3
95°	21.2	21.9	22.6	23.3	24.0	24.7	25.2	25.8	26.3	26.9	27.1
97.5°	37.0	37.6	38.2	38.7	39.3	39.9	40.5	41.2	41.8	42.5	42.8
100°	49.5	49.8	50.1	50.4	50.7	51.2	51.9	52.7	53.4	54.1	54.2
102.5°	62.5	62.6	62.7	62.9	63.0	63.4	64.0	64.7	65.3	65.9	66.2
105°	82.3	82.4	82.5	82.6	82.6	82.8	83.2	83.5	83.8	84.1	84.3
107.5°	103.2	103.3	103.4	103.5	103.6	103.6	103.7	103.7	103.8	103.8	104.0
110°	117.3	117.5	117.6	117.8	117.9	118.0	117.9	117.8	117.7	117.7	117.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	132.0	132.0	132.1	132.1	132.1	132.1	131.9	131.8	131.7	131.5	131.5
115°	154.1	154.1	154.1	154.1	154.1	154.0	153.8	153.7	153.5	153.4	153.3
117.5°	174.8	174.9	175.0	175.0	175.1	175.1	175.0	174.9	174.7	174.6	174.4
120°	188.7	189.0	189.3	189.6	190.0	190.0	189.8	189.5	189.3	189.1	188.7
122.5°	203.1	203.2	203.4	203.5	203.6	203.6	203.5	203.4	203.3	203.2	202.9
125°	224.4	224.4	224.4	224.4	224.4	224.3	224.3	224.2	224.1	224.0	223.9
127.5°	243.7	243.9	244.2	244.4	244.6	244.7	244.6	244.4	244.3	244.2	244.0
130°	257.3	257.5	257.7	258.0	258.2	258.3	258.3	258.3	258.3	258.3	258.2
132.5°	271.1	271.3	271.4	271.6	271.8	271.8	271.8	271.7	271.7	271.6	271.4
135°	289.4	289.9	290.3	290.8	291.3	291.5	291.5	291.5	291.5	291.5	291.4
137.5°	309.3	309.6	309.8	310.0	310.2	310.4	310.5	310.6	310.8	310.9	310.7
140°	322.6	322.8	322.9	323.1	323.3	323.3	323.3	323.3	323.3	323.3	323.3
142.5°	334.8	334.9	335.1	335.2	335.4	335.5	335.4	335.3	335.3	335.2	335.2
145°	351.6	351.9	352.2	352.5	352.9	353.1	353.1	353.2	353.3	353.4	353.3
147.5°	368.3	368.7	369.0	369.4	369.8	369.9	369.9	369.8	369.8	369.7	369.6
150°	378.5	378.8	379.1	379.4	379.7	379.9	379.9	379.9	379.9	379.9	379.9
152.5°	388.1	388.3	388.4	388.6	388.8	388.9	389.0	389.1	389.1	389.2	389.4
155°	402.8	402.8	402.8	402.8	402.8	402.8	402.7	402.6	402.6	402.5	402.8
157.5°	415.3	415.1	415.0	414.9	414.7	414.6	414.6	414.6	414.6	414.6	414.8
160°	422.6	422.5	422.5	422.4	422.3	422.2	422.2	422.1	422.0	421.9	422.2
162.5°	429.4	429.2	429.0	428.8	428.6	428.5	428.4	428.3	428.2	428.1	428.6
165°	438.5	438.3	438.1	437.8	437.6	437.4	437.2	437.1	436.9	436.8	437.2
167.5°	445.5	445.2	444.9	444.5	444.2	444.0	444.1	444.1	444.1	444.1	444.6
170°	449.5	449.1	448.7	448.3	447.9	447.8	447.8	447.9	448.0	448.1	448.5
172.5°	452.3	452.0	451.6	451.3	451.0	450.8	450.8	450.9	450.9	450.9	451.4
175°	456.2	455.8	455.4	455.0	454.6	454.4	454.3	454.2	454.2	454.1	454.6
177.5°	457.5	457.2	456.8	456.5	456.2	456.1	456.1	456.1	456.1	456.1	456.5
180°	456.9	456.9	456.9	456.9	456.9	456.9	456.9	456.9	456.9	456.9	456.9



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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°	13.3	13.2	13.1	13.2	13.4	13.6	13.8	14.0
90°	8.7	9.2	9.7	10.0	10.1	10.3	10.4	10.6
92.5°	14.6	14.8	15.1	15.3	15.4	15.5	15.6	15.7
95°	27.3	27.6	27.8	27.9	27.9	27.9	27.9	27.9
97.5°	43.0	43.3	43.6	43.7	43.7	43.7	43.7	43.7
100°	54.4	54.5	54.7	54.8	54.8	54.8	54.8	54.8
102.5°	66.4	66.6	66.8	67.0	67.0	67.1	67.1	67.2
105°	84.6	84.8	85.0	85.3	85.5	85.8	86.0	86.2
107.5°	104.3	104.5	104.7	104.8	104.8	104.8	104.8	104.7
110°	117.4	117.2	117.0	117.1	117.3	117.6	117.8	118.0



TEST NUMBER: P332929

CATALOG NUMBER: SA4XXRDIP-C795D365U835-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	131.5	131.4	131.4	131.4	131.5	131.5	131.5	131.6
115°	153.2	153.1	153.0	153.0	152.9	152.8	152.7	152.7
117.5°	174.1	173.8	173.6	173.4	173.2	173.0	172.9	172.7
120°	188.3	187.9	187.5	187.4	187.5	187.7	187.8	188.0
122.5°	202.7	202.4	202.1	201.8	201.6	201.3	201.0	200.7
125°	223.7	223.6	223.4	223.2	223.1	222.9	222.8	222.6
127.5°	243.9	243.7	243.5	243.4	243.3	243.2	243.0	242.9
130°	258.0	257.8	257.7	257.4	257.1	256.8	256.5	256.2
132.5°	271.3	271.1	271.0	270.8	270.7	270.6	270.5	270.3
135°	291.2	291.1	290.9	290.7	290.5	290.2	290.0	289.8
137.5°	310.5	310.3	310.1	310.0	310.0	310.1	310.1	310.2
140°	323.2	323.1	323.0	322.9	322.9	322.8	322.7	322.6
142.5°	335.2	335.2	335.1	335.1	335.1	335.1	335.1	335.1
145°	353.2	353.1	353.1	352.9	352.7	352.4	352.2	352.0
147.5°	369.6	369.5	369.4	369.4	369.3	369.2	369.1	369.1
150°	379.9	379.9	379.9	379.8	379.8	379.7	379.6	379.5
152.5°	389.6	389.8	390.0	389.9	389.7	389.5	389.3	389.1
155°	403.1	403.4	403.7	403.7	403.4	403.1	402.8	402.5
157.5°	415.0	415.3	415.5	415.5	415.2	415.0	414.7	414.4
160°	422.4	422.6	422.9	422.8	422.4	422.0	421.6	421.2
162.5°	429.0	429.4	429.8	429.8	429.5	429.1	428.7	428.3
165°	437.7	438.2	438.6	438.7	438.4	438.1	437.8	437.5
167.5°	445.1	445.5	446.0	446.0	445.5	445.0	444.5	444.0
170°	449.0	449.5	450.0	449.9	449.4	448.8	448.3	447.7
172.5°	452.0	452.5	453.0	453.0	452.5	451.9	451.4	450.8
175°	455.2	455.7	456.3	456.3	455.7	455.2	454.6	454.1
177.5°	456.9	457.4	457.8	457.8	457.3	456.8	456.3	455.8
180°	456.9	456.9	456.9	456.9	456.9	456.9	456.9	456.9

(END OF REPORT)