

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: P332595-840

Luminaire Tested: **SA4XXDIP-C795D590U840-4F0-1E-UDD-F**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P332595-840
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: SA4XXDIP-C795D590U840-4F0-1E-UDD-F
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 795 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 590 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

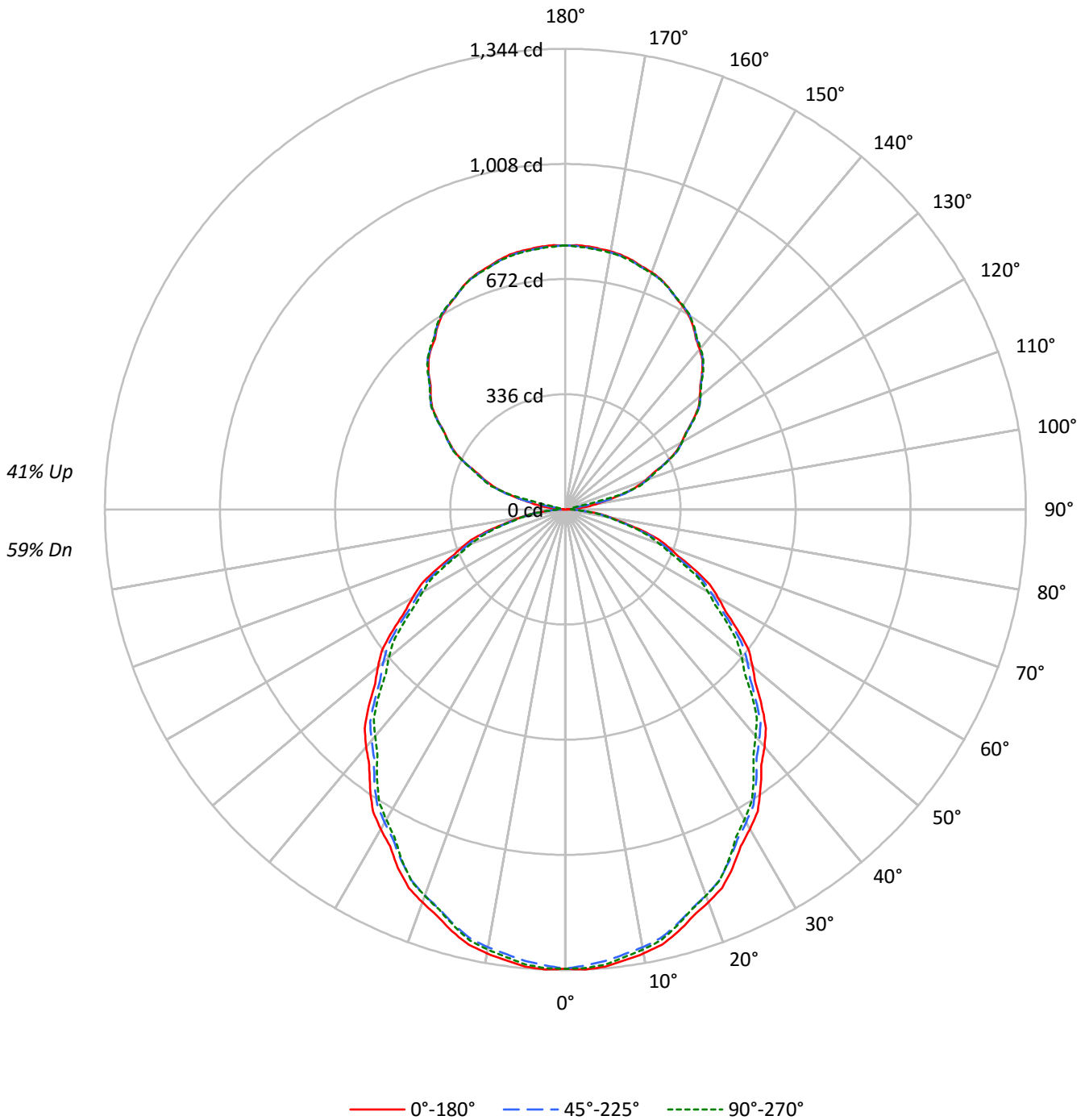
Lumens per Lamp: N/A
Luminaire Lumens: 5824.7 lumens
Efficiency: N/A
Efficacy: 144.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: General Diffuse

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	50	30	10	0	
RCR																						
0	109	109	109	109	102	102	102	102	88	88	88	76	76	76	64	64	64	59				
1	100	95	91	88	93	89	86	83	77	75	73	67	65	63	57	56	54	50				
2	91	83	77	72	85	78	72	68	68	64	60	59	56	53	50	48	46	42				
3	83	73	66	60	77	69	62	57	60	55	51	52	48	45	44	41	39	35				
4	76	65	57	51	70	61	54	48	53	48	43	46	42	38	40	36	34	30				
5	70	58	50	43	65	54	47	41	48	42	37	42	37	33	36	32	29	26				
6	64	52	44	38	60	49	41	36	43	37	33	38	33	29	32	29	26	23				
7	59	47	39	33	55	44	37	32	39	33	29	34	29	26	30	26	23	20				
8	55	43	35	29	51	40	33	28	36	30	26	31	27	23	27	23	21	18				
9	51	39	31	26	48	37	30	25	33	27	23	29	24	21	25	21	19	17				
10	48	36	29	24	45	34	27	23	30	25	21	27	22	19	23	20	17	15				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10823	10823	10823
5°	10855	10724	10802
10°	10787	10637	10690
15°	10657	10486	10513
20°	10483	10299	10308
25°	10286	10085	10056
30°	10043	9833	9743
35°	9792	9570	9443
40°	9531	9271	9101
45°	9259	8977	8805
50°	8959	8715	8446
55°	8633	8376	8103
60°	8307	7995	7753
65°	7941	7633	7324
70°	7530	7152	6871
75°	6903	6569	6400
80°	6141	5890	5742
85°	5372	5169	5067



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	126.2	2.2
10°-20°	355.7	6.1
20°-30°	523.5	9.0
30°-40°	608.6	10.4
40°-50°	608.7	10.4
50°-60°	532.4	9.1
60°-70°	395.4	6.8
70°-80°	224.6	3.9
80°-90°	67.0	1.2
90°-100°	26.3	0.5
100°-110°	168.0	2.9
110°-120°	321.3	5.5
120°-130°	407.9	7.0
130°-140°	436.4	7.5
140°-150°	408.1	7.0
150°-160°	329.1	5.6
160°-170°	212.2	3.6
170°-180°	73.2	1.3
0°-30°	1005.5	17.3
0°-40°	1614.1	27.7
0°-60°	2755.2	47.3
0°-90°	3442.3	59.1
90°-120°	515.6	8.9
90°-150°	1767.9	30.4
90°-180°	2382.0	40.9
0°-180°	5824.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1341	1341	1341	1341	1341	
5°	1340	1335	1323	1334	1333	127
15°	1275	1270	1255	1260	1258	359
25°	1155	1147	1132	1133	1129	531
35°	994	986	971	964	958	621
45°	811	803	786	775	771	625
55°	613	609	595	583	576	549
65°	416	410	400	389	383	411
75°	221	216	211	206	205	235
85°	58	58	56	56	55	64
90°	2	8	13	16	17	5
95°	32	13	13	16	17	41
105°	173	177	180	183	164	181
115°	324	325	325	326	326	318
125°	455	457	456	458	459	406
135°	564	564	566	567	569	435
145°	651	653	653	653	654	407
155°	714	714	713	715	713	329
165°	753	750	750	754	749	213
175°	770	767	767	772	766	73
180°	770	770	770	770	770	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1340.6	1340.6	1340.6	1340.6	1340.6	1340.6	1340.6	1340.6	1340.6	1340.6	1340.6
2.5°	1344.0	1343.4	1342.8	1342.3	1341.7	1340.4	1338.3	1336.2	1334.0	1332.0	1333.8
5°	1339.5	1338.6	1337.6	1336.7	1335.6	1333.8	1331.2	1328.6	1326.0	1323.3	1326.0
7.5°	1327.1	1326.1	1325.1	1324.1	1323.2	1321.3	1318.4	1315.5	1312.5	1309.6	1311.7
10°	1315.9	1314.9	1313.9	1313.0	1312.0	1310.0	1306.9	1303.8	1300.7	1297.6	1299.5
12.5°	1301.2	1300.3	1299.3	1298.4	1297.5	1295.3	1292.0	1288.7	1285.5	1282.1	1284.2
15°	1275.1	1274.0	1273.1	1272.1	1271.2	1269.0	1265.4	1261.8	1258.2	1254.7	1256.1
17.5°	1243.4	1242.2	1241.0	1239.9	1238.7	1236.4	1233.0	1229.6	1226.2	1222.8	1223.8
20°	1220.2	1219.0	1217.9	1216.7	1215.5	1213.0	1209.5	1205.9	1202.3	1198.8	1199.5
22.5°	1195.4	1193.8	1192.1	1190.6	1189.0	1186.5	1182.9	1179.3	1175.7	1172.2	1173.5
25°	1154.7	1153.1	1151.3	1149.7	1148.0	1145.5	1142.2	1138.8	1135.5	1132.2	1132.4
27.5°	1108.3	1106.6	1104.9	1103.2	1101.5	1099.0	1095.9	1092.9	1089.7	1086.6	1086.0
30°	1077.4	1075.5	1073.6	1071.7	1069.8	1067.2	1064.1	1061.1	1057.9	1054.8	1053.9
32.5°	1044.7	1043.0	1041.3	1039.6	1037.8	1035.3	1032.1	1028.7	1025.5	1022.2	1021.1
35°	993.6	991.9	990.3	988.6	986.9	984.4	981.1	977.8	974.4	971.1	969.4
37.5°	939.7	938.2	936.6	935.1	933.5	931.0	927.5	923.8	920.3	916.7	914.8
40°	904.4	902.5	900.6	898.7	896.8	894.0	890.5	886.9	883.3	879.7	877.4
42.5°	866.7	865.5	864.3	863.2	862.0	859.5	855.6	851.6	847.6	843.6	840.9
45°	811.0	809.3	807.7	806.0	804.4	801.5	797.8	794.0	790.1	786.3	783.7
47.5°	752.8	751.6	750.5	749.3	748.2	745.9	742.4	738.8	735.3	731.7	728.7
50°	713.3	712.3	711.3	710.3	709.4	707.3	704.0	700.6	697.2	693.9	690.5
52.5°	674.6	673.5	672.3	671.2	669.9	667.6	664.1	660.6	657.0	653.5	650.6
55°	613.4	612.6	611.9	611.2	610.5	608.4	605.1	601.8	598.4	595.1	592.2
57.5°	554.9	554.1	553.3	552.5	551.7	549.6	546.3	543.0	539.8	536.4	533.7
60°	514.5	513.3	512.1	511.0	509.8	507.6	504.5	501.4	498.3	495.2	493.0
62.5°	475.0	474.0	473.0	472.0	471.0	468.9	465.5	462.2	459.0	455.7	453.7
65°	415.7	414.5	413.3	412.1	410.9	409.1	406.8	404.3	401.9	399.6	397.2
67.5°	356.0	354.9	353.8	352.6	351.6	349.9	347.6	345.3	343.1	340.7	338.4
70°	319.0	317.4	315.7	314.0	312.4	310.5	308.6	306.7	304.8	303.0	301.0
72.5°	279.5	277.8	276.2	274.5	272.8	271.2	269.7	268.1	266.6	265.1	263.6
75°	221.3	220.0	218.9	217.7	216.5	215.3	214.1	212.9	211.8	210.6	209.5
77.5°	165.6	165.1	164.6	164.1	163.5	162.8	161.7	160.7	159.6	158.5	158.2
80°	132.1	131.4	130.7	130.0	129.3	128.7	128.2	127.7	127.2	126.7	126.2
82.5°	99.5	99.2	98.8	98.5	98.2	98.0	97.9	97.8	97.7	97.6	97.3
85°	58.0	58.0	58.0	58.0	58.0	57.8	57.3	56.9	56.4	55.8	55.8
87.5°	22.7	22.8	22.8	22.9	23.0	23.1	23.1	23.1	23.1	23.1	23.3
90°	1.7	3.1	4.5	6.0	7.4	8.6	9.6	10.6	11.6	12.6	13.4
92.5°	7.3	7.4	7.4	7.5	7.6	8.1	9.2	10.2	11.2	12.2	13.0
95°	31.7	27.4	23.0	18.6	14.2	12.1	12.3	12.4	12.5	12.6	13.4
97.5°	67.3	70.0	72.7	75.4	78.2	72.3	58.1	43.8	29.5	15.2	15.2
100°	94.4	96.7	99.1	101.4	103.7	96.0	78.4	60.7	43.0	25.3	23.1
102.5°	124.9	126.5	128.3	130.0	131.7	131.4	129.1	126.7	124.4	122.1	98.7
105°	173.4	174.2	174.9	175.7	176.4	177.1	177.8	178.4	179.0	179.8	180.9
107.5°	218.4	218.8	219.2	219.5	219.9	220.6	221.5	222.4	223.2	224.1	224.7
110°	248.8	249.2	249.6	250.0	250.3	251.0	251.8	252.5	253.3	254.1	254.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	278.3	279.0	279.7	280.4	281.1	281.7	282.0	282.4	282.8	283.1	283.1
115°	323.8	324.2	324.5	324.9	325.3	325.4	325.3	325.2	325.0	324.9	325.2
117.5°	364.7	365.2	365.7	366.2	366.7	367.1	367.4	367.7	367.9	368.2	368.2
120°	392.3	392.8	393.3	393.8	394.4	394.6	394.5	394.3	394.2	394.0	394.3
122.5°	418.1	418.4	418.7	419.0	419.3	419.6	419.8	419.9	420.1	420.3	420.4
125°	455.0	455.6	456.2	456.7	457.2	457.3	457.0	456.8	456.5	456.3	456.7
127.5°	490.1	490.2	490.4	490.5	490.6	491.0	491.6	492.1	492.7	493.3	493.2
130°	512.7	512.8	512.9	513.1	513.2	513.4	513.8	514.2	514.6	515.0	515.1
132.5°	533.4	533.6	533.9	534.1	534.3	534.7	535.2	535.6	536.1	536.6	536.7
135°	564.5	564.4	564.3	564.1	564.0	564.2	564.7	565.2	565.7	566.2	566.5
137.5°	592.1	592.1	592.2	592.2	592.3	592.6	593.1	593.7	594.3	594.8	595.1
140°	610.1	610.3	610.6	610.8	611.1	611.3	611.6	611.9	612.1	612.4	612.7
142.5°	626.2	626.6	627.1	627.5	628.0	628.3	628.4	628.6	628.7	628.9	629.2
145°	651.0	651.4	651.7	652.1	652.5	652.7	652.7	652.7	652.7	652.7	652.8
147.5°	670.7	671.4	672.1	672.8	673.5	673.8	673.7	673.6	673.4	673.3	673.4
150°	684.9	685.4	686.0	686.5	687.0	687.2	687.0	686.9	686.8	686.6	686.6
152.5°	696.9	697.3	697.7	698.1	698.5	698.6	698.4	698.2	697.9	697.7	697.9
155°	713.8	713.9	714.0	714.1	714.3	714.1	713.8	713.4	713.0	712.6	713.1
157.5°	727.9	727.8	727.7	727.7	727.6	727.3	726.9	726.5	726.0	725.6	726.3
160°	736.2	735.8	735.4	735.1	734.7	734.4	734.3	734.2	734.0	733.9	734.7
162.5°	743.6	743.1	742.6	742.1	741.6	741.3	741.1	741.0	740.9	740.8	741.5
165°	752.9	752.2	751.6	750.9	750.3	750.0	750.0	750.0	750.0	750.0	751.0
167.5°	760.2	759.6	758.9	758.3	757.6	757.2	757.2	757.1	757.0	756.9	758.1
170°	764.5	763.7	762.9	762.1	761.3	761.0	761.1	761.2	761.4	761.5	762.5
172.5°	767.2	766.4	765.7	764.9	764.2	763.8	764.0	764.1	764.2	764.3	765.4
175°	770.2	769.4	768.6	767.9	767.1	766.8	766.9	767.1	767.2	767.3	768.4
177.5°	771.5	770.8	770.1	769.4	768.7	768.4	768.6	768.8	769.0	769.2	770.1
180°	770.2	770.2	770.2	770.2	770.2	770.2	770.2	770.2	770.2	770.2	770.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1340.6	1340.6	1340.6	1340.6	1340.6	1340.6	1340.6	1340.6
2.5°	1335.7	1337.7	1339.6	1340.5	1340.3	1340.1	1339.9	1339.7
5°	1328.6	1331.2	1333.8	1334.9	1334.4	1334.0	1333.5	1333.0
7.5°	1313.8	1316.0	1318.0	1318.9	1318.7	1318.4	1318.1	1317.8
10°	1301.4	1303.3	1305.3	1306.0	1305.5	1304.9	1304.5	1304.0
12.5°	1286.4	1288.4	1290.5	1291.2	1290.6	1289.9	1289.2	1288.6
15°	1257.5	1258.9	1260.3	1260.7	1260.0	1259.3	1258.6	1257.9
17.5°	1224.7	1225.6	1226.5	1226.7	1226.2	1225.7	1225.3	1224.8
20°	1200.2	1200.9	1201.6	1201.7	1201.2	1200.8	1200.3	1199.8
22.5°	1174.7	1176.0	1177.3	1177.5	1176.6	1175.8	1174.9	1174.1
25°	1132.7	1132.9	1133.2	1132.8	1131.9	1130.8	1129.9	1128.9
27.5°	1085.5	1084.9	1084.3	1083.5	1082.3	1081.1	1079.8	1078.6
30°	1052.9	1052.0	1051.0	1050.0	1048.7	1047.5	1046.3	1045.2
32.5°	1019.9	1018.8	1017.6	1016.4	1015.2	1014.0	1012.8	1011.7
35°	967.8	966.0	964.3	962.9	961.7	960.6	959.4	958.2
37.5°	913.0	911.2	909.5	907.8	906.2	904.6	903.0	901.4
40°	874.9	872.6	870.2	868.4	867.2	866.1	864.8	863.6
42.5°	838.1	835.4	832.5	830.8	830.0	829.2	828.4	827.6
45°	781.0	778.4	775.8	774.2	773.4	772.6	771.9	771.2
47.5°	725.8	722.9	719.8	717.5	715.7	713.9	712.1	710.2
50°	687.2	683.9	680.5	678.1	676.7	675.3	673.9	672.5
52.5°	647.6	644.6	641.7	639.3	637.5	635.7	633.9	632.1
55°	589.4	586.5	583.6	581.5	580.1	578.7	577.1	575.7
57.5°	531.0	528.3	525.5	523.5	522.1	520.7	519.4	518.0
60°	490.9	488.8	486.6	484.9	483.7	482.5	481.3	480.2
62.5°	451.7	449.8	447.9	446.3	445.0	443.8	442.7	441.5
65°	394.9	392.4	390.0	388.3	387.1	385.9	384.7	383.4
67.5°	336.2	333.9	331.5	330.2	329.9	329.6	329.2	328.9
70°	299.1	297.2	295.3	294.0	293.3	292.6	291.9	291.1
72.5°	262.1	260.5	259.0	257.9	257.1	256.4	255.7	255.0
75°	208.6	207.6	206.7	206.1	205.9	205.6	205.4	205.2
77.5°	157.9	157.6	157.4	156.9	156.3	155.7	155.1	154.5
80°	125.8	125.3	124.8	124.5	124.2	124.0	123.8	123.5
82.5°	96.9	96.6	96.3	96.1	95.9	95.6	95.4	95.1
85°	55.8	55.8	55.8	55.7	55.5	55.2	55.0	54.7
87.5°	23.4	23.6	23.7	23.8	23.9	23.9	24.0	24.0
90°	14.2	14.9	15.8	16.3	16.6	16.8	17.1	17.3
92.5°	13.7	14.5	15.2	15.7	15.8	15.8	15.9	15.9
95°	14.2	14.9	15.8	16.2	16.4	16.5	16.6	16.7
97.5°	15.3	15.5	15.6	15.7	15.8	15.9	16.0	16.2
100°	21.0	18.8	16.7	15.7	15.8	15.9	16.0	16.2
102.5°	75.1	51.7	28.2	16.5	16.6	16.6	16.6	16.6
105°	182.1	183.2	184.3	182.6	178.0	173.4	168.7	164.2
107.5°	225.2	225.8	226.3	226.8	227.3	227.8	228.3	228.8
110°	254.6	254.8	255.1	255.4	255.8	256.1	256.5	256.9



TEST NUMBER: P332595-840

CATALOG NUMBER: SA4XXDIP-C795D590U840-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	283.0	283.0	282.9	283.1	283.6	284.1	284.6	285.0
115°	325.4	325.7	325.9	326.1	326.1	326.1	326.1	326.1
117.5°	368.1	368.1	368.0	368.0	367.9	367.9	367.8	367.8
120°	394.6	394.8	395.1	395.1	394.8	394.6	394.3	394.0
122.5°	420.6	420.7	420.9	420.8	420.6	420.3	420.1	419.8
125°	457.0	457.4	457.8	458.1	458.2	458.3	458.4	458.6
127.5°	493.2	493.1	493.0	492.9	492.8	492.7	492.6	492.5
130°	515.2	515.3	515.5	515.5	515.5	515.5	515.5	515.5
132.5°	536.9	537.0	537.1	537.1	537.0	536.9	536.8	536.7
135°	566.7	567.0	567.2	567.5	567.7	568.0	568.4	568.6
137.5°	595.4	595.7	595.9	596.0	596.0	595.9	595.8	595.7
140°	613.1	613.5	613.9	614.1	614.3	614.4	614.5	614.6
142.5°	629.4	629.8	630.1	630.3	630.3	630.3	630.3	630.4
145°	652.9	653.1	653.2	653.4	653.6	653.9	654.2	654.4
147.5°	673.5	673.6	673.7	673.8	674.0	674.1	674.2	674.3
150°	686.6	686.6	686.6	686.7	686.8	687.0	687.1	687.2
152.5°	698.1	698.3	698.5	698.6	698.5	698.4	698.3	698.3
155°	713.6	714.1	714.6	714.7	714.3	713.9	713.6	713.2
157.5°	726.9	727.6	728.2	728.2	727.6	726.9	726.3	725.6
160°	735.4	736.2	737.0	737.0	736.2	735.4	734.7	733.9
162.5°	742.4	743.1	743.9	743.9	743.0	742.0	741.2	740.3
165°	752.0	753.1	754.2	754.1	752.9	751.7	750.6	749.4
167.5°	759.2	760.3	761.4	761.3	760.1	758.8	757.5	756.3
170°	763.6	764.6	765.7	765.5	764.3	763.0	761.6	760.4
172.5°	766.4	767.4	768.4	768.2	766.9	765.5	764.1	762.7
175°	769.6	770.7	771.9	771.7	770.2	768.6	767.1	765.6
177.5°	770.9	771.7	772.5	772.3	771.1	769.9	768.6	767.4
180°	770.2	770.2	770.2	770.2	770.2	770.2	770.2	770.2

(END OF REPORT)