

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: P332674

Luminaire Tested: **SA4XXDIP-C1195D365U835-4F0-1E-UDD-D1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P332674
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: SA4XXDIP-C1195D365U835-4F0-1E-UDD-D1
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1195 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 365 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

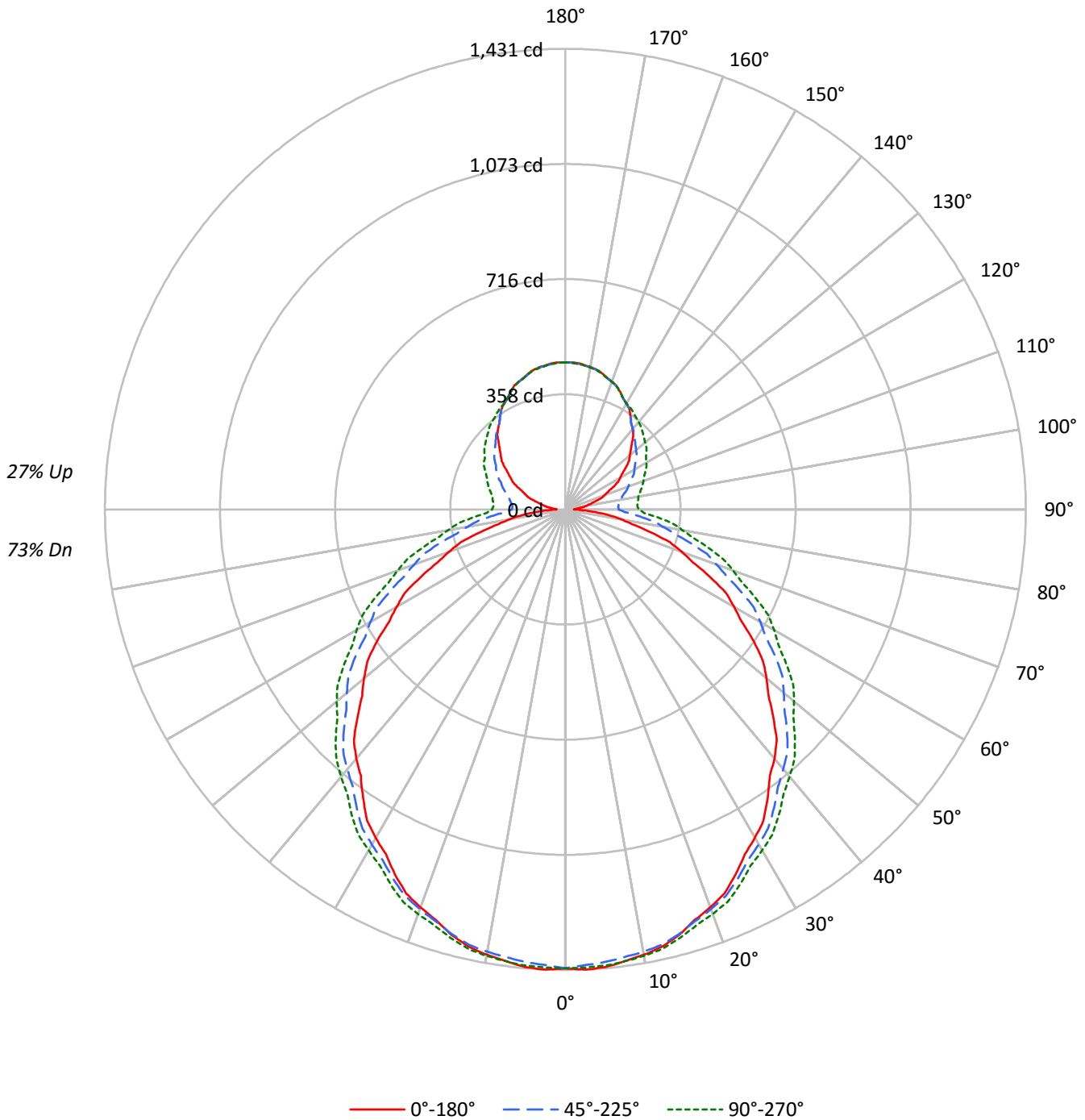
Lumens per Lamp: N/A
Luminaire Lumens: 6129.9 lumens
Efficiency: N/A
Efficacy: 123.1 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')
CIE Type: Semi-Direct

Input Watts (W): 49.8
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	113	113	113	113	107	107	107	107	96	96	96	87	87	87	78	78	78	73				
1	102	96	92	88	96	92	87	84	82	79	76	74	72	69	66	64	63	59				
2	92	83	76	70	87	79	73	68	71	66	62	64	60	57	57	54	52	48				
3	83	73	65	58	79	69	62	56	62	56	51	56	51	47	50	46	43	40				
4	76	64	55	49	72	61	53	47	55	49	43	50	44	40	45	40	37	34				
5	70	57	48	42	66	54	46	40	49	43	37	45	39	35	40	36	32	29				
6	64	51	42	36	61	49	41	35	44	38	32	40	34	30	36	32	28	25				
7	60	46	38	32	56	44	36	31	40	33	29	37	31	27	33	28	25	22				
8	55	42	34	28	52	40	32	27	37	30	25	33	28	24	30	26	22	20				
9	52	38	30	25	49	37	29	24	34	27	23	31	25	21	28	23	20	18				
10	48	35	28	22	46	34	27	22	31	25	21	28	23	19	26	21	18	16				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11512	11512	11512
5°	11547	11251	11283
10°	11477	11067	11058
15°	11374	10854	10794
20°	11219	10619	10537
25°	11044	10355	10254
30°	10854	10093	9964
35°	10640	9824	9710
40°	10469	9569	9445
45°	10215	9334	9218
50°	10000	9062	8977
55°	9778	8806	8695
60°	9431	8480	8438
65°	9051	8130	8122
70°	8591	7730	7753
75°	7950	7291	7421
80°	7239	6868	7093
85°	6329	6495	6901



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	135.0	2.2
10°-20°	386.9	6.3
20°-30°	585.0	9.5
30°-40°	707.8	11.5
40°-50°	748.3	12.2
50°-60°	704.2	11.5
60°-70°	584.3	9.5
70°-80°	410.4	6.7
80°-90°	233.4	3.8
90°-100°	167.9	2.7
100°-110°	191.3	3.1
110°-120°	220.0	3.6
120°-130°	238.4	3.9
130°-140°	241.1	3.9
140°-150°	223.9	3.7
150°-160°	185.5	3.0
160°-170°	123.4	2.0
170°-180°	43.2	0.7
0°-30°	1106.9	18.1
0°-40°	1814.7	29.6
0°-60°	3267.3	53.3
0°-90°	4495.4	73.3
90°-120°	579.1	9.4
90°-150°	1282.5	20.9
90°-180°	1635.0	26.7
0°-180°	6129.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1426	1426	1426	1426	1426	
5°	1428	1422	1412	1424	1423	135
15°	1368	1370	1365	1379	1378	385
25°	1252	1261	1266	1283	1285	576
35°	1095	1114	1130	1152	1158	686
45°	913	944	974	1000	1009	706
55°	715	750	797	828	838	637
65°	495	546	600	639	653	490
75°	275	334	401	444	460	292
85°	85	152	224	270	287	90
90°	27	95	166	212	228	18
95°	42	98	166	208	224	40
105°	97	131	190	229	244	104
115°	164	180	228	262	274	162
125°	231	232	269	297	307	206
135°	293	295	306	330	339	227
145°	353	353	353	362	368	221
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	



TEST NUMBER: P332674

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1426.0	1426.0	1426.0	1426.0	1426.0	1426.0	1426.0	1426.0	1426.0	1426.0	1426.0
2.5°	1431.1	1430.2	1429.4	1428.5	1427.7	1426.1	1423.8	1421.6	1419.3	1417.0	1419.0
5°	1427.5	1426.5	1425.4	1424.4	1423.3	1421.5	1419.0	1416.5	1414.1	1411.6	1414.4
7.5°	1415.4	1414.8	1414.1	1413.5	1412.9	1411.5	1409.5	1407.4	1405.3	1403.3	1406.5
10°	1405.2	1404.8	1404.5	1404.1	1403.8	1402.7	1400.9	1399.2	1397.4	1395.6	1398.8
12.5°	1391.1	1391.1	1391.0	1390.9	1390.9	1390.2	1389.0	1387.8	1386.6	1385.4	1388.3
15°	1368.5	1368.8	1369.2	1369.5	1369.9	1369.5	1368.5	1367.4	1366.3	1365.3	1368.5
17.5°	1337.5	1338.6	1339.6	1340.7	1341.7	1342.2	1342.0	1341.7	1341.5	1341.3	1344.6
20°	1315.8	1316.8	1317.9	1319.0	1320.0	1320.7	1321.1	1321.5	1321.8	1322.2	1325.7
22.5°	1291.5	1292.8	1294.2	1295.5	1296.9	1297.9	1298.5	1299.2	1299.8	1300.4	1304.0
25°	1251.9	1254.0	1256.2	1258.3	1260.4	1262.0	1263.1	1264.1	1265.2	1266.3	1270.2
27.5°	1207.8	1211.0	1214.1	1217.2	1220.3	1222.7	1224.3	1226.0	1227.6	1229.2	1232.8
30°	1178.4	1181.3	1184.1	1187.0	1189.8	1192.5	1194.9	1197.4	1199.9	1202.4	1206.3
32.5°	1146.5	1149.9	1153.3	1156.7	1160.1	1163.2	1166.0	1168.8	1171.5	1174.3	1178.8
35°	1095.4	1099.7	1103.9	1108.2	1112.4	1116.3	1119.9	1123.4	1127.0	1130.5	1135.5
37.5°	1044.0	1048.9	1053.8	1058.7	1063.6	1068.2	1072.6	1077.0	1081.4	1085.8	1090.9
40°	1010.8	1015.4	1020.0	1024.6	1029.2	1034.0	1039.0	1044.0	1048.9	1053.9	1059.2
42.5°	972.5	977.6	982.8	988.0	993.2	998.7	1004.5	1010.3	1016.1	1022.0	1027.9
45°	913.4	920.1	926.9	933.6	940.3	947.1	953.8	960.6	967.3	974.1	980.1
47.5°	856.8	863.8	870.8	877.7	884.7	892.1	899.9	907.7	915.5	923.3	929.5
50°	816.0	823.8	831.6	839.4	847.2	855.0	862.8	870.6	878.4	886.2	893.3
52.5°	775.1	782.9	790.7	798.5	806.3	814.7	823.6	832.6	841.5	850.5	857.6
55°	715.4	722.8	730.3	737.7	745.2	754.2	764.9	775.5	786.2	796.8	803.9
57.5°	648.6	657.9	667.1	676.3	685.5	695.4	706.0	716.6	727.2	737.7	746.2
60°	605.2	614.4	623.6	632.9	642.1	652.6	664.3	676.0	687.7	699.4	707.6
62.5°	563.0	573.1	583.2	593.3	603.3	614.2	626.0	637.7	649.4	661.1	669.2
65°	495.0	506.4	517.7	529.1	540.4	552.1	564.2	576.3	588.3	600.4	609.3
67.5°	429.5	441.6	453.7	465.7	477.8	490.3	503.2	516.1	529.0	542.0	551.0
70°	384.8	396.9	409.0	421.0	433.1	445.9	459.3	472.8	486.3	499.8	509.4
72.5°	341.4	353.7	366.1	378.4	390.8	404.1	418.5	432.8	447.1	461.5	470.8
75°	274.7	287.8	300.9	314.0	327.2	341.2	356.1	371.0	385.9	400.8	410.7
77.5°	212.4	226.3	240.2	254.1	268.0	282.8	298.4	314.0	329.6	345.2	355.3
80°	174.1	188.2	202.4	216.6	230.8	245.7	261.3	277.0	292.6	308.2	318.8
82.5°	135.7	150.5	165.3	180.0	194.8	210.0	225.6	241.2	256.8	272.4	283.3
85°	84.6	99.5	114.4	129.3	144.2	159.7	175.6	191.6	207.6	223.6	234.2
87.5°	47.5	62.1	76.8	91.4	106.1	121.2	136.9	152.6	168.2	183.9	194.3
90°	26.6	41.7	56.7	71.8	86.8	102.3	118.2	134.1	150.0	165.9	176.6
92.5°	31.8	45.6	59.4	73.1	86.9	101.6	117.3	133.0	148.7	164.4	174.7
95°	42.0	54.4	66.8	79.2	91.6	105.4	120.5	135.6	150.7	165.8	175.6
97.5°	55.9	66.5	77.2	87.8	98.4	111.3	126.3	141.4	156.4	171.5	181.1
100°	67.0	76.6	86.1	95.7	105.2	117.2	131.8	146.3	160.9	175.4	185.2
102.5°	80.0	88.3	96.5	104.7	112.9	124.1	138.3	152.5	166.7	180.9	190.4
105°	96.7	103.9	111.1	118.2	125.4	135.7	149.2	162.6	176.0	189.5	198.6
107.5°	117.2	123.1	129.1	135.0	140.9	150.1	162.5	175.0	187.5	199.9	208.9
110°	130.1	135.2	140.3	145.5	150.6	159.3	171.7	184.0	196.3	208.7	216.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	143.5	147.9	152.4	156.8	161.2	169.3	181.0	192.7	204.4	216.2	224.0
115°	163.6	166.8	170.0	173.2	176.4	183.6	194.8	206.0	217.2	228.4	236.1
117.5°	184.1	186.1	188.1	190.0	192.0	198.2	208.7	219.2	229.6	240.1	247.2
120°	196.7	198.1	199.4	200.8	202.2	207.9	218.0	228.0	238.1	248.1	254.8
122.5°	211.1	211.4	211.8	212.1	212.5	217.4	227.0	236.7	246.3	255.9	262.7
125°	230.8	230.4	230.1	229.7	229.4	233.6	242.4	251.2	260.0	268.7	275.3
127.5°	249.7	249.6	249.5	249.4	249.3	252.6	259.2	265.9	272.6	279.3	285.5
130°	262.0	261.9	261.8	261.7	261.6	264.3	270.0	275.7	281.4	287.1	293.3
132.5°	275.9	275.7	275.5	275.3	275.2	277.3	281.8	286.3	290.8	295.2	301.2
135°	292.6	293.1	293.5	294.0	294.5	296.0	298.4	300.9	303.4	305.9	311.4
137.5°	312.5	312.4	312.3	312.1	312.0	312.6	313.9	315.3	316.6	317.9	322.9
140°	325.8	325.6	325.4	325.2	325.0	325.1	325.5	325.8	326.2	326.5	331.1
142.5°	336.7	336.8	336.9	337.0	337.0	336.9	336.7	336.4	336.1	335.8	339.9
145°	353.2	353.2	353.1	353.1	353.0	353.1	353.1	353.2	353.3	353.4	355.4
147.5°	369.9	369.9	369.9	369.9	370.0	369.9	369.9	369.8	369.8	369.7	369.9
150°	380.1	380.0	380.0	379.9	379.9	379.9	379.9	379.9	379.9	379.9	379.9
152.5°	388.4	388.5	388.6	388.7	388.9	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°	1426.0	1426.0	1426.0	1426.0	1426.0	1426.0	1426.0	1426.0
2.5°	1421.0	1423.0	1425.0	1425.8	1425.5	1425.2	1425.0	1424.7
5°	1417.3	1420.1	1422.9	1424.2	1423.8	1423.5	1423.1	1422.8
7.5°	1409.7	1412.9	1416.1	1417.5	1417.1	1416.8	1416.4	1416.1
10°	1402.0	1405.2	1408.4	1409.8	1409.5	1409.1	1408.7	1408.4
12.5°	1391.2	1394.1	1397.0	1398.5	1398.4	1398.3	1398.2	1398.2
15°	1371.7	1374.9	1378.0	1379.5	1379.1	1378.8	1378.4	1378.0
17.5°	1347.9	1351.1	1354.4	1355.9	1355.6	1355.3	1355.0	1354.7
20°	1329.3	1332.8	1336.4	1338.1	1338.1	1338.1	1338.1	1338.1
22.5°	1307.5	1311.1	1314.6	1316.7	1317.3	1317.8	1318.4	1319.0
25°	1274.1	1278.0	1281.9	1284.0	1284.4	1284.7	1285.1	1285.4
27.5°	1236.5	1240.1	1243.7	1245.7	1246.2	1246.6	1247.0	1247.4
30°	1210.2	1214.1	1218.0	1220.3	1221.0	1221.7	1222.4	1223.2
32.5°	1183.2	1187.7	1192.2	1194.8	1195.5	1196.2	1196.9	1197.6
35°	1140.5	1145.4	1150.4	1153.4	1154.5	1155.6	1156.6	1157.7
37.5°	1095.9	1100.9	1106.0	1109.1	1110.2	1111.3	1112.5	1113.6
40°	1064.5	1069.9	1075.2	1078.6	1080.0	1081.4	1082.8	1084.2
42.5°	1033.7	1039.6	1045.5	1049.0	1050.2	1051.3	1052.4	1053.6
45°	986.1	992.2	998.2	1002.1	1003.9	1005.6	1007.4	1009.2
47.5°	935.8	942.0	948.3	952.4	954.6	956.7	958.8	961.0
50°	900.4	907.5	914.6	919.2	921.4	923.5	925.6	927.7
52.5°	864.7	871.8	878.8	883.5	885.6	887.7	889.8	892.0
55°	811.0	818.1	825.2	829.8	831.9	834.1	836.2	838.3
57.5°	754.6	763.1	771.5	776.7	778.7	780.7	782.7	784.7
60°	715.7	723.9	732.0	737.5	740.4	743.2	746.1	748.9
62.5°	677.4	685.6	693.7	699.2	702.1	704.9	707.7	710.6
65°	618.1	627.0	635.9	641.7	644.6	647.4	650.3	653.1
67.5°	560.0	569.0	578.0	583.9	586.7	589.4	592.2	595.0
70°	519.0	528.5	538.1	544.2	546.6	549.1	551.6	554.1
72.5°	480.1	489.4	498.7	504.7	507.5	510.2	513.0	515.8
75°	420.7	430.6	440.5	447.1	450.3	453.5	456.7	459.9
77.5°	365.4	375.5	385.5	392.3	395.7	399.1	402.5	405.9
80°	329.5	340.1	350.8	357.5	360.3	363.2	366.0	368.9
82.5°	294.3	305.2	316.1	323.2	326.3	329.4	332.5	335.6
85°	244.8	255.5	266.1	273.2	276.8	280.3	283.9	287.4
87.5°	204.7	215.1	225.4	232.2	235.4	238.5	241.7	244.8
90°	187.4	198.1	208.9	215.8	218.8	221.8	224.8	227.8
92.5°	185.0	195.3	205.6	212.2	215.1	218.0	221.0	223.9
95°	185.4	195.2	205.0	211.5	214.7	217.9	221.1	224.3
97.5°	190.7	200.2	209.8	216.1	219.2	222.2	225.3	228.3
100°	194.9	204.6	214.4	220.5	223.0	225.5	227.9	230.4
102.5°	199.9	209.5	219.0	225.1	228.0	230.8	233.6	236.5
105°	207.7	216.8	225.9	232.0	235.1	238.2	241.2	244.3
107.5°	217.8	226.8	235.7	241.5	244.0	246.6	249.1	251.6
110°	224.7	232.7	240.7	246.2	249.3	252.4	255.5	258.5



TEST NUMBER: P332674

CATALOG NUMBER: SA4XXDIP-C1195D365U835-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	231.8	239.7	247.5	252.9	255.8	258.7	261.6	264.4
115°	243.9	251.6	259.3	264.4	266.8	269.2	271.6	274.0
117.5°	254.3	261.4	268.6	273.5	276.1	278.8	281.5	284.2
120°	261.5	268.2	274.9	279.8	282.8	285.8	288.8	291.8
122.5°	269.5	276.4	283.2	287.8	290.0	292.3	294.6	296.8
125°	281.9	288.5	295.1	299.4	301.3	303.3	305.3	307.3
127.5°	291.8	298.0	304.2	308.5	310.8	313.1	315.3	317.6
130°	299.5	305.7	312.0	316.0	317.8	319.6	321.4	323.3
132.5°	307.1	313.1	319.0	323.0	325.0	327.0	329.0	331.0
135°	316.9	322.5	328.0	331.7	333.6	335.5	337.4	339.3
137.5°	327.9	332.8	337.8	341.2	343.0	344.9	346.7	348.5
140°	335.6	340.1	344.7	347.8	349.5	351.2	352.9	354.6
142.5°	343.9	347.9	352.0	354.7	356.2	357.7	359.1	360.6
145°	357.5	359.5	361.6	363.2	364.4	365.6	366.7	367.9
147.5°	370.1	370.4	370.6	371.2	372.3	373.3	374.4	375.4
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)