

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: P332674-935

Luminaire Tested: **SA4XXDIP-C1195D365U935-4F0-1E-UDD-D1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P332674-935
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-C1195D365U935-4F0-1E-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

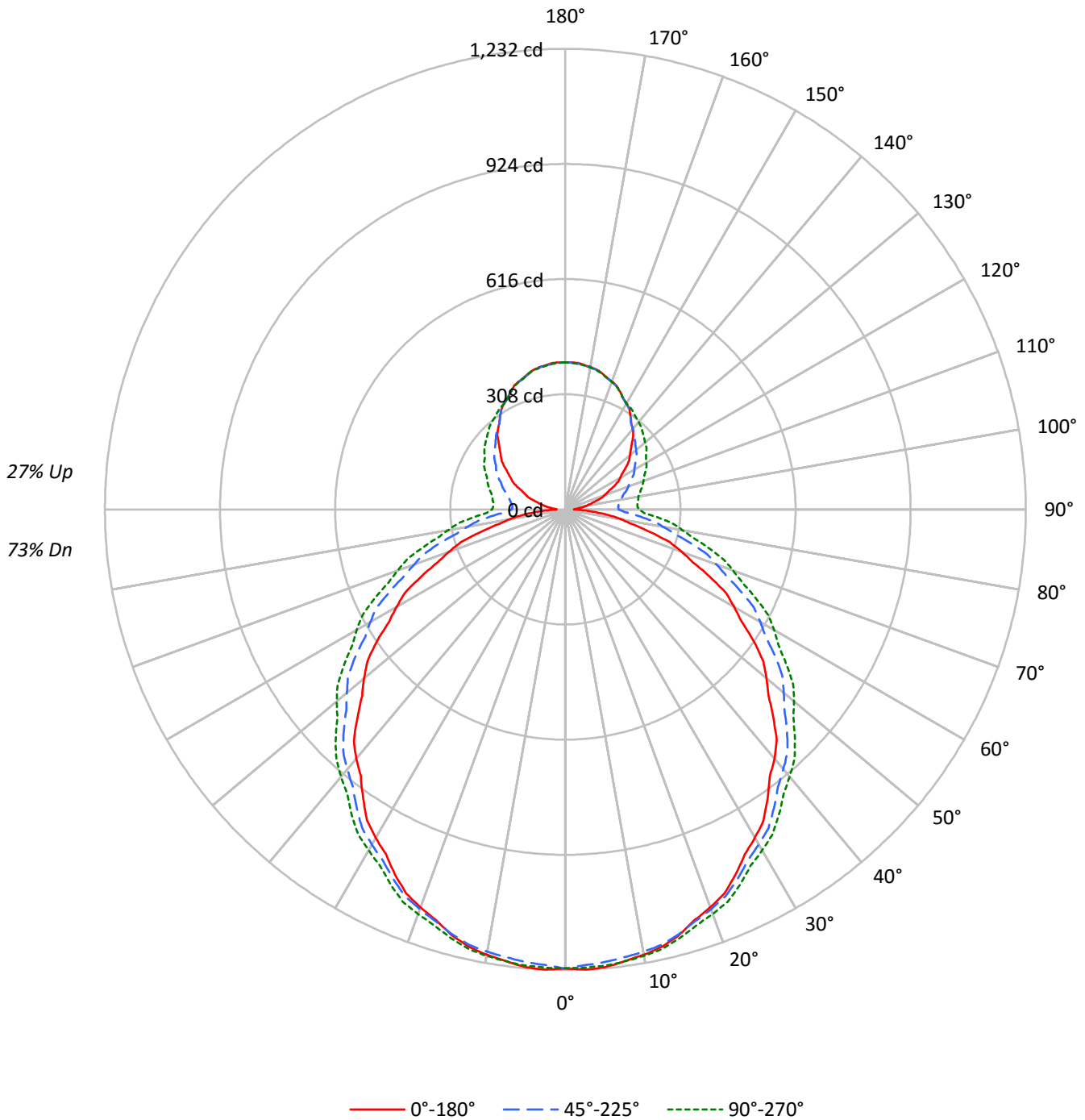
Lumens per Lamp: N/A
Luminaire Lumens: 5277.8 lumens
Efficiency: N/A
Efficacy: 106.0 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')
CIE Type: Semi-Direct

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°	9912	9912	9912
5°	9942	9687	9715
10°	9882	9528	9521
15°	9793	9345	9294
20°	9660	9143	9072
25°	9509	8916	8829
30°	9346	8690	8579
35°	9161	8459	8360
40°	9014	8239	8132
45°	8795	8036	7936
50°	8610	7802	7728
55°	8420	7582	7486
60°	8121	7301	7265
65°	7793	6999	6992
70°	7397	6655	6676
75°	6845	6278	6390
80°	6233	5915	6107
85°	5446	5591	5943



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	116.3	2.2
10°-20°	333.1	6.3
20°-30°	503.7	9.5
30°-40°	609.4	11.5
40°-50°	644.3	12.2
50°-60°	606.4	11.5
60°-70°	503.1	9.5
70°-80°	353.4	6.7
80°-90°	200.9	3.8
90°-100°	144.6	2.7
100°-110°	164.7	3.1
110°-120°	189.4	3.6
120°-130°	205.3	3.9
130°-140°	207.6	3.9
140°-150°	192.8	3.7
150°-160°	159.7	3.0
160°-170°	106.2	2.0
170°-180°	37.2	0.7
0°-30°	953.1	18.1
0°-40°	1562.5	29.6
0°-60°	2813.1	53.3
0°-90°	3870.5	73.3
90°-120°	498.6	9.4
90°-150°	1104.2	20.9
90°-180°	1407.0	26.7
0°-180°	5277.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1228	1228	1228	1228	1228	
5°	1229	1225	1215	1226	1225	117
15°	1178	1179	1176	1187	1186	332
25°	1078	1086	1090	1105	1107	496
35°	943	959	973	992	997	590
45°	786	813	839	861	869	608
55°	616	646	686	712	722	549
65°	426	470	517	550	562	422
75°	236	288	345	382	396	252
85°	73	131	192	232	248	78
90°	23	81	143	183	196	16
95°	36	85	143	179	193	35
105°	83	112	163	197	210	89
115°	141	155	197	225	236	139
125°	199	199	231	256	265	177
135°	252	254	263	284	292	195
145°	304	304	304	312	317	190
155°	347	347	347	348	347	160
165°	378	377	376	378	377	106
175°	393	391	391	393	391	37
180°	393	393	393	393	393	



TEST NUMBER: P332674-935

CATALOG NUMBER: SA4XXDIP-C1195D365U935-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1227.8	1227.8	1227.8	1227.8	1227.8	1227.8	1227.8	1227.8	1227.8	1227.8	1227.8
2.5°	1232.2	1231.4	1230.7	1229.9	1229.2	1227.9	1225.9	1224.0	1222.0	1220.0	1221.8
5°	1229.1	1228.2	1227.3	1226.4	1225.5	1223.9	1221.8	1219.6	1217.5	1215.4	1217.8
7.5°	1218.7	1218.1	1217.5	1217.0	1216.5	1215.3	1213.6	1211.8	1210.0	1208.2	1211.0
10°	1209.9	1209.5	1209.3	1208.9	1208.7	1207.7	1206.2	1204.7	1203.2	1201.6	1204.4
12.5°	1197.7	1197.7	1197.7	1197.6	1197.6	1197.0	1195.9	1194.9	1193.9	1192.8	1195.3
15°	1178.3	1178.5	1178.9	1179.1	1179.5	1179.1	1178.3	1177.3	1176.4	1175.5	1178.3
17.5°	1151.6	1152.5	1153.4	1154.3	1155.2	1155.6	1155.5	1155.2	1155.0	1154.9	1157.7
20°	1132.9	1133.8	1134.7	1135.7	1136.5	1137.1	1137.5	1137.8	1138.1	1138.4	1141.4
22.5°	1112.0	1113.1	1114.3	1115.4	1116.6	1117.5	1118.0	1118.6	1119.1	1119.6	1122.7
25°	1077.9	1079.7	1081.6	1083.4	1085.2	1086.6	1087.5	1088.4	1089.3	1090.3	1093.6
27.5°	1039.9	1042.7	1045.3	1048.0	1050.7	1052.7	1054.1	1055.6	1057.0	1058.3	1061.4
30°	1014.6	1017.1	1019.5	1022.0	1024.4	1026.7	1028.8	1031.0	1033.1	1035.3	1038.6
32.5°	987.1	990.1	993.0	995.9	998.8	1001.5	1003.9	1006.3	1008.7	1011.1	1014.9
35°	943.1	946.8	950.5	954.2	957.8	961.1	964.2	967.2	970.3	973.4	977.7
37.5°	898.9	903.1	907.3	911.5	915.8	919.7	923.5	927.3	931.1	934.9	939.3
40°	870.3	874.3	878.2	882.2	886.1	890.3	894.6	898.9	903.1	907.4	912.0
42.5°	837.3	841.7	846.2	850.7	855.1	859.9	864.9	869.9	874.9	879.9	885.0
45°	786.4	792.2	798.1	803.8	809.6	815.5	821.2	827.1	832.8	838.7	843.9
47.5°	737.7	743.7	749.8	755.7	761.7	768.1	774.8	781.5	788.2	795.0	800.3
50°	702.6	709.3	716.0	722.7	729.4	736.2	742.9	749.6	756.3	763.0	769.1
52.5°	667.4	674.1	680.8	687.5	694.2	701.5	709.1	716.9	724.5	732.3	738.4
55°	616.0	622.3	628.8	635.2	641.6	649.4	658.6	667.7	676.9	686.0	692.2
57.5°	558.4	566.5	574.4	582.3	590.2	598.7	607.9	617.0	626.1	635.2	642.5
60°	521.1	529.0	536.9	544.9	552.8	561.9	572.0	582.0	592.1	602.2	609.2
62.5°	484.7	493.4	502.1	510.8	519.4	528.8	539.0	549.1	559.1	569.2	576.2
65°	426.2	436.0	445.7	455.6	465.3	475.4	485.8	496.2	506.5	516.9	524.6
67.5°	369.8	380.2	390.6	401.0	411.4	422.1	433.3	444.4	455.5	466.7	474.4
70°	331.3	341.7	352.1	362.5	372.9	383.9	395.5	407.1	418.7	430.3	438.6
72.5°	293.9	304.5	315.2	325.8	336.5	347.9	360.3	372.6	385.0	397.4	405.4
75°	236.5	247.8	259.1	270.4	281.7	293.8	306.6	319.4	332.3	345.1	353.6
77.5°	182.9	194.8	206.8	218.8	230.7	243.5	256.9	270.4	283.8	297.2	305.9
80°	149.9	162.0	174.3	186.5	198.7	211.5	225.0	238.5	251.9	265.4	274.5
82.5°	116.8	129.6	142.3	155.0	167.7	180.8	194.2	207.7	221.1	234.5	243.9
85°	72.8	85.7	98.5	111.3	124.2	137.5	151.2	165.0	178.7	192.5	201.6
87.5°	40.9	53.5	66.1	78.7	91.4	104.4	117.9	131.4	144.8	158.3	167.3
90°	22.9	35.9	48.8	61.8	74.7	88.1	101.8	115.5	129.2	142.8	152.1
92.5°	27.4	39.3	51.1	62.9	74.8	87.5	101.0	114.5	128.0	141.5	150.4
95°	36.2	46.8	57.5	68.2	78.9	90.7	103.8	116.8	129.8	142.8	151.2
97.5°	48.1	57.3	66.5	75.6	84.7	95.8	108.7	121.7	134.7	147.7	155.9
100°	57.7	66.0	74.1	82.4	90.6	100.9	113.5	126.0	138.5	151.0	159.5
102.5°	68.9	76.0	83.1	90.1	97.2	106.9	119.1	131.3	143.5	155.8	163.9
105°	83.3	89.5	95.7	101.8	108.0	116.8	128.5	140.0	151.5	163.2	171.0
107.5°	100.9	106.0	111.2	116.2	121.3	129.2	139.9	150.7	161.4	172.1	179.9
110°	112.0	116.4	120.8	125.3	129.7	137.2	147.8	158.4	169.0	179.7	186.6



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CATALOG NUMBER: SA4XXDIP-C1195D365U935-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	123.6	127.3	131.2	135.0	138.8	145.8	155.8	165.9	176.0	186.1	192.9
115°	140.9	143.6	146.4	149.1	151.9	158.1	167.7	177.4	187.0	196.7	203.3
117.5°	158.5	160.2	162.0	163.6	165.3	170.7	179.7	188.7	197.7	206.7	212.8
120°	169.4	170.6	171.7	172.9	174.1	179.0	187.7	196.3	205.0	213.6	219.4
122.5°	181.8	182.0	182.4	182.6	183.0	187.2	195.4	203.8	212.1	220.3	226.2
125°	198.7	198.4	198.1	197.8	197.5	201.1	208.7	216.3	223.9	231.4	237.0
127.5°	215.0	214.9	214.8	214.7	214.6	217.5	223.2	228.9	234.7	240.5	245.8
130°	225.6	225.5	225.4	225.3	225.2	227.6	232.5	237.4	242.3	247.2	252.5
132.5°	237.5	237.4	237.2	237.0	236.9	238.8	242.6	246.5	250.4	254.2	259.3
135°	251.9	252.4	252.7	253.1	253.6	254.9	256.9	259.1	261.2	263.4	268.1
137.5°	269.1	269.0	268.9	268.7	268.6	269.1	270.3	271.5	272.6	273.7	278.0
140°	280.5	280.3	280.2	280.0	279.8	279.9	280.3	280.5	280.9	281.1	285.1
142.5°	289.9	290.0	290.1	290.2	290.2	290.1	289.9	289.6	289.4	289.1	292.7
145°	304.1	304.1	304.0	304.0	303.9	304.0	304.0	304.1	304.2	304.3	306.0
147.5°	318.5	318.5	318.5	318.5	318.6	318.5	318.5	318.4	318.4	318.3	318.5
150°	327.3	327.2	327.2	327.1	327.1	327.1	327.1	327.1	327.1	327.1	327.1
152.5°	334.4	334.5	334.6	334.7	334.8	334.8	334.9	335.0	335.0	335.1	335.3
155°	346.8	346.8	346.8	346.8	346.8	346.8	346.7	346.6	346.6	346.6	346.8
157.5°	357.6	357.4	357.3	357.2	357.1	357.0	357.0	357.0	357.0	357.0	357.1
160°	363.9	363.8	363.8	363.7	363.6	363.5	363.5	363.4	363.3	363.3	363.5
162.5°	369.7	369.5	369.4	369.2	369.0	368.9	368.9	368.8	368.7	368.6	369.0
165°	377.5	377.4	377.2	376.9	376.8	376.6	376.4	376.3	376.2	376.1	376.4
167.5°	383.6	383.3	383.1	382.7	382.5	382.3	382.4	382.4	382.4	382.4	382.8
170°	387.0	386.7	386.3	386.0	385.6	385.6	385.6	385.6	385.7	385.8	386.2
172.5°	389.4	389.2	388.8	388.6	388.3	388.1	388.1	388.2	388.2	388.2	388.7
175°	392.8	392.4	392.1	391.8	391.4	391.2	391.2	391.1	391.1	391.0	391.4
177.5°	393.9	393.6	393.3	393.0	392.8	392.7	392.7	392.7	392.7	392.7	393.0
180°	393.4	393.4	393.4	393.4	393.4	393.4	393.4	393.4	393.4	393.4	393.4



TEST NUMBER: P332674-935

CATALOG NUMBER: SA4XXDIP-C1195D365U935-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1227.8	1227.8	1227.8	1227.8	1227.8	1227.8	1227.8	1227.8
2.5°	1223.5	1225.2	1226.9	1227.6	1227.4	1227.1	1226.9	1226.7
5°	1220.3	1222.7	1225.1	1226.2	1225.9	1225.6	1225.3	1225.0
7.5°	1213.8	1216.5	1219.3	1220.5	1220.1	1219.9	1219.5	1219.3
10°	1207.1	1209.9	1212.6	1213.8	1213.6	1213.2	1212.9	1212.6
12.5°	1197.8	1200.3	1202.8	1204.1	1204.0	1203.9	1203.9	1203.9
15°	1181.0	1183.8	1186.5	1187.7	1187.4	1187.1	1186.8	1186.5
17.5°	1160.5	1163.3	1166.1	1167.4	1167.2	1166.9	1166.7	1166.4
20°	1144.5	1147.5	1150.6	1152.1	1152.1	1152.1	1152.1	1152.1
22.5°	1125.8	1128.9	1131.9	1133.7	1134.2	1134.6	1135.1	1135.7
25°	1097.0	1100.4	1103.7	1105.5	1105.9	1106.1	1106.5	1106.7
27.5°	1064.6	1067.7	1070.8	1072.5	1073.0	1073.3	1073.7	1074.0
30°	1042.0	1045.3	1048.7	1050.7	1051.3	1051.9	1052.5	1053.2
32.5°	1018.7	1022.6	1026.5	1028.7	1029.3	1029.9	1030.5	1031.1
35°	982.0	986.2	990.5	993.1	994.0	995.0	995.8	996.8
37.5°	943.6	947.9	952.3	954.9	955.9	956.8	957.9	958.8
40°	916.5	921.2	925.7	928.7	929.9	931.1	932.3	933.5
42.5°	890.0	895.1	900.2	903.2	904.2	905.2	906.1	907.1
45°	849.0	854.3	859.5	862.8	864.4	865.8	867.4	868.9
47.5°	805.7	811.1	816.5	820.0	821.9	823.7	825.5	827.4
50°	775.2	781.4	787.5	791.4	793.3	795.1	796.9	798.7
52.5°	744.5	750.6	756.6	760.7	762.5	764.3	766.1	768.0
55°	698.3	704.4	710.5	714.5	716.3	718.2	720.0	721.8
57.5°	649.7	657.0	664.3	668.7	670.5	672.2	673.9	675.6
60°	616.2	623.3	630.3	635.0	637.5	639.9	642.4	644.8
62.5°	583.2	590.3	597.3	602.0	604.5	606.9	609.3	611.8
65°	532.2	539.8	547.5	552.5	555.0	557.4	559.9	562.3
67.5°	482.2	489.9	497.7	502.7	505.1	507.5	509.9	512.3
70°	446.9	455.0	463.3	468.6	470.6	472.8	474.9	477.1
72.5°	413.4	421.4	429.4	434.5	437.0	439.3	441.7	444.1
75°	362.2	370.7	379.3	385.0	387.7	390.5	393.2	396.0
77.5°	314.6	323.3	331.9	337.8	340.7	343.6	346.6	349.5
80°	283.7	292.8	302.0	307.8	310.2	312.7	315.1	317.6
82.5°	253.4	262.8	272.2	278.3	280.9	283.6	286.3	289.0
85°	210.8	220.0	229.1	235.2	238.3	241.3	244.4	247.5
87.5°	176.2	185.2	194.1	199.9	202.7	205.3	208.1	210.8
90°	161.4	170.6	179.9	185.8	188.4	191.0	193.6	196.1
92.5°	159.3	168.2	177.0	182.7	185.2	187.7	190.3	192.8
95°	159.6	168.1	176.5	182.1	184.9	187.6	190.4	193.1
97.5°	164.2	172.4	180.6	186.1	188.7	191.3	194.0	196.6
100°	167.8	176.2	184.6	189.9	192.0	194.2	196.2	198.4
102.5°	172.1	180.4	188.6	193.8	196.3	198.7	201.1	203.6
105°	178.8	186.7	194.5	199.8	202.4	205.1	207.7	210.3
107.5°	187.5	195.3	202.9	207.9	210.1	212.3	214.5	216.6
110°	193.5	200.4	207.2	212.0	214.6	217.3	220.0	222.6



TEST NUMBER: P332674-935

CATALOG NUMBER: SA4XXDIP-C1195D365U935-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	199.6	206.4	213.1	217.7	220.2	222.7	225.2	227.6
115°	210.0	216.6	223.3	227.6	229.7	231.8	233.8	235.9
117.5°	219.0	225.1	231.3	235.5	237.7	240.0	242.4	244.7
120°	225.2	230.9	236.7	240.9	243.5	246.1	248.7	251.2
122.5°	232.0	238.0	243.8	247.8	249.7	251.7	253.7	255.5
125°	242.7	248.4	254.1	257.8	259.4	261.1	262.9	264.6
127.5°	251.2	256.6	261.9	265.6	267.6	269.6	271.5	273.5
130°	257.9	263.2	268.6	272.1	273.6	275.2	276.7	278.4
132.5°	264.4	269.6	274.7	278.1	279.8	281.5	283.3	285.0
135°	272.9	277.7	282.4	285.6	287.2	288.9	290.5	292.1
137.5°	282.3	286.5	290.8	293.8	295.3	297.0	298.5	300.1
140°	289.0	292.8	296.8	299.5	300.9	302.4	303.8	305.3
142.5°	296.1	299.5	303.1	305.4	306.7	308.0	309.2	310.5
145°	307.8	309.5	311.3	312.7	313.7	314.8	315.7	316.8
147.5°	318.7	318.9	319.1	319.6	320.6	321.4	322.4	323.2
150°	327.1	327.1	327.1	327.0	327.0	326.9	326.8	326.7
152.5°	335.4	335.6	335.8	335.7	335.5	335.4	335.2	335.0
155°	347.1	347.3	347.6	347.6	347.3	347.1	346.8	346.6
157.5°	357.3	357.6	357.7	357.7	357.5	357.3	357.1	356.8
160°	363.7	363.9	364.1	364.0	363.7	363.3	363.0	362.7
162.5°	369.4	369.7	370.1	370.1	369.8	369.5	369.1	368.8
165°	376.9	377.3	377.6	377.7	377.5	377.2	376.9	376.7
167.5°	383.2	383.6	384.0	384.0	383.6	383.1	382.7	382.3
170°	386.6	387.0	387.4	387.4	386.9	386.4	386.0	385.5
172.5°	389.2	389.6	390.0	390.0	389.6	389.1	388.7	388.1
175°	391.9	392.4	392.9	392.9	392.4	391.9	391.4	391.0
177.5°	393.4	393.8	394.2	394.2	393.7	393.3	392.9	392.4
180°	393.4	393.4	393.4	393.4	393.4	393.4	393.4	393.4

(END OF REPORT)