

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: P332682-927

Luminaire Tested: **SA4XXDIP-C1195D590U927-4F0-1E-UDD-D**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P332682-927
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-C1195D590U927-4F0-1E-UDD-D
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1195 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 590 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5721.3 lumens
Efficiency: N/A
Efficacy: 103.8 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

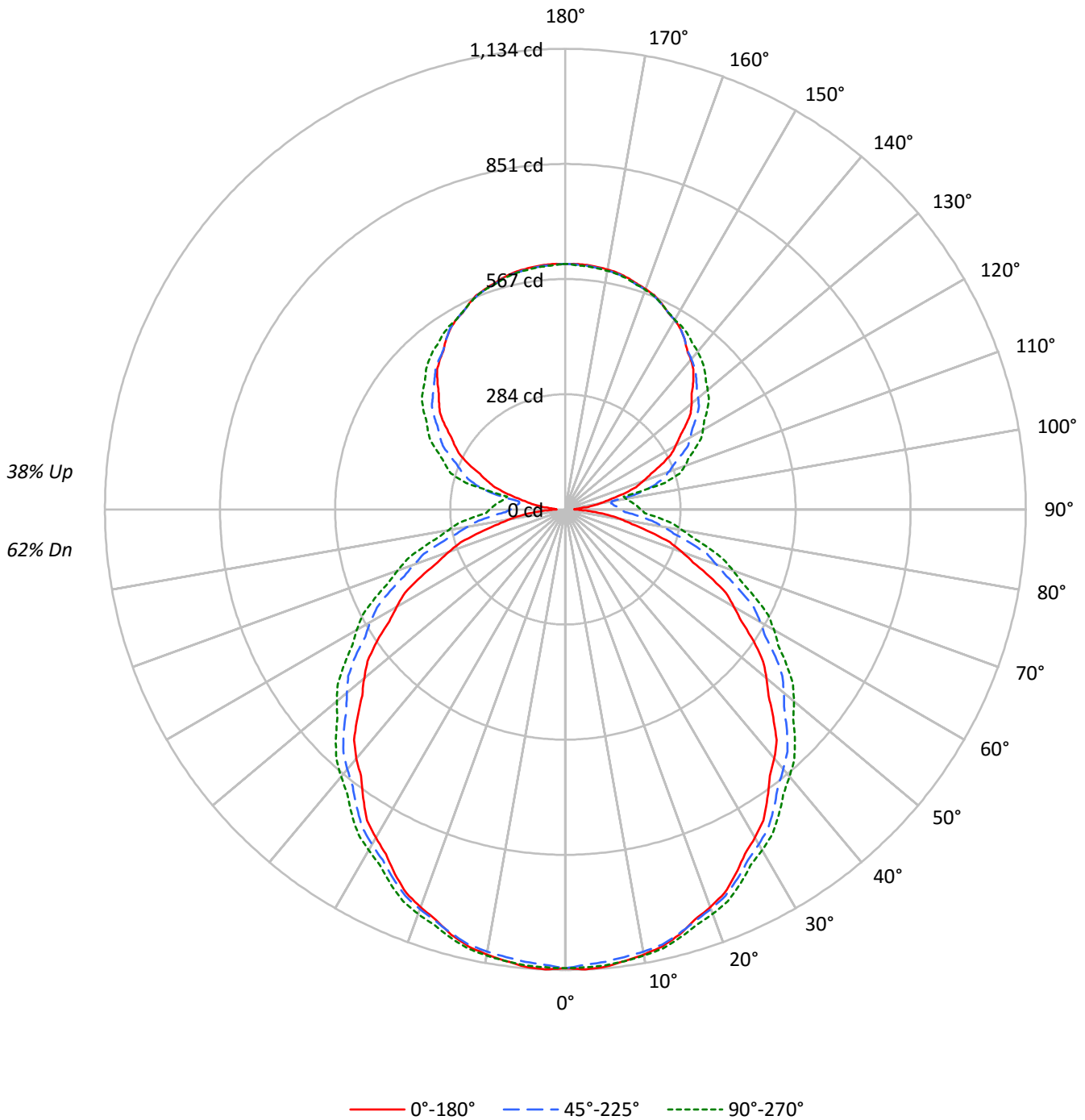
Input Watts (W): 55.1
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332682-927

CATALOG NUMBER: SA4XXDIP-C1195D590U927-4F0-1E-UDD-D

Luminous Intensity Polar Plot





TEST NUMBER: P332682-927

CATALOG NUMBER: SA4XXDIP-C1195D590U927-4F0-1E-UDD-D

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	110	110	110	110	103	103	103	103	90	90	90	78	78	78	67	67	67	62				
1	99	94	90	86	93	88	84	81	77	74	72	67	65	63	58	56	54	50				
2	90	82	75	69	84	77	70	65	67	62	58	58	55	51	50	47	45	41				
3	82	71	63	57	76	67	60	54	59	53	48	51	47	43	44	40	38	34				
4	75	63	54	48	69	59	51	45	52	46	41	45	40	36	39	35	32	29				
5	68	56	47	41	64	53	45	39	46	40	35	40	35	31	35	31	28	25				
6	63	50	41	35	59	47	39	34	42	35	30	36	31	27	32	27	24	21				
7	58	45	37	31	54	43	35	29	38	31	27	33	28	24	29	25	21	19				
8	54	41	33	27	50	39	31	26	34	28	24	30	25	21	26	22	19	17				
9	50	37	30	24	47	35	28	23	31	25	21	28	23	19	24	20	17	15				
10	47	34	27	22	44	33	26	21	29	23	19	26	21	17	23	18	16	14				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9120	9120	9120
5°	9147	8912	8938
10°	9092	8767	8760
15°	9010	8598	8551
20°	8888	8412	8347
25°	8749	8203	8124
30°	8599	7995	7894
35°	8429	7783	7692
40°	8293	7580	7482
45°	8093	7394	7302
50°	7922	7178	7111
55°	7746	6976	6888
60°	7471	6718	6685
65°	7170	6440	6434
70°	6805	6123	6141
75°	6298	5775	5878
80°	5734	5442	5618
85°	5012	5144	5468



TEST NUMBER: P332682-927

CATALOG NUMBER: SA4XXDIP-C1195D590U927-4F0-1E-UDD-D

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	107.0	1.9
10°-20°	306.5	5.4
20°-30°	463.4	8.1
30°-40°	560.7	9.8
40°-50°	592.8	10.4
50°-60°	557.9	9.8
60°-70°	462.9	8.1
70°-80°	325.1	5.7
80°-90°	185.5	3.2
90°-100°	129.8	2.3
100°-110°	212.5	3.7
110°-120°	306.3	5.4
120°-130°	350.5	6.1
130°-140°	355.5	6.2
140°-150°	322.8	5.6
150°-160°	258.2	4.5
160°-170°	166.5	2.9
170°-180°	57.4	1.0
0°-30°	876.9	15.3
0°-40°	1437.6	25.1
0°-60°	2588.3	45.2
0°-90°	3561.8	62.3
90°-120°	648.6	11.3
90°-150°	1677.5	29.3
90°-180°	2160.0	37.8
0°-180°	5721.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1130	1130	1130	1130	1130	
5°	1131	1127	1118	1128	1127	107
15°	1084	1085	1082	1092	1092	305
25°	992	999	1003	1016	1018	457
35°	868	883	896	912	917	543
45°	724	748	772	792	800	559
55°	567	594	631	656	664	505
65°	392	433	476	506	517	389
75°	218	265	318	352	364	231
85°	67	120	177	214	228	71
90°	22	77	135	173	186	15
95°	41	69	120	155	169	45
105°	147	177	224	258	254	155
115°	262	276	314	342	352	258
125°	362	364	393	418	427	323
135°	445	446	456	476	485	343
145°	512	512	512	520	526	320
155°	560	560	559	561	559	258
165°	591	588	588	592	588	167
175°	604	602	602	605	601	58
180°	604	604	604	604	604	



TEST NUMBER: P332682-927

CATALOG NUMBER: SA4XXDIP-C1195D590U927-4F0-1E-UDD-D

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1129.7	1129.7	1129.7	1129.7	1129.7	1129.7	1129.7	1129.7	1129.7	1129.7	1129.7
2.5°	1133.7	1133.0	1132.3	1131.6	1131.0	1129.7	1127.9	1126.2	1124.3	1122.5	1124.1
5°	1130.8	1130.0	1129.2	1128.4	1127.5	1126.1	1124.1	1122.1	1120.2	1118.2	1120.5
7.5°	1121.3	1120.8	1120.2	1119.7	1119.3	1118.2	1116.6	1114.9	1113.3	1111.7	1114.2
10°	1113.2	1112.9	1112.6	1112.3	1112.1	1111.2	1109.8	1108.4	1107.0	1105.6	1108.1
12.5°	1102.0	1102.0	1101.9	1101.8	1101.8	1101.3	1100.3	1099.4	1098.4	1097.5	1099.8
15°	1084.1	1084.3	1084.7	1084.9	1085.2	1084.9	1084.1	1083.2	1082.4	1081.6	1084.1
17.5°	1059.5	1060.4	1061.2	1062.1	1062.9	1063.3	1063.1	1062.9	1062.7	1062.6	1065.2
20°	1042.4	1043.1	1044.0	1044.9	1045.7	1046.2	1046.6	1046.9	1047.1	1047.4	1050.2
22.5°	1023.1	1024.1	1025.2	1026.3	1027.4	1028.2	1028.6	1029.2	1029.7	1030.2	1033.0
25°	991.7	993.4	995.1	996.8	998.5	999.7	1000.6	1001.4	1002.3	1003.1	1006.2
27.5°	956.8	959.3	961.8	964.2	966.7	968.6	969.9	971.2	972.5	973.8	976.6
30°	933.5	935.8	938.0	940.3	942.5	944.7	946.6	948.6	950.5	952.5	955.6
32.5°	908.2	910.9	913.6	916.3	919.0	921.5	923.7	925.9	928.0	930.3	933.8
35°	867.8	871.2	874.5	877.9	881.2	884.3	887.2	889.9	892.8	895.6	899.5
37.5°	827.0	830.9	834.8	838.7	842.6	846.2	849.7	853.2	856.7	860.2	864.2
40°	800.7	804.4	808.0	811.7	815.3	819.1	823.1	827.0	830.9	834.9	839.1
42.5°	770.4	774.4	778.6	782.7	786.8	791.2	795.7	800.3	804.9	809.6	814.3
45°	723.6	728.9	734.3	739.6	744.9	750.3	755.6	761.0	766.3	771.7	776.4
47.5°	678.7	684.3	689.8	695.3	700.8	706.7	712.9	719.1	725.2	731.4	736.3
50°	646.4	652.6	658.8	665.0	671.1	677.3	683.5	689.7	695.9	702.0	707.7
52.5°	614.0	620.2	626.4	632.6	638.7	645.4	652.4	659.6	666.6	673.8	679.4
55°	566.7	572.6	578.5	584.4	590.3	597.5	605.9	614.3	622.8	631.2	636.8
57.5°	513.8	521.2	528.5	535.8	543.0	550.9	559.3	567.7	576.1	584.4	591.1
60°	479.4	486.7	494.0	501.4	508.7	517.0	526.2	535.5	544.8	554.1	560.5
62.5°	446.0	454.0	462.0	470.0	477.9	486.6	495.9	505.2	514.4	523.7	530.1
65°	392.1	401.2	410.1	419.1	428.1	437.4	446.9	456.5	466.0	475.6	482.7
67.5°	340.2	349.8	359.4	368.9	378.5	388.4	398.6	408.8	419.1	429.4	436.5
70°	304.8	314.4	324.0	333.5	343.1	353.2	363.8	374.5	385.2	395.9	403.5
72.5°	270.5	280.2	290.0	299.8	309.6	320.1	331.5	342.9	354.2	365.6	373.0
75°	217.6	228.0	238.4	248.7	259.2	270.3	282.1	293.9	305.7	317.5	325.3
77.5°	168.3	179.3	190.3	201.3	212.3	224.0	236.4	248.7	261.1	273.5	281.5
80°	137.9	149.1	160.3	171.6	182.8	194.6	207.0	219.4	231.8	244.2	252.5
82.5°	107.5	119.2	130.9	142.6	154.3	166.4	178.7	191.1	203.4	215.8	224.4
85°	67.0	78.8	90.6	102.4	114.2	126.5	139.1	151.8	164.5	177.1	185.5
87.5°	37.7	49.4	61.1	72.8	84.4	96.6	109.0	121.5	134.0	146.5	154.7
90°	21.6	33.9	46.3	58.6	71.0	83.6	96.5	109.4	122.3	135.1	143.9
92.5°	25.0	35.1	45.3	55.5	65.7	77.2	90.1	103.0	115.8	128.7	137.3
95°	41.3	47.1	53.0	58.9	64.7	73.5	85.1	96.7	108.4	120.0	128.2
97.5°	67.7	77.8	87.9	98.1	108.1	113.3	113.5	113.8	113.9	114.2	121.6
100°	88.0	97.1	106.2	115.3	124.5	127.6	124.7	121.8	118.9	116.1	121.9
102.5°	111.9	119.6	127.4	135.1	142.8	151.1	160.1	169.1	177.9	186.9	175.8
105°	147.4	153.6	159.9	166.0	172.3	180.9	191.8	202.6	213.6	224.5	232.4
107.5°	182.5	187.4	192.3	197.3	202.2	209.8	220.4	230.9	241.4	251.9	259.3
110°	205.3	209.5	213.8	218.0	222.3	229.7	240.0	250.5	260.9	271.4	278.1



TEST NUMBER: P332682-927

CATALOG NUMBER: SA4XXDIP-C1195D590U927-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	227.4	231.5	235.5	239.6	243.6	250.4	260.1	269.7	279.4	289.1	295.3
115°	261.6	264.4	267.2	270.1	272.9	278.8	287.6	296.5	305.4	314.3	320.7
117.5°	293.3	295.3	297.2	299.1	301.0	306.3	314.9	323.5	332.1	340.7	346.5
120°	314.0	315.3	316.6	317.8	319.0	323.7	331.8	339.8	347.8	355.9	361.7
122.5°	334.3	334.7	335.1	335.6	336.0	340.1	347.9	355.8	363.6	371.5	377.2
125°	362.0	362.2	362.3	362.4	362.5	366.0	372.8	379.7	386.5	393.3	398.9
127.5°	389.3	389.1	388.9	388.7	388.6	391.4	397.3	403.1	408.9	414.8	419.9
130°	406.0	405.8	405.6	405.4	405.3	407.6	412.3	417.2	421.9	426.7	431.9
132.5°	422.2	422.2	422.1	421.9	421.8	423.7	427.8	431.7	435.7	439.7	444.7
135°	445.4	445.3	445.2	445.0	445.0	446.1	448.5	450.8	453.2	455.6	460.3
137.5°	467.0	466.8	466.5	466.3	466.0	466.6	468.0	469.4	470.8	472.1	476.5
140°	481.1	481.0	480.9	480.9	480.8	480.9	481.4	481.9	482.4	482.9	486.8
142.5°	492.7	493.1	493.3	493.6	493.9	494.1	494.0	494.0	493.9	493.8	497.3
145°	511.9	511.9	511.9	512.0	512.0	512.0	512.0	512.0	512.0	512.0	513.7
147.5°	527.4	527.6	527.9	528.2	528.5	528.5	528.5	528.4	528.2	528.1	528.5
150°	538.5	538.7	538.8	538.9	539.0	539.1	538.9	538.8	538.8	538.6	538.6
152.5°	546.9	547.2	547.5	547.7	548.0	548.0	547.9	547.7	547.5	547.3	547.5
155°	559.9	560.0	560.1	560.2	560.3	560.2	559.9	559.6	559.3	559.0	559.4
157.5°	571.0	570.9	570.8	570.8	570.8	570.5	570.2	569.9	569.5	569.2	569.7
160°	577.5	577.2	576.9	576.6	576.3	576.1	576.0	575.9	575.8	575.7	576.3
162.5°	583.3	582.9	582.5	582.2	581.8	581.5	581.4	581.3	581.2	581.1	581.7
165°	590.6	590.1	589.6	589.1	588.6	588.4	588.4	588.4	588.4	588.4	589.1
167.5°	596.4	595.9	595.3	594.8	594.3	594.0	594.0	593.9	593.8	593.7	594.7
170°	599.7	599.0	598.4	597.9	597.2	597.0	597.1	597.1	597.3	597.4	598.2
172.5°	601.8	601.2	600.6	600.0	599.4	599.1	599.3	599.4	599.4	599.5	600.4
175°	604.2	603.6	602.9	602.4	601.7	601.5	601.6	601.7	601.8	601.9	602.8
177.5°	605.2	604.7	604.1	603.6	603.0	602.8	602.9	603.1	603.2	603.4	604.1
180°	604.2	604.2	604.2	604.2	604.2	604.2	604.2	604.2	604.2	604.2	604.2



TEST NUMBER: P332682-927

CATALOG NUMBER: SA4XXDIP-C1195D590U927-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1129.7	1129.7	1129.7	1129.7	1129.7	1129.7	1129.7	1129.7
2.5°	1125.7	1127.3	1128.9	1129.5	1129.3	1129.0	1128.9	1128.6
5°	1122.8	1125.0	1127.2	1128.2	1127.9	1127.7	1127.4	1127.1
7.5°	1116.7	1119.3	1121.8	1122.9	1122.6	1122.4	1122.0	1121.8
10°	1110.6	1113.2	1115.7	1116.8	1116.6	1116.3	1115.9	1115.7
12.5°	1102.1	1104.4	1106.7	1107.9	1107.8	1107.7	1107.6	1107.6
15°	1086.6	1089.2	1091.6	1092.8	1092.5	1092.3	1091.9	1091.6
17.5°	1067.8	1070.3	1072.9	1074.1	1073.9	1073.6	1073.4	1073.2
20°	1053.0	1055.8	1058.7	1060.0	1060.0	1060.0	1060.0	1060.0
22.5°	1035.8	1038.6	1041.4	1043.1	1043.5	1043.9	1044.4	1044.9
25°	1009.3	1012.4	1015.5	1017.2	1017.5	1017.7	1018.0	1018.3
27.5°	979.5	982.4	985.2	986.8	987.2	987.5	987.9	988.2
30°	958.7	961.8	964.9	966.7	967.3	967.8	968.4	969.0
32.5°	937.3	940.9	944.4	946.5	947.1	947.6	948.2	948.7
35°	903.5	907.4	911.3	913.7	914.6	915.4	916.2	917.1
37.5°	868.2	872.1	876.2	878.6	879.5	880.4	881.3	882.2
40°	843.3	847.6	851.8	854.4	855.6	856.7	857.8	858.9
42.5°	818.9	823.6	828.2	831.0	831.9	832.8	833.7	834.6
45°	781.2	786.0	790.8	793.8	795.3	796.6	798.0	799.5
47.5°	741.3	746.2	751.2	754.5	756.2	757.9	759.5	761.3
50°	713.3	718.9	724.5	728.2	729.9	731.6	733.2	734.9
52.5°	685.0	690.6	696.2	699.9	701.6	703.2	704.9	706.6
55°	642.5	648.1	653.7	657.4	659.0	660.8	662.4	664.1
57.5°	597.8	604.5	611.2	615.3	616.9	618.5	620.0	621.6
60°	567.0	573.5	579.9	584.2	586.5	588.7	591.0	593.3
62.5°	536.6	543.1	549.5	553.9	556.2	558.4	560.6	562.9
65°	489.6	496.7	503.7	508.3	510.6	512.9	515.2	517.4
67.5°	443.6	450.8	457.9	462.6	464.8	466.9	469.1	471.3
70°	411.1	418.7	426.3	431.1	433.0	435.0	437.0	438.9
72.5°	380.3	387.7	395.1	399.8	402.0	404.2	406.4	408.6
75°	333.3	341.1	349.0	354.2	356.7	359.3	361.8	364.3
77.5°	289.5	297.5	305.4	310.8	313.5	316.2	318.9	321.5
80°	261.0	269.4	277.9	283.2	285.4	287.7	289.9	292.2
82.5°	233.1	241.8	250.4	256.0	258.5	260.9	263.4	265.9
85°	193.9	202.4	210.8	216.4	219.3	222.0	224.9	227.7
87.5°	163.0	171.3	179.5	184.9	187.4	190.0	192.5	195.0
90°	152.7	161.4	170.2	175.8	178.2	180.7	183.2	185.6
92.5°	145.8	154.3	162.9	168.3	170.6	172.9	175.2	177.4
95°	136.4	144.6	152.7	158.2	160.8	163.4	166.0	168.7
97.5°	129.0	136.4	143.9	148.8	151.3	153.8	156.4	158.9
100°	127.8	133.6	139.6	143.5	145.6	147.7	149.7	151.8
102.5°	164.8	153.7	142.7	138.2	140.5	142.7	144.9	147.1
105°	240.3	248.3	256.2	259.5	258.1	256.7	255.4	254.1
107.5°	266.6	274.0	281.4	286.2	288.7	291.0	293.4	295.9
110°	284.7	291.4	298.0	302.7	305.2	307.8	310.3	312.8



TEST NUMBER: P332682-927

CATALOG NUMBER: SA4XXDIP-C1195D590U927-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	301.5	307.7	313.9	318.3	320.9	323.6	326.2	328.8
115°	327.1	333.5	339.8	344.0	346.0	348.0	349.9	351.9
117.5°	352.3	358.1	363.9	368.0	370.2	372.3	374.5	376.8
120°	367.6	373.4	379.2	383.1	385.2	387.2	389.3	391.3
122.5°	382.9	388.6	394.4	398.2	400.1	401.9	403.7	405.5
125°	404.6	410.3	415.9	419.6	421.4	423.2	424.9	426.7
127.5°	424.8	429.8	434.8	438.2	440.1	441.9	443.7	445.5
130°	437.0	442.2	447.4	450.8	452.5	454.2	455.9	457.6
132.5°	449.6	454.5	459.5	462.7	464.3	465.9	467.5	469.1
135°	465.0	469.7	474.4	477.7	479.6	481.4	483.3	485.2
137.5°	480.9	485.1	489.5	492.3	493.7	495.0	496.4	497.7
140°	490.8	494.7	498.7	501.5	503.0	504.5	506.0	507.5
142.5°	500.7	504.1	507.6	509.8	511.1	512.3	513.5	514.7
145°	515.6	517.4	519.1	520.7	522.0	523.3	524.7	526.0
147.5°	528.8	529.1	529.4	530.0	531.0	532.0	533.1	534.0
150°	538.6	538.6	538.6	538.7	538.8	538.9	539.0	539.1
152.5°	547.6	547.8	548.0	548.0	548.0	547.9	547.8	547.8
155°	559.8	560.2	560.5	560.6	560.3	560.0	559.8	559.4
157.5°	570.2	570.8	571.2	571.2	570.8	570.2	569.7	569.2
160°	576.9	577.5	578.1	578.1	577.5	576.9	576.3	575.7
162.5°	582.3	582.9	583.5	583.5	582.8	582.1	581.5	580.7
165°	589.9	590.7	591.6	591.5	590.6	589.7	588.8	587.9
167.5°	595.6	596.4	597.3	597.2	596.3	595.2	594.2	593.3
170°	599.0	599.8	600.6	600.5	599.5	598.5	597.5	596.5
172.5°	601.2	602.0	602.8	602.6	601.6	600.5	599.4	598.3
175°	603.7	604.6	605.5	605.4	604.2	602.9	601.7	600.6
177.5°	604.8	605.4	606.0	605.9	604.9	604.0	602.9	602.0
180°	604.2	604.2	604.2	604.2	604.2	604.2	604.2	604.2

(END OF REPORT)