

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: P332683-927

Luminaire Tested: **SA4XXDIP-C1195D590U927-4F0-1E-UDD-D1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P332683-927
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-C1195D590U927-4F0-1E-UDD-D1
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1195 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 590 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5473.3 lumens
Efficiency: N/A
Efficacy: 99.3 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

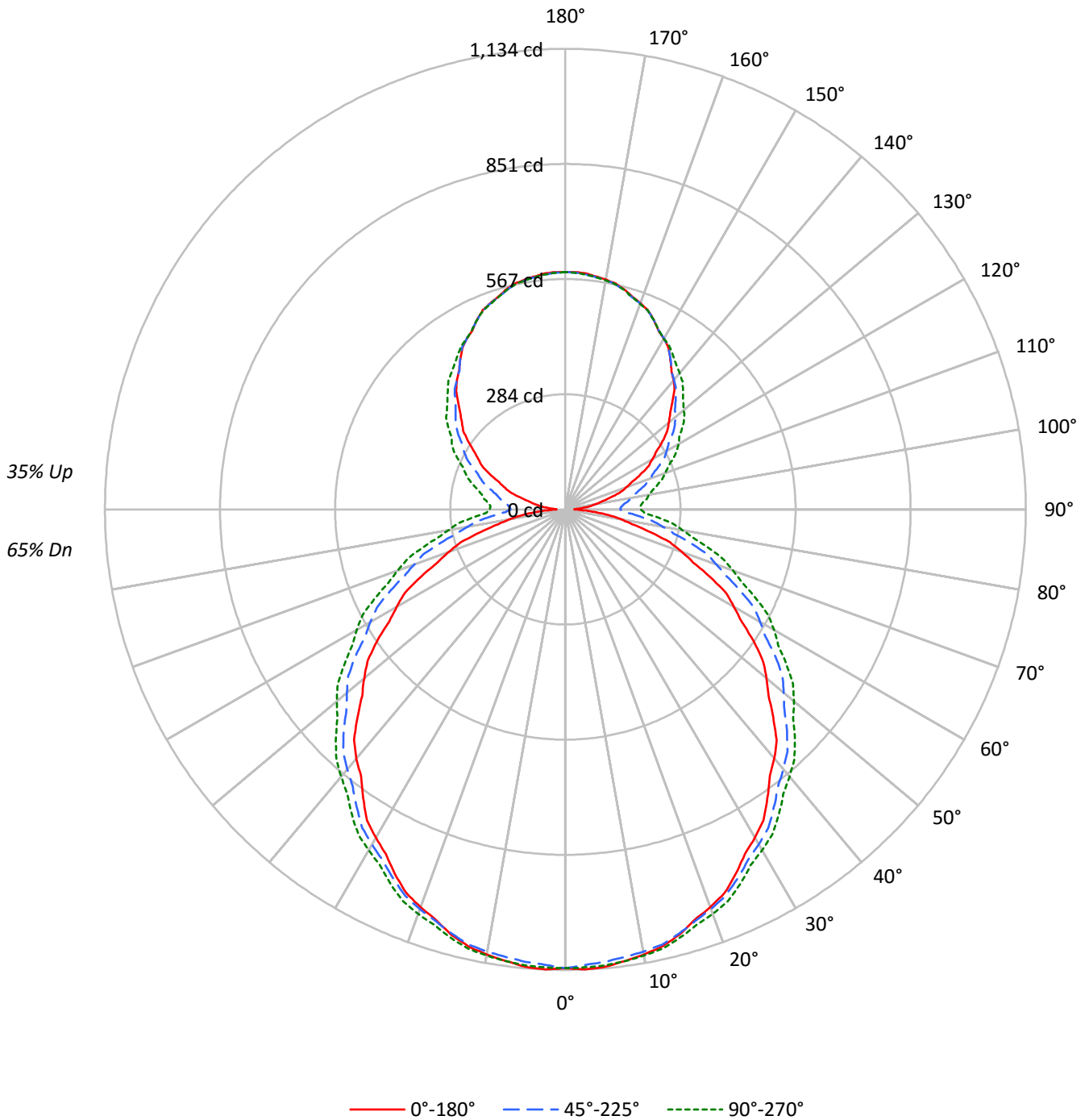
Input Watts (W): 55.1
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332683-927

CATALOG NUMBER: SA4XXDIP-C1195D590U927-4F0-1E-UDD-D1

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	111	111	111	111	104	104	104	104	92	92	92	80	80	80	70	70	70	65				
1	100	95	90	86	94	89	85	82	79	76	73	69	66	64	60	58	57	52				
2	90	82	75	69	84	77	71	66	68	63	59	60	56	53	52	49	47	43				
3	82	72	64	57	77	68	60	54	60	54	49	52	48	44	45	42	39	35				
4	75	63	55	48	70	60	52	46	53	46	42	46	41	37	40	36	33	30				
5	69	56	47	41	64	53	45	39	47	41	36	41	36	32	36	32	29	26				
6	63	50	42	35	59	48	40	34	42	36	31	37	32	28	33	28	25	22				
7	59	45	37	31	55	43	35	30	38	32	27	34	29	25	30	26	22	20				
8	54	41	33	27	51	39	32	26	35	29	24	31	26	22	27	23	20	18				
9	51	38	30	24	47	36	28	23	32	26	22	29	23	20	25	21	18	16				
10	47	35	27	22	44	33	26	21	30	24	19	26	21	18	23	19	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



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CATALOG NUMBER: SA4XXDIP-C1195D590U927-4F0-1E-UDD-D1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	107.0	2.0
10°-20°	306.5	5.6
20°-30°	463.4	8.5
30°-40°	560.7	10.2
40°-50°	592.8	10.8
50°-60°	557.9	10.2
60°-70°	462.9	8.5
70°-80°	325.1	5.9
80°-90°	185.5	3.4
90°-100°	147.7	2.7
100°-110°	194.9	3.6
110°-120°	248.0	4.5
120°-130°	286.0	5.2
130°-140°	300.1	5.5
140°-150°	284.6	5.2
150°-160°	237.1	4.3
160°-170°	157.8	2.9
170°-180°	55.2	1.0
0°-30°	876.9	16.0
0°-40°	1437.6	26.3
0°-60°	2588.3	47.3
0°-90°	3561.8	65.1
90°-120°	590.6	10.8
90°-150°	1461.3	26.7
90°-180°	1911.0	34.9
0°-180°	5473.3	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°	44	90	144	179	191	43
105°	117	144	191	223	235	125
115°	205	218	256	282	291	202
125°	292	292	322	344	352	260
135°	373	376	384	403	410	289
145°	451	451	452	459	463	282
155°	515	515	515	516	515	237
165°	561	559	558	561	559	158
175°	583	581	581	583	581	55
180°	584	584	584	584	584	



TEST NUMBER: P332683-927

CATALOG NUMBER: SA4XXDIP-C1195D590U927-4F0-1E-UDD-D1

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°	28.9	40.2	51.7	63.1	74.5	86.4	99.1	111.8	124.4	137.0	145.4
95°	43.6	53.7	63.9	74.1	84.3	95.5	107.7	119.9	132.1	144.4	152.3
97.5°	62.3	71.0	79.7	88.4	97.1	107.6	119.8	132.1	144.3	156.5	164.2
100°	77.2	84.8	92.6	100.3	108.0	117.8	129.7	141.6	153.4	165.2	173.1
102.5°	93.8	100.4	106.9	113.5	120.1	129.1	140.7	152.3	163.8	175.4	183.0
105°	116.7	122.4	128.1	133.8	139.6	147.8	158.6	169.4	180.2	191.0	198.4
107.5°	143.1	147.8	152.5	157.2	162.0	169.3	179.2	189.1	199.0	208.9	216.1
110°	160.1	164.3	168.4	172.5	176.7	183.6	193.4	203.1	212.9	222.5	228.9



TEST NUMBER: P332683-927

CATALOG NUMBER: SA4XXDIP-C1195D590U927-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	177.9	181.4	185.0	188.5	192.0	198.4	207.6	216.8	226.0	235.2	241.4
115°	204.6	207.1	209.6	212.1	214.7	220.4	229.2	238.0	246.8	255.6	261.7
117.5°	230.9	232.5	234.1	235.7	237.3	242.2	250.4	258.6	266.9	275.1	280.7
120°	247.6	248.8	250.1	251.4	252.5	257.1	265.0	272.8	280.7	288.5	293.7
122.5°	266.0	266.3	266.7	267.0	267.4	271.3	278.8	286.5	294.0	301.5	306.8
125°	292.0	291.7	291.4	291.1	290.8	294.1	301.1	308.0	315.0	321.9	327.0
127.5°	316.4	316.4	316.4	316.5	316.5	319.1	324.3	329.5	334.8	340.0	344.9
130°	332.7	332.7	332.8	332.8	332.8	335.1	339.5	344.0	348.6	353.1	357.9
132.5°	350.5	350.4	350.3	350.2	350.2	351.9	355.5	358.9	362.5	366.0	370.7
135°	372.6	373.2	373.8	374.4	375.0	376.3	378.3	380.2	382.1	384.1	388.4
137.5°	398.1	398.1	398.1	398.1	398.1	398.6	399.7	400.8	402.0	403.1	406.9
140°	415.0	414.9	414.9	414.8	414.7	414.8	415.1	415.4	415.7	416.0	419.5
142.5°	429.6	429.7	429.8	430.0	430.2	430.1	429.8	429.6	429.4	429.1	432.3
145°	450.8	450.9	451.1	451.2	451.3	451.4	451.5	451.6	451.7	451.8	453.4
147.5°	472.1	472.4	472.5	472.8	472.9	473.0	472.9	472.9	472.8	472.7	472.9
150°	485.1	485.3	485.4	485.5	485.6	485.7	485.7	485.7	485.7	485.7	485.7
152.5°	496.5	496.6	496.8	497.0	497.2	497.3	497.4	497.5	497.6	497.6	497.9
155°	515.1	515.1	515.1	515.1	515.1	515.0	514.9	514.8	514.8	514.6	515.0
157.5°	531.0	530.8	530.6	530.4	530.3	530.1	530.1	530.1	530.1	530.0	530.4
160°	540.3	540.3	540.2	540.1	540.0	539.9	539.8	539.7	539.6	539.5	539.8
162.5°	549.1	548.8	548.5	548.3	548.0	547.8	547.7	547.6	547.6	547.4	548.0
165°	560.7	560.4	560.1	559.8	559.5	559.3	559.0	558.9	558.6	558.5	559.0
167.5°	569.7	569.3	568.8	568.4	568.0	567.8	567.8	567.8	567.8	567.8	568.5
170°	574.7	574.3	573.7	573.2	572.7	572.5	572.6	572.7	572.8	572.9	573.5
172.5°	578.3	577.9	577.5	577.1	576.6	576.5	576.5	576.5	576.5	576.6	577.2
175°	583.3	582.8	582.3	581.8	581.3	581.0	580.9	580.8	580.7	580.6	581.3
177.5°	584.9	584.6	584.2	583.8	583.3	583.1	583.1	583.1	583.1	583.1	583.7
180°	584.2	584.2	584.2	584.2	584.2	584.2	584.2	584.2	584.2	584.2	584.2



TEST NUMBER: P332683-927

CATALOG NUMBER: SA4XXDIP-C1195D590U927-4F0-1E-UDD-D1

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°	153.6	161.9	170.2	175.5	177.9	180.3	182.7	185.0
95°	160.2	168.1	175.9	181.2	183.7	186.2	188.8	191.3
97.5°	172.0	179.7	187.4	192.5	194.9	197.3	199.7	202.2
100°	180.9	188.6	196.5	201.3	203.3	205.3	207.2	209.2
102.5°	190.7	198.4	206.0	211.0	213.2	215.5	217.8	220.0
105°	205.7	213.0	220.3	225.3	227.8	230.4	232.9	235.4
107.5°	223.3	230.4	237.7	242.2	244.3	246.3	248.3	250.3
110°	235.1	241.4	247.6	252.0	254.6	257.1	259.7	262.2



TEST NUMBER: P332683-927

CATALOG NUMBER: SA4XXDIP-C1195D590U927-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	247.6	253.8	260.0	264.3	266.6	268.9	271.2	273.5
115°	267.7	273.8	279.9	283.8	285.7	287.6	289.5	291.3
117.5°	286.1	291.7	297.1	301.0	303.0	305.1	307.1	309.1
120°	298.7	303.9	309.0	312.8	315.2	317.7	320.1	322.6
122.5°	312.1	317.3	322.7	326.1	327.8	329.5	331.1	332.8
125°	332.2	337.3	342.5	345.7	347.2	348.7	350.2	351.7
127.5°	349.7	354.6	359.5	362.7	364.6	366.3	368.0	369.8
130°	362.7	367.7	372.5	375.6	376.8	378.1	379.4	380.7
132.5°	375.3	379.9	384.5	387.6	389.1	390.6	392.2	393.7
135°	392.8	397.0	401.3	404.2	405.5	406.9	408.3	409.7
137.5°	410.7	414.6	418.4	421.1	422.6	424.1	425.5	427.0
140°	423.0	426.6	430.2	432.6	433.9	435.2	436.5	437.8
142.5°	435.5	438.6	441.9	444.0	445.2	446.3	447.5	448.7
145°	455.0	456.6	458.2	459.4	460.2	461.1	461.8	462.6
147.5°	473.0	473.1	473.2	473.7	474.5	475.3	476.2	477.0
150°	485.7	485.7	485.7	485.7	485.5	485.4	485.4	485.3
152.5°	498.1	498.4	498.6	498.6	498.4	498.0	497.8	497.6
155°	515.4	515.8	516.3	516.3	515.8	515.4	515.0	514.6
157.5°	530.7	531.0	531.3	531.2	530.9	530.6	530.2	529.9
160°	540.1	540.3	540.7	540.6	540.1	539.6	539.1	538.6
162.5°	548.5	549.1	549.6	549.6	549.1	548.6	548.1	547.6
165°	559.7	560.2	560.9	560.9	560.5	560.2	559.8	559.4
167.5°	569.0	569.7	570.3	570.2	569.7	569.0	568.4	567.8
170°	574.1	574.7	575.3	575.3	574.6	573.9	573.1	572.4
172.5°	577.9	578.6	579.2	579.2	578.5	577.8	577.1	576.5
175°	582.0	582.7	583.4	583.4	582.7	582.0	581.3	580.6
177.5°	584.2	584.8	585.3	585.3	584.7	584.1	583.4	582.7
180°	584.2	584.2	584.2	584.2	584.2	584.2	584.2	584.2

(END OF REPORT)