

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: P332674-927

Luminaire Tested: **SA4XXDIP-C1195D365U927-4F0-1E-UDD-D1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P332674-927
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-C1195D365U927-4F0-1E-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

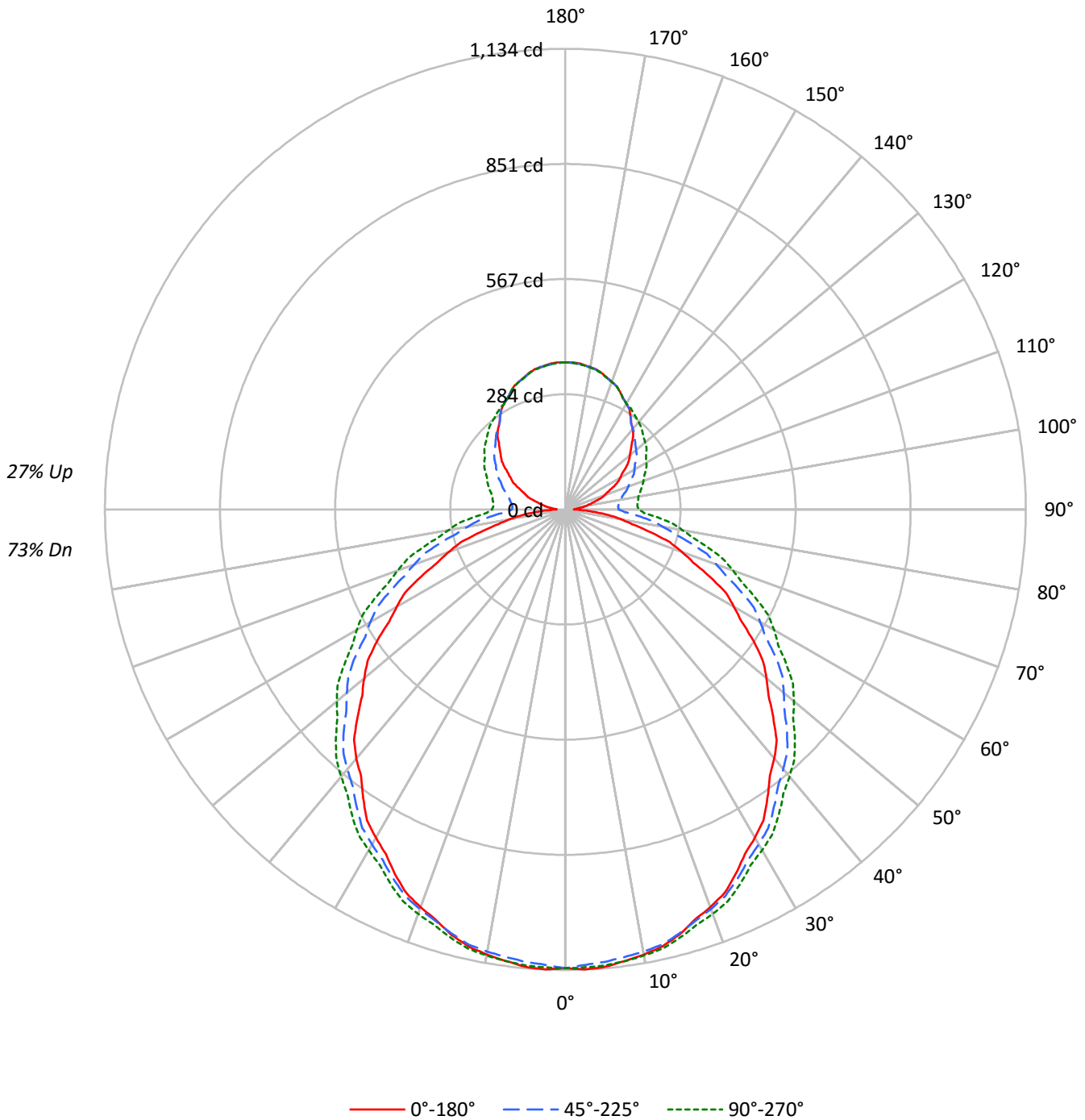
Lumens per Lamp: N/A
Luminaire Lumens: 4856.0 lumens
Efficiency: N/A
Efficacy: 97.5 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')
CIE Type: Semi-Direct

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°	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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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	107.0	2.2
10°-20°	306.5	6.3
20°-30°	463.4	9.5
30°-40°	560.7	11.5
40°-50°	592.8	12.2
50°-60°	557.9	11.5
60°-70°	462.9	9.5
70°-80°	325.1	6.7
80°-90°	184.9	3.8
90°-100°	133.0	2.7
100°-110°	151.5	3.1
110°-120°	174.2	3.6
120°-130°	188.9	3.9
130°-140°	191.0	3.9
140°-150°	177.3	3.7
150°-160°	146.9	3.0
160°-170°	97.7	2.0
170°-180°	34.2	0.7
0°-30°	876.9	18.1
0°-40°	1437.6	29.6
0°-60°	2588.3	53.3
0°-90°	3561.1	73.3
90°-120°	458.8	9.4
90°-150°	1015.9	20.9
90°-180°	1295.0	26.7
0°-180°	4856.0	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°	21	75	131	168	180	14
95°	33	78	131	165	178	32
105°	77	103	150	181	194	82
115°	130	143	181	207	217	128
125°	183	183	213	236	243	163
135°	232	234	242	261	269	180
145°	280	280	280	287	291	175
155°	319	319	319	320	319	147
165°	347	347	346	348	347	98
175°	361	360	360	362	360	34
180°	362	362	362	362	362	



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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°	37.6	49.2	60.8	72.4	84.1	96.0	108.4	120.9	133.2	145.7	153.9
90°	21.1	33.0	44.9	56.9	68.8	81.0	93.6	106.2	118.8	131.4	139.9
92.5°	25.2	36.1	47.1	57.9	68.8	80.5	92.9	105.4	117.8	130.2	138.4
95°	33.3	43.1	52.9	62.7	72.6	83.5	95.5	107.4	119.4	131.3	139.1
97.5°	44.3	52.7	61.2	69.6	78.0	88.2	100.1	112.0	123.9	135.9	143.5
100°	53.1	60.7	68.2	75.8	83.3	92.8	104.4	115.9	127.5	138.9	146.7
102.5°	63.4	69.9	76.4	82.9	89.4	98.3	109.6	120.8	132.1	143.3	150.8
105°	76.6	82.3	88.0	93.6	99.3	107.5	118.2	128.8	139.4	150.1	157.3
107.5°	92.8	97.5	102.3	106.9	111.6	118.9	128.7	138.6	148.5	158.4	165.5
110°	103.1	107.1	111.1	115.3	119.3	126.2	136.0	145.8	155.5	165.3	171.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	113.7	117.2	120.7	124.2	127.7	134.1	143.4	152.7	161.9	171.3	177.4
115°	129.6	132.1	134.7	137.2	139.7	145.4	154.3	163.2	172.1	180.9	187.0
117.5°	145.8	147.4	149.0	150.5	152.1	157.0	165.3	173.6	181.9	190.2	195.8
120°	155.8	156.9	158.0	159.1	160.2	164.7	172.7	180.6	188.6	196.5	201.8
122.5°	167.2	167.5	167.8	168.0	168.3	172.2	179.8	187.5	195.1	202.7	208.1
125°	182.8	182.5	182.3	182.0	181.7	185.1	192.0	199.0	206.0	212.9	218.1
127.5°	197.8	197.7	197.6	197.6	197.5	200.1	205.3	210.6	215.9	221.3	226.2
130°	207.6	207.5	207.4	207.3	207.2	209.4	213.9	218.4	222.9	227.4	232.3
132.5°	218.6	218.4	218.2	218.1	218.0	219.7	223.2	226.8	230.4	233.9	238.6
135°	231.8	232.2	232.5	232.9	233.3	234.5	236.4	238.4	240.3	242.3	246.7
137.5°	247.6	247.5	247.4	247.2	247.2	247.6	248.7	249.8	250.8	251.8	255.8
140°	258.1	257.9	257.8	257.6	257.5	257.5	257.9	258.1	258.4	258.6	262.3
142.5°	266.7	266.8	266.9	267.0	267.0	266.9	266.7	266.5	266.3	266.0	269.3
145°	279.8	279.8	279.7	279.7	279.6	279.7	279.7	279.8	279.9	280.0	281.5
147.5°	293.0	293.0	293.0	293.0	293.1	293.0	293.0	292.9	292.9	292.9	293.0
150°	301.1	301.0	301.0	301.0	301.0	301.0	301.0	301.0	301.0	301.0	301.0
152.5°	307.7	307.8	307.8	307.9	308.1	308.1	308.2	308.2	308.2	308.3	308.5
155°	319.1	319.1	319.1	319.1	319.1	319.1	319.0	318.9	318.9	318.9	319.1
157.5°	329.0	328.8	328.8	328.7	328.5	328.4	328.4	328.4	328.4	328.4	328.6
160°	334.8	334.7	334.7	334.6	334.5	334.5	334.5	334.4	334.3	334.2	334.5
162.5°	340.2	340.0	339.8	339.7	339.5	339.5	339.4	339.3	339.2	339.1	339.5
165°	347.4	347.2	347.1	346.8	346.7	346.5	346.3	346.3	346.1	346.0	346.3
167.5°	352.9	352.7	352.4	352.1	351.9	351.7	351.8	351.8	351.8	351.8	352.2
170°	356.1	355.8	355.5	355.1	354.8	354.7	354.7	354.8	354.9	355.0	355.3
172.5°	358.3	358.1	357.7	357.5	357.3	357.1	357.1	357.2	357.2	357.2	357.6
175°	361.4	361.1	360.8	360.4	360.1	360.0	359.9	359.8	359.8	359.7	360.1
177.5°	362.4	362.2	361.9	361.6	361.4	361.3	361.3	361.3	361.3	361.3	361.6
180°	361.9	361.9	361.9	361.9	361.9	361.9	361.9	361.9	361.9	361.9	361.9



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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°	162.2	170.4	178.6	183.9	186.5	188.9	191.5	193.9
90°	148.5	156.9	165.5	171.0	173.3	175.7	178.1	180.5
92.5°	146.6	154.7	162.9	168.1	170.4	172.7	175.1	177.4
95°	146.9	154.6	162.4	167.5	170.1	172.6	175.2	177.7
97.5°	151.1	158.6	166.2	171.2	173.6	176.0	178.5	180.9
100°	154.4	162.1	169.8	174.7	176.7	178.6	180.5	182.5
102.5°	158.4	166.0	173.5	178.3	180.6	182.8	185.1	187.4
105°	164.5	171.7	179.0	183.8	186.2	188.7	191.1	193.5
107.5°	172.5	179.7	186.7	191.3	193.3	195.4	197.3	199.3
110°	178.0	184.3	190.7	195.0	197.5	199.9	202.4	204.8



TEST NUMBER: P332674-927

CATALOG NUMBER: SA4XXDIP-C1195D365U927-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	183.6	189.9	196.1	200.3	202.6	204.9	207.2	209.5
115°	193.2	199.3	205.4	209.5	211.4	213.3	215.2	217.1
117.5°	201.5	207.1	212.8	216.7	218.7	220.9	223.0	225.1
120°	207.2	212.5	217.8	221.7	224.0	226.4	228.8	231.2
122.5°	213.5	219.0	224.3	228.0	229.7	231.6	233.4	235.1
125°	223.3	228.5	233.8	237.2	238.7	240.3	241.9	243.4
127.5°	231.2	236.1	241.0	244.4	246.2	248.0	249.8	251.6
130°	237.3	242.2	247.2	250.3	251.8	253.2	254.6	256.1
132.5°	243.3	248.0	252.7	255.9	257.5	259.0	260.6	262.2
135°	251.0	255.5	259.8	262.8	264.3	265.8	267.3	268.8
137.5°	259.8	263.6	267.6	270.3	271.7	273.2	274.6	276.1
140°	265.9	269.4	273.1	275.5	276.9	278.2	279.6	280.9
142.5°	272.4	275.6	278.8	281.0	282.2	283.4	284.5	285.7
145°	283.2	284.8	286.5	287.7	288.7	289.6	290.5	291.4
147.5°	293.2	293.4	293.6	294.1	294.9	295.7	296.6	297.4
150°	301.0	301.0	301.0	300.9	300.9	300.8	300.7	300.6
152.5°	308.6	308.8	309.0	308.9	308.7	308.6	308.4	308.2
155°	319.3	319.6	319.8	319.8	319.6	319.3	319.1	318.9
157.5°	328.8	329.0	329.2	329.2	328.9	328.8	328.5	328.3
160°	334.6	334.8	335.0	334.9	334.6	334.3	334.0	333.7
162.5°	339.8	340.2	340.5	340.5	340.2	339.9	339.6	339.3
165°	346.7	347.1	347.5	347.5	347.3	347.1	346.8	346.6
167.5°	352.6	352.9	353.3	353.3	352.9	352.5	352.1	351.7
170°	355.7	356.1	356.5	356.4	356.0	355.5	355.1	354.7
172.5°	358.1	358.5	358.9	358.9	358.5	358.0	357.6	357.1
175°	360.6	361.0	361.5	361.5	361.0	360.6	360.1	359.7
177.5°	361.9	362.3	362.7	362.7	362.3	361.9	361.5	361.1
180°	361.9	361.9	361.9	361.9	361.9	361.9	361.9	361.9

(END OF REPORT)