

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: P332675-927

Luminaire Tested: **SA4XXDIP-C1195D365U927-4F0-1E-UDD-D4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P332675-927
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-18,
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-D4
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1195 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 365 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

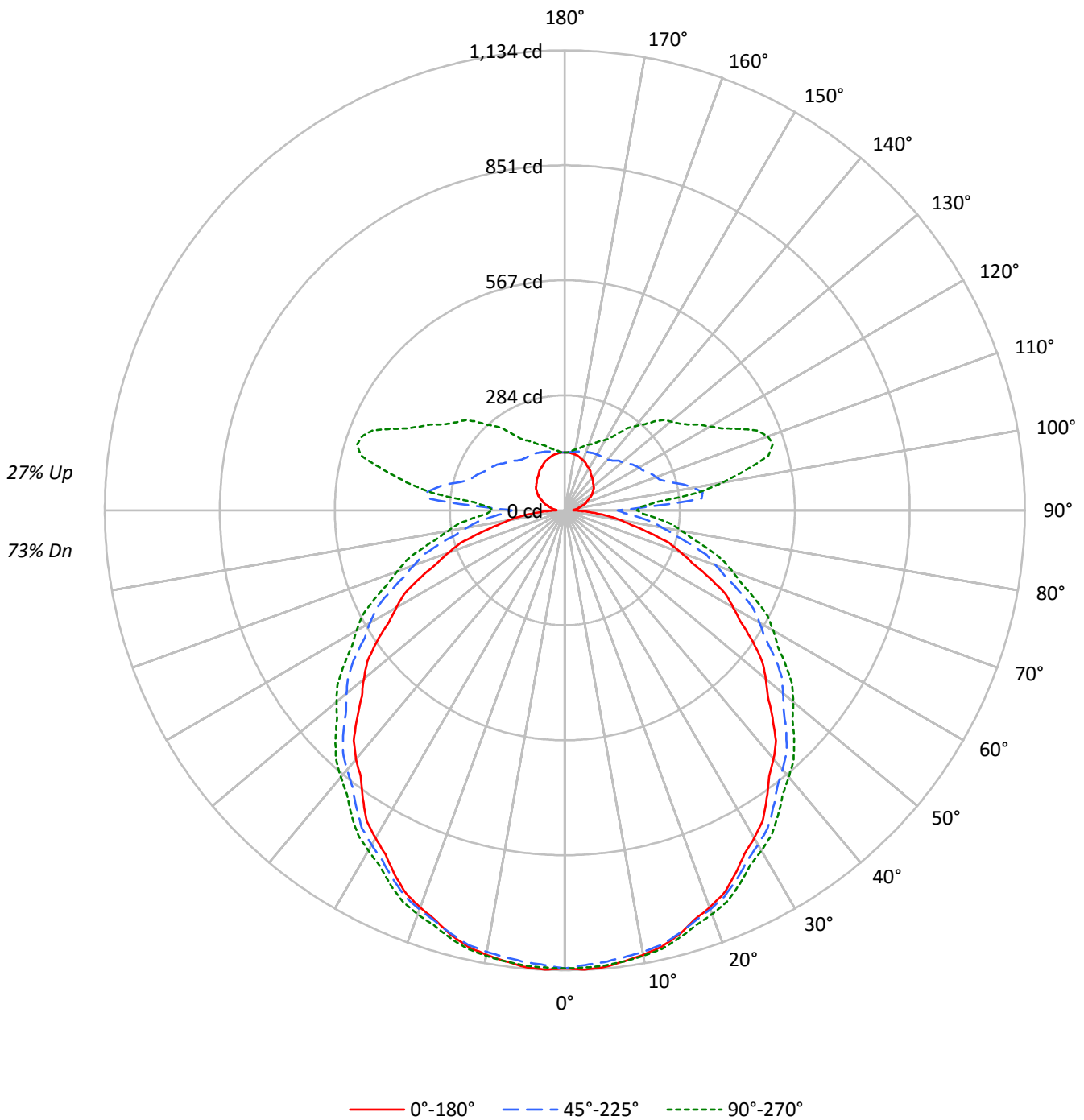
Lumens per Lamp: N/A
Luminaire Lumens: 4887.9 lumens
Efficiency: N/A
Efficacy: 98.2 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')
CIE Type: Semi-Direct

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	86	86	86	77	77	77	73				73
1	101	96	92	88	96	91	87	84	82	79	76	74	71	69	66	64	62	58				58
2	92	83	76	70	87	79	73	67	71	66	62	64	60	56	57	54	51	48				48
3	83	73	65	58	79	69	62	56	62	56	51	56	51	47	50	46	43	40				40
4	76	64	55	49	72	61	53	47	55	49	43	50	44	40	44	40	37	34				34
5	70	57	48	42	66	54	46	40	49	42	37	44	39	34	40	35	32	29				29
6	64	51	42	36	61	49	41	35	44	37	32	40	34	30	36	31	28	25				25
7	59	46	38	32	56	44	36	31	40	33	28	36	31	26	33	28	24	22				22
8	55	42	34	28	52	40	32	27	37	30	25	33	28	24	30	25	22	20				20
9	51	38	30	25	49	37	29	24	34	27	23	31	25	21	28	23	20	18				18
10	48	35	28	22	46	34	27	22	31	25	20	28	23	19	26	21	18	16				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	12.1
50°-60°	557.9	11.4
60°-70°	462.9	9.5
70°-80°	325.1	6.7
80°-90°	184.6	3.8
90°-100°	212.1	4.3
100°-110°	295.0	6.0
110°-120°	246.1	5.0
120°-130°	192.0	3.9
130°-140°	147.8	3.0
140°-150°	105.5	2.2
150°-160°	72.3	1.5
160°-170°	42.5	0.9
170°-180°	13.8	0.3
0°-30°	876.9	17.9
0°-40°	1437.6	29.4
0°-60°	2588.3	53.0
0°-90°	3560.8	72.8
90°-120°	753.2	15.4
90°-150°	1198.5	24.5
90°-180°	1327.0	27.1
0°-180°	4887.9	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°	20	73	130	166	178	14
95°	26	88	338	256	224	23
105°	44	85	267	509	519	48
115°	65	93	223	401	474	65
125°	85	101	198	326	369	76
135°	98	117	173	269	309	76
145°	111	126	161	208	233	70
155°	125	135	156	177	184	58
165°	136	141	150	159	161	38
175°	142	142	144	146	145	13
180°	142	142	142	142	142	



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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°	37.5	49.1	60.7	72.2	83.7	95.7	108.3	120.6	133.0	145.4	153.5
90°	20.5	32.3	44.4	55.9	67.5	79.1	92.9	105.0	117.6	130.2	138.2
92.5°	22.4	34.0	46.7	60.3	74.5	91.4	117.7	151.5	184.8	207.9	201.1
95°	25.7	35.8	47.8	60.8	76.8	98.9	134.8	192.3	270.7	338.3	352.3
97.5°	31.5	39.5	49.9	61.2	74.9	94.5	124.7	174.0	251.9	342.5	404.3
100°	35.2	42.5	51.8	62.4	75.1	93.2	120.6	163.3	231.3	321.2	400.5
102.5°	39.7	46.5	54.7	64.2	75.7	92.8	118.5	157.1	216.4	297.1	378.4
105°	44.1	50.6	57.6	66.6	77.2	93.4	117.2	150.9	200.5	267.1	340.0
107.5°	51.7	56.8	62.8	71.0	80.4	95.6	117.8	148.8	192.1	247.2	307.9
110°	55.8	60.3	65.6	72.9	81.8	96.3	118.4	147.9	188.5	239.0	291.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	59.7	63.7	68.8	75.4	84.0	98.0	119.2	147.1	185.3	231.9	278.8
115°	65.3	68.6	73.1	78.4	86.3	99.7	119.9	145.6	180.6	223.2	264.7
117.5°	72.4	74.7	78.0	82.5	89.0	101.9	120.9	144.7	176.4	215.4	253.9
120°	76.3	77.7	80.6	84.4	90.1	102.3	121.2	143.9	173.6	210.3	247.0
122.5°	80.8	81.5	83.7	86.7	92.1	103.6	121.9	143.3	171.0	205.0	240.2
125°	85.4	86.3	87.6	90.5	95.5	106.7	123.8	143.7	168.4	198.4	230.6
127.5°	90.4	91.0	92.7	95.9	101.2	111.7	126.8	144.0	164.9	190.1	218.7
130°	92.3	93.1	95.1	99.0	104.0	114.2	128.3	143.7	162.5	184.9	211.2
132.5°	95.1	95.8	98.4	102.1	107.6	116.9	130.1	144.3	160.9	180.6	204.7
135°	98.0	99.1	102.0	106.7	112.6	120.8	132.1	144.1	157.6	172.9	193.7
137.5°	102.1	102.9	105.7	110.0	115.7	123.0	132.6	143.0	154.1	167.1	184.6
140°	105.0	105.6	108.4	112.8	118.4	125.2	133.8	143.1	152.9	163.8	179.5
142.5°	107.1	107.9	110.7	115.2	120.8	127.1	135.1	143.3	152.2	161.8	175.7
145°	111.3	111.9	114.4	118.0	123.0	129.0	136.3	143.9	152.0	160.7	171.3
147.5°	116.3	116.3	118.4	122.2	126.4	131.7	138.6	145.2	152.3	159.7	167.8
150°	119.4	119.4	121.4	124.5	128.3	133.6	139.7	145.8	152.3	159.0	166.0
152.5°	121.3	121.3	123.5	126.6	130.2	135.1	140.6	146.3	151.9	157.9	164.2
155°	125.2	125.4	127.1	129.9	133.0	137.2	142.0	146.7	151.2	156.2	161.5
157.5°	129.1	129.1	130.7	132.8	135.5	138.9	142.9	146.7	150.4	154.5	158.8
160°	131.6	131.6	132.7	134.7	136.9	140.0	143.4	146.7	149.8	153.1	156.8
162.5°	133.8	133.6	134.5	136.3	138.2	140.7	143.8	146.7	149.1	151.8	155.0
165°	136.3	136.3	136.9	138.3	139.7	141.4	143.9	146.2	147.8	149.8	152.0
167.5°	138.9	138.6	138.9	139.9	140.7	142.0	143.9	145.4	146.5	147.7	149.3
170°	140.0	139.7	140.0	140.9	141.4	142.2	143.6	145.0	145.6	146.4	147.6
172.5°	141.1	140.9	140.9	141.5	141.8	142.4	143.4	144.6	144.7	145.0	146.0
175°	142.2	142.0	142.0	142.2	142.5	142.5	143.1	143.9	143.6	143.6	144.2
177.5°	142.8	142.5	142.3	142.5	142.5	142.5	142.8	143.1	142.8	142.8	143.0
180°	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5



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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°	161.8	170.0	178.2	183.5	186.0	188.5	191.0	193.5
90°	146.6	155.0	163.4	168.7	171.2	173.7	175.6	177.9
92.5°	190.0	184.3	183.8	183.3	182.2	183.0	184.3	186.5
95°	332.7	296.9	267.0	244.9	233.7	227.5	225.0	223.9
97.5°	423.4	414.7	394.7	370.3	352.7	338.2	332.2	328.8
100°	449.0	462.2	456.1	440.1	417.7	402.6	396.2	395.9
102.5°	441.9	477.1	488.4	484.5	471.7	461.6	455.0	455.3
105°	411.1	466.6	501.3	517.5	520.2	520.2	518.6	519.2
107.5°	371.6	430.1	476.0	505.5	521.3	529.7	534.6	537.3
110°	347.4	402.3	449.3	484.5	506.6	520.6	527.9	532.7



TEST NUMBER: P332675-927

CATALOG NUMBER: SA4XXDIP-C1195D365U927-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	327.7	376.8	421.4	456.5	481.3	497.7	507.1	513.4
115°	305.9	346.5	385.5	416.4	440.5	459.2	470.2	474.4
117.5°	290.7	325.0	356.6	383.5	404.6	421.0	432.3	436.3
120°	282.0	313.7	341.7	365.5	383.7	398.3	407.8	413.1
122.5°	274.3	305.1	331.1	352.3	367.8	380.3	388.6	393.6
125°	262.8	292.2	316.9	335.8	348.7	358.5	365.5	368.8
127.5°	249.1	277.1	301.4	319.6	332.7	341.8	348.2	351.8
130°	239.5	266.7	290.8	309.0	322.2	330.8	337.0	340.4
132.5°	230.3	256.0	279.3	297.5	310.4	320.0	325.9	329.3
135°	215.8	238.5	260.1	277.2	290.0	299.6	305.8	309.1
137.5°	203.4	222.8	241.3	256.7	268.6	277.7	282.8	286.3
140°	196.0	212.9	229.1	243.4	254.6	262.1	267.4	271.1
142.5°	190.0	204.8	218.8	231.2	241.0	247.9	252.5	255.3
145°	182.0	193.2	203.3	212.5	220.6	226.6	230.4	233.0
147.5°	175.5	183.2	190.2	196.9	203.0	207.9	211.0	212.4
150°	172.8	179.2	184.8	189.8	194.3	198.0	199.6	199.9
152.5°	170.3	175.9	181.0	185.1	188.9	191.9	192.9	193.2
155°	166.6	171.0	175.2	178.6	181.4	183.6	184.5	184.5
157.5°	162.6	166.4	169.9	172.6	174.7	176.4	176.9	176.9
160°	160.2	163.2	166.3	168.6	170.2	171.9	172.2	172.2
162.5°	157.7	160.3	162.7	164.8	166.0	167.6	167.9	167.7
165°	154.2	156.0	157.9	159.3	160.4	161.5	161.3	161.0
167.5°	151.0	152.3	153.8	154.6	155.2	156.0	155.9	155.7
170°	148.9	149.8	150.9	151.8	152.3	152.6	152.3	152.3
172.5°	147.2	147.7	148.5	149.1	149.4	149.6	149.4	148.9
175°	144.7	145.0	145.6	145.6	145.6	146.2	145.6	145.0
177.5°	143.1	143.4	143.4	143.6	143.4	143.6	143.1	142.8
180°	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5

(END OF REPORT)