

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: P332664-927

Luminaire Tested: **SA4XXDIP-C1020D1205U927-4F0-1E-UDD-D**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P332664-927
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-C1020D1205U927-4F0-1E-UDD-D
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1020 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1205 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7144.6 lumens
Efficiency: N/A
Efficacy: 109.2 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: General Diffuse

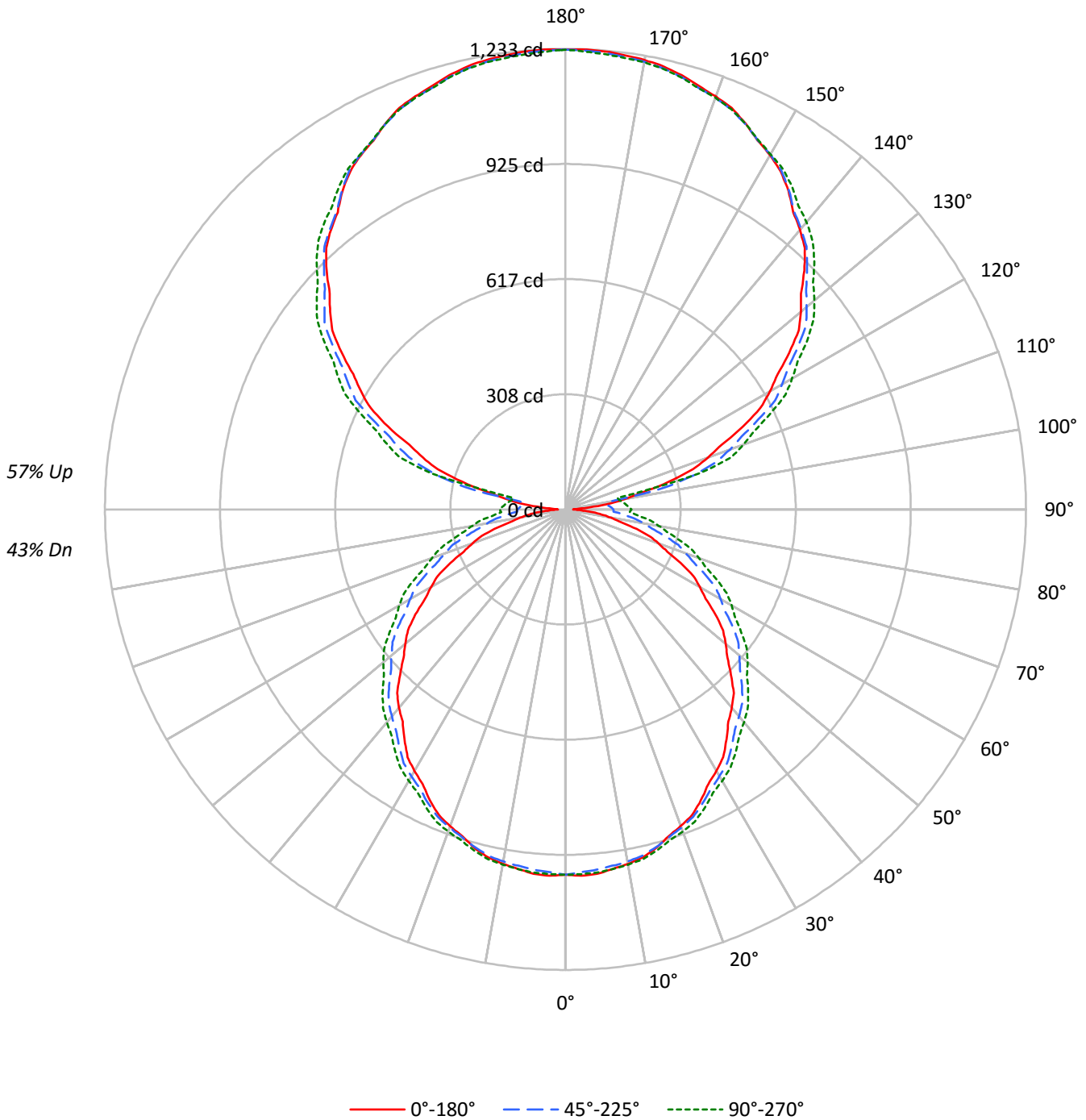
Input Watts (W): 65.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P332664-927

CATALOG NUMBER: SA4XXDIP-C1020D1205U927-4F0-1E-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	0
RCR																		
0	106	106	106	106	96	96	96	96	80	80	80	64	64	64	50	50	50	43
1	95	91	87	83	87	83	79	76	68	66	63	55	53	52	43	41	40	35
2	86	79	72	67	79	72	66	62	59	55	52	48	45	42	37	35	33	28
3	79	69	61	55	71	63	56	51	52	47	43	42	38	35	32	30	28	23
4	72	61	53	46	65	56	48	43	46	41	36	37	33	30	29	26	24	20
5	66	54	46	39	60	49	42	37	41	35	31	33	29	26	26	23	21	17
6	60	48	40	34	55	44	37	32	37	31	27	30	26	22	23	20	18	15
7	56	43	35	30	51	40	33	28	33	28	24	27	23	20	21	18	16	13
8	52	39	31	26	47	36	29	24	30	25	21	25	21	17	19	16	14	12
9	48	36	28	23	44	33	26	22	28	22	19	23	19	16	18	15	13	10
10	45	33	25	21	41	30	24	19	25	20	17	21	17	14	17	14	11	9

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7896	7896	7896
5°	7920	7717	7739
10°	7872	7591	7585
15°	7802	7444	7404
20°	7695	7284	7227
25°	7575	7102	7034
30°	7445	6922	6835
35°	7299	6739	6660
40°	7181	6564	6478
45°	7007	6402	6322
50°	6859	6215	6158
55°	6707	6040	5964
60°	6469	5816	5788
65°	6208	5578	5571
70°	5894	5303	5319
75°	5453	5001	5089
80°	4964	4711	4865
85°	4347	4456	4735



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	92.6	1.3
10°-20°	265.4	3.7
20°-30°	401.3	5.6
30°-40°	485.5	6.8
40°-50°	513.3	7.2
50°-60°	483.1	6.8
60°-70°	400.8	5.6
70°-80°	281.5	3.9
80°-90°	162.7	2.3
90°-100°	136.6	1.9
100°-110°	338.3	4.7
110°-120°	560.4	7.8
120°-130°	678.2	9.5
130°-140°	708.7	9.9
140°-150°	654.4	9.2
150°-160°	525.9	7.4
160°-170°	339.2	4.7
170°-180°	116.9	1.6
0°-30°	759.3	10.6
0°-40°	1244.8	17.4
0°-60°	2241.1	31.4
0°-90°	3086.1	43.2
90°-120°	1035.3	14.5
90°-150°	3076.6	43.1
90°-180°	4059.0	56.8
0°-180°	7144.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	978	978	978	978	978	
5°	979	976	968	976	976	93
15°	939	940	936	946	945	264
25°	859	865	868	880	882	395
35°	751	764	776	790	794	470
45°	626	647	668	686	692	484
55°	491	514	546	568	575	437
65°	340	375	412	438	448	336
75°	188	229	275	304	315	200
85°	58	104	153	185	197	62
90°	20	74	129	164	177	14
95°	65	72	116	149	161	76
105°	287	315	360	392	371	301
115°	524	538	571	596	604	516
125°	732	735	760	782	791	653
135°	904	904	915	933	942	697
145°	1041	1043	1043	1050	1057	651
155°	1140	1141	1139	1142	1140	526
165°	1203	1199	1198	1205	1198	340
175°	1231	1226	1226	1233	1223	117
180°	1231	1231	1231	1231	1231	



TEST NUMBER: P332664-927

CATALOG NUMBER: SA4XXDIP-C1020D1205U927-4F0-1E-UDD-D

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	978.1	978.1	978.1	978.1	978.1	978.1	978.1	978.1	978.1	978.1	978.1
2.5°	981.6	981.0	980.4	979.9	979.2	978.2	976.6	975.1	973.5	971.9	973.3
5°	979.1	978.4	977.7	977.0	976.3	975.0	973.4	971.6	969.9	968.2	970.2
7.5°	970.8	970.4	969.9	969.6	969.1	968.2	966.8	965.4	963.9	962.5	964.7
10°	963.8	963.6	963.4	963.1	962.9	962.1	960.9	959.7	958.5	957.3	959.5
12.5°	954.2	954.2	954.1	954.0	954.0	953.5	952.8	951.9	951.1	950.2	952.3
15°	938.7	938.9	939.1	939.4	939.6	939.4	938.7	937.9	937.2	936.4	938.7
17.5°	917.4	918.1	918.9	919.6	920.4	920.6	920.4	920.4	920.2	920.0	922.3
20°	902.5	903.2	904.0	904.7	905.5	905.9	906.2	906.4	906.7	906.9	909.3
22.5°	885.8	886.8	887.7	888.7	889.5	890.3	890.7	891.1	891.5	892.0	894.5
25°	858.7	860.2	861.6	863.1	864.5	865.6	866.3	867.1	867.8	868.5	871.2
27.5°	828.5	830.6	832.7	834.9	837.0	838.7	839.8	840.9	842.0	843.1	845.7
30°	808.3	810.2	812.2	814.1	816.1	817.9	819.6	821.3	823.0	824.7	827.4
32.5°	786.4	788.8	791.1	793.4	795.7	797.9	799.8	801.7	803.6	805.5	808.5
35°	751.4	754.3	757.2	760.1	763.0	765.7	768.2	770.6	773.0	775.5	778.9
37.5°	716.1	719.5	722.8	726.2	729.5	732.7	735.7	738.7	741.8	744.8	748.2
40°	693.3	696.5	699.7	702.8	706.0	709.2	712.6	716.1	719.5	722.9	726.5
42.5°	667.0	670.6	674.1	677.7	681.2	685.0	689.0	693.0	697.0	701.0	705.0
45°	626.5	631.1	635.7	640.4	645.0	649.6	654.3	658.9	663.5	668.1	672.2
47.5°	587.7	592.5	597.2	602.1	606.8	611.9	617.2	622.6	628.0	633.3	637.5
50°	559.7	565.1	570.4	575.8	581.1	586.5	591.8	597.1	602.5	607.8	612.8
52.5°	531.6	537.0	542.3	547.7	553.1	558.8	564.9	571.1	577.2	583.4	588.2
55°	490.7	495.8	500.9	506.0	511.1	517.3	524.7	532.0	539.2	546.5	551.4
57.5°	444.9	451.2	457.6	463.9	470.2	477.0	484.3	491.5	498.8	506.0	511.8
60°	415.1	421.4	427.8	434.1	440.5	447.6	455.7	463.7	471.7	479.7	485.3
62.5°	386.2	393.1	400.1	406.9	413.8	421.3	429.4	437.4	445.4	453.4	459.1
65°	339.5	347.3	355.1	362.9	370.7	378.7	387.0	395.3	403.5	411.9	417.9
67.5°	294.6	302.9	311.2	319.5	327.7	336.3	345.2	354.0	362.9	371.8	378.0
70°	264.0	272.3	280.5	288.8	297.1	305.9	315.1	324.3	333.6	342.9	349.4
72.5°	234.2	242.6	251.1	259.6	268.1	277.2	287.0	296.8	306.7	316.6	322.9
75°	188.4	197.4	206.4	215.4	224.4	234.0	244.2	254.4	264.7	274.9	281.7
77.5°	145.7	155.2	164.8	174.3	183.9	193.9	204.7	215.4	226.1	236.8	243.7
80°	119.4	129.1	138.9	148.6	158.4	168.6	179.3	190.0	200.7	211.4	218.7
82.5°	93.1	103.2	113.4	123.5	133.6	144.0	154.7	165.4	176.2	186.9	194.3
85°	58.1	68.3	78.5	88.7	98.9	109.6	120.5	131.4	142.4	153.4	160.7
87.5°	33.0	43.3	53.7	64.1	74.5	85.2	96.2	107.2	118.1	129.1	136.4
90°	20.3	32.2	44.3	56.2	68.2	80.2	92.4	104.5	116.6	128.7	137.0
92.5°	28.3	37.2	46.0	54.9	63.8	74.3	86.3	98.5	110.6	122.7	130.8
95°	64.9	65.9	67.0	68.1	69.2	74.8	85.0	95.1	105.4	115.5	123.3
97.5°	120.4	131.7	142.9	154.2	165.4	164.6	151.6	138.7	125.7	112.8	119.3
100°	163.0	173.0	183.0	193.1	203.0	198.7	180.0	161.2	142.5	123.7	126.8
102.5°	211.6	219.8	228.1	236.4	244.6	251.5	257.1	262.8	268.4	274.0	242.9
105°	286.9	293.0	299.1	305.2	311.3	319.3	329.4	339.5	349.4	359.5	367.4
107.5°	358.7	363.3	367.9	372.5	377.1	384.4	394.3	404.2	414.1	424.0	430.9
110°	406.4	410.4	414.5	418.5	422.5	429.4	439.1	448.9	458.6	468.3	474.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	452.7	456.8	460.9	465.0	469.1	475.5	484.3	493.0	501.7	510.4	515.7
115°	523.9	526.7	529.5	532.3	535.1	540.3	547.9	555.5	563.1	570.6	576.4
117.5°	589.0	591.1	593.3	595.4	597.5	602.5	610.1	617.9	625.6	633.3	638.3
120°	632.3	633.9	635.4	637.0	638.5	642.7	649.6	656.4	663.3	670.1	675.4
122.5°	673.6	674.2	674.9	675.5	676.1	679.9	686.8	693.8	700.8	707.7	712.8
125°	731.6	732.1	732.7	733.3	733.9	737.0	742.7	748.4	754.0	759.7	764.9
127.5°	787.3	787.3	787.2	787.2	787.1	790.0	795.6	801.1	806.8	812.4	816.7
130°	822.5	822.4	822.4	822.4	822.4	824.6	829.1	833.6	838.1	842.6	847.2
132.5°	855.6	855.8	855.9	856.0	856.1	858.2	862.1	865.9	869.8	873.7	878.1
135°	904.3	904.0	903.9	903.6	903.4	904.6	907.1	909.7	912.2	914.7	919.0
137.5°	948.2	948.1	947.9	947.8	947.6	948.4	950.1	951.9	953.5	955.3	959.3
140°	977.0	977.2	977.3	977.5	977.6	978.0	978.7	979.4	980.0	980.6	984.4
142.5°	1001.9	1002.6	1003.2	1003.9	1004.6	1005.0	1005.1	1005.2	1005.3	1005.4	1008.6
145°	1041.2	1041.6	1042.0	1042.4	1042.7	1042.9	1042.9	1042.9	1042.9	1042.9	1044.6
147.5°	1072.7	1073.6	1074.5	1075.4	1076.3	1076.7	1076.5	1076.3	1076.0	1075.9	1076.2
150°	1095.5	1096.1	1096.7	1097.3	1097.8	1098.0	1097.8	1097.6	1097.4	1097.2	1097.2
152.5°	1113.8	1114.4	1115.0	1115.6	1116.3	1116.3	1116.0	1115.6	1115.2	1114.9	1115.2
155°	1140.5	1140.7	1140.9	1141.1	1141.3	1141.1	1140.5	1139.9	1139.2	1138.6	1139.5
157.5°	1163.1	1163.0	1162.8	1162.8	1162.6	1162.2	1161.5	1160.9	1160.2	1159.4	1160.5
160°	1176.4	1175.8	1175.1	1174.6	1173.9	1173.5	1173.3	1173.1	1172.9	1172.7	1173.9
162.5°	1188.1	1187.4	1186.6	1185.8	1185.0	1184.6	1184.3	1184.2	1183.9	1183.8	1184.9
165°	1203.1	1202.1	1201.0	1200.0	1199.0	1198.5	1198.5	1198.5	1198.5	1198.5	1200.1
167.5°	1214.8	1213.8	1212.8	1211.6	1210.6	1210.0	1209.9	1209.7	1209.7	1209.5	1211.3
170°	1221.5	1220.3	1219.0	1217.8	1216.6	1216.1	1216.2	1216.5	1216.6	1216.9	1218.5
172.5°	1225.9	1224.6	1223.4	1222.2	1221.0	1220.4	1220.7	1220.9	1221.1	1221.3	1222.9
175°	1230.7	1229.5	1228.2	1227.0	1225.7	1225.3	1225.4	1225.7	1225.9	1226.1	1227.9
177.5°	1232.9	1231.8	1230.6	1229.5	1228.3	1227.9	1228.2	1228.5	1228.9	1229.2	1230.5
180°	1230.7	1230.7	1230.7	1230.7	1230.7	1230.7	1230.7	1230.7	1230.7	1230.7	1230.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	978.1	978.1	978.1	978.1	978.1	978.1	978.1	978.1
2.5°	974.7	976.0	977.4	977.9	977.8	977.6	977.4	977.2
5°	972.1	974.1	976.0	976.8	976.6	976.4	976.1	975.9
7.5°	966.9	969.1	971.3	972.2	972.0	971.8	971.5	971.3
10°	961.6	963.8	966.1	967.0	966.8	966.5	966.3	966.1
12.5°	954.3	956.2	958.2	959.3	959.2	959.1	959.1	959.0
15°	940.9	943.0	945.2	946.2	945.9	945.7	945.5	945.2
17.5°	924.5	926.8	929.0	930.0	929.8	929.6	929.4	929.2
20°	911.7	914.2	916.6	917.8	917.8	917.8	917.8	917.8
22.5°	896.8	899.3	901.7	903.2	903.6	903.9	904.3	904.7
25°	873.9	876.5	879.2	880.7	881.0	881.2	881.5	881.7
27.5°	848.1	850.6	853.1	854.4	854.8	855.1	855.3	855.6
30°	830.1	832.7	835.4	837.0	837.5	838.0	838.5	839.0
32.5°	811.6	814.7	817.8	819.5	820.0	820.5	820.9	821.5
35°	782.3	785.7	789.1	791.2	791.9	792.6	793.4	794.1
37.5°	751.7	755.2	758.6	760.7	761.5	762.3	763.0	763.8
40°	730.2	733.8	737.5	739.8	740.8	741.7	742.8	743.7
42.5°	709.1	713.1	717.2	719.5	720.3	721.1	721.9	722.6
45°	676.4	680.6	684.7	687.4	688.6	689.8	691.0	692.2
47.5°	641.8	646.1	650.5	653.3	654.7	656.2	657.7	659.2
50°	617.6	622.5	627.3	630.5	632.0	633.4	634.9	636.4
52.5°	593.1	597.9	602.9	605.9	607.4	608.9	610.4	611.8
55°	556.3	561.2	566.0	569.2	570.6	572.1	573.5	575.0
57.5°	517.6	523.4	529.2	532.7	534.1	535.5	536.9	538.2
60°	490.9	496.5	502.1	505.9	507.9	509.8	511.7	513.7
62.5°	464.6	470.2	475.9	479.6	481.6	483.5	485.4	487.4
65°	424.0	430.1	436.2	440.2	442.1	444.1	446.0	448.0
67.5°	384.1	390.3	396.5	400.5	402.4	404.3	406.2	408.1
70°	355.9	362.5	369.1	373.3	374.9	376.7	378.3	380.1
72.5°	329.3	335.6	342.1	346.2	348.1	350.0	351.9	353.8
75°	288.5	295.3	302.1	306.7	308.9	311.1	313.2	315.4
77.5°	250.6	257.5	264.4	269.1	271.4	273.8	276.1	278.5
80°	226.0	233.3	240.6	245.2	247.2	249.1	251.0	253.0
82.5°	201.8	209.4	216.8	221.7	223.8	225.9	228.1	230.2
85°	167.9	175.2	182.5	187.4	189.9	192.3	194.7	197.2
87.5°	143.7	151.1	158.4	163.1	165.3	167.5	169.8	172.0
90°	145.3	153.5	161.8	167.2	169.5	171.8	174.2	176.6
92.5°	138.9	146.9	155.0	160.1	162.2	164.1	166.2	168.3
95°	131.1	138.9	146.7	151.9	154.2	156.6	159.0	161.4
97.5°	125.8	132.3	138.8	143.2	145.5	147.8	150.1	152.4
100°	129.9	133.0	136.1	138.6	140.5	142.4	144.3	146.2
102.5°	211.8	180.6	149.5	134.8	136.8	138.7	140.7	142.6
105°	375.3	383.3	391.2	392.4	387.0	381.6	376.2	370.7
107.5°	437.8	444.7	451.5	456.3	458.8	461.3	463.8	466.4
110°	480.4	486.4	492.4	496.7	499.2	501.8	504.4	506.9



TEST NUMBER: P332664-927

CATALOG NUMBER: SA4XXDIP-C1020D1205U927-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	521.0	526.3	531.6	535.7	538.4	541.1	543.8	546.6
115°	582.2	588.0	593.7	597.4	599.1	600.8	602.5	604.2
117.5°	643.3	648.2	653.2	656.6	658.5	660.4	662.2	664.1
120°	680.7	686.0	691.3	694.7	696.2	697.8	699.3	700.8
122.5°	718.0	723.1	728.2	731.4	732.8	734.1	735.5	736.8
125°	770.2	775.4	780.6	784.1	785.8	787.4	789.1	790.8
127.5°	820.9	825.1	829.4	832.3	833.8	835.3	836.8	838.3
130°	851.8	856.3	860.9	864.0	865.5	866.9	868.4	869.8
132.5°	882.5	886.9	891.3	894.1	895.4	896.8	898.0	899.3
135°	923.3	927.6	931.9	935.0	936.8	938.7	940.6	942.5
137.5°	963.3	967.3	971.3	973.8	974.9	976.0	977.2	978.3
140°	988.2	992.0	995.8	998.4	999.8	1001.2	1002.7	1004.1
142.5°	1011.9	1015.1	1018.4	1020.5	1021.5	1022.5	1023.7	1024.7
145°	1046.2	1047.9	1049.6	1051.1	1052.5	1053.8	1055.3	1056.6
147.5°	1076.6	1076.9	1077.3	1077.9	1079.0	1079.9	1080.9	1081.9
150°	1097.2	1097.2	1097.2	1097.3	1097.5	1097.7	1098.0	1098.1
152.5°	1115.6	1115.9	1116.2	1116.3	1116.2	1116.0	1115.9	1115.8
155°	1140.3	1141.1	1141.9	1142.0	1141.4	1140.7	1140.2	1139.6
157.5°	1161.6	1162.6	1163.7	1163.7	1162.6	1161.6	1160.5	1159.4
160°	1175.1	1176.4	1177.6	1177.6	1176.4	1175.1	1173.9	1172.7
162.5°	1186.2	1187.4	1188.7	1188.6	1187.2	1185.8	1184.4	1183.0
165°	1201.7	1203.4	1205.0	1204.9	1203.1	1201.2	1199.4	1197.5
167.5°	1213.1	1214.9	1216.7	1216.6	1214.6	1212.5	1210.5	1208.4
170°	1220.1	1221.8	1223.4	1223.2	1221.1	1219.1	1217.1	1215.0
172.5°	1224.6	1226.2	1227.8	1227.6	1225.3	1223.1	1220.9	1218.7
175°	1229.8	1231.6	1233.4	1233.1	1230.7	1228.2	1225.7	1223.3
177.5°	1231.8	1233.1	1234.5	1234.1	1232.2	1230.2	1228.2	1226.3
180°	1230.7	1230.7	1230.7	1230.7	1230.7	1230.7	1230.7	1230.7

(END OF REPORT)