

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: P332711-930

Luminaire Tested: **SA4XXDIP-C1195D1205U930-4F0-1E-UDD-D4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P332711-930
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-C1195D1205U930-4F0-1E-UDD-D4
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1195 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1205 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7472.8 lumens
Efficiency: N/A
Efficacy: 104.2 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

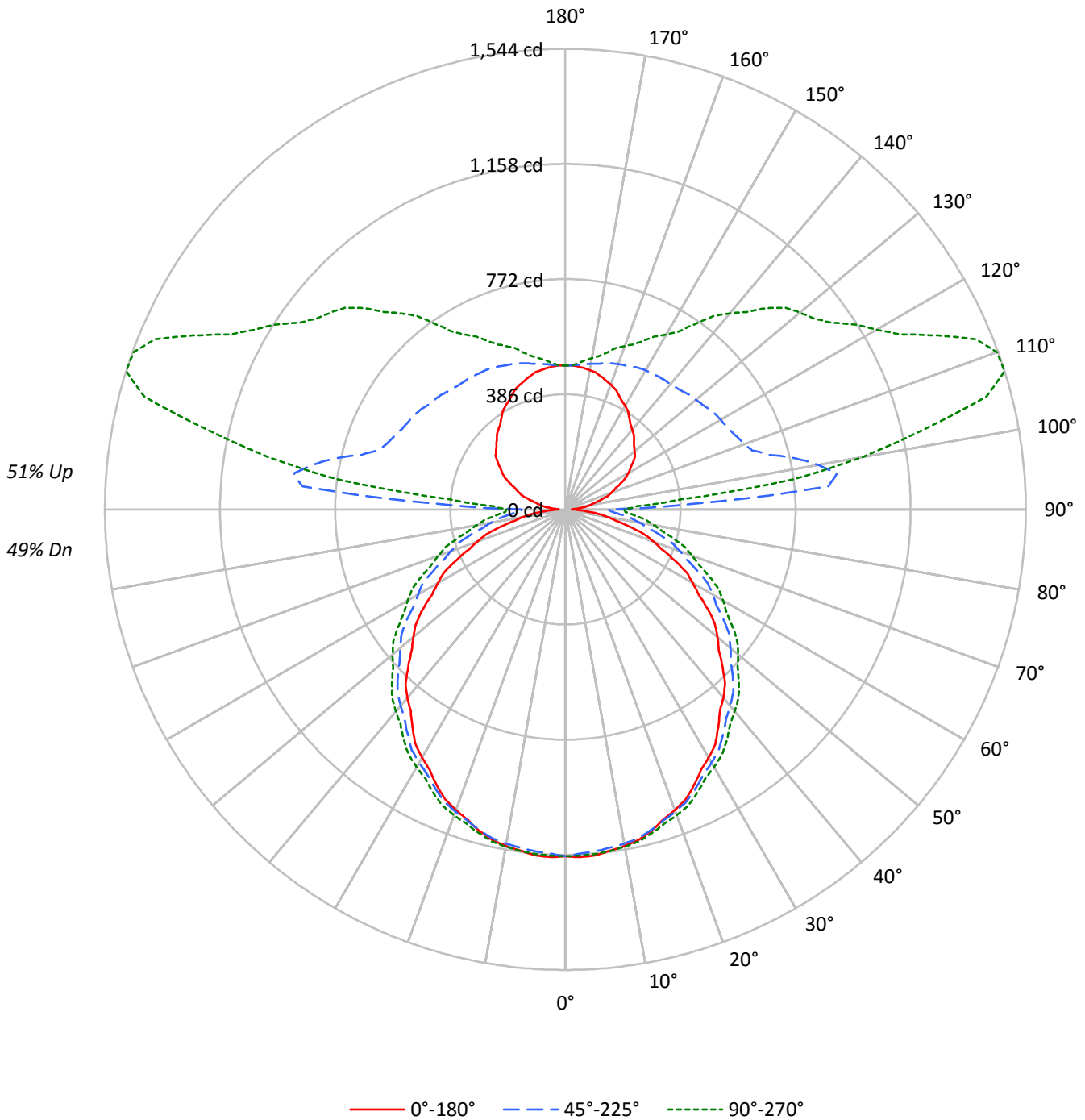
Input Watts (W): 71.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	0
RCR																		
0	107	107	107	107	99	99	99	99	83	83	83	68	68	68	55	55	55	49
1	97	92	88	84	89	85	81	78	71	68	66	59	57	55	47	46	45	39
2	88	80	73	68	80	73	68	63	62	57	54	51	48	45	41	39	37	32
3	80	70	62	56	73	64	57	52	54	49	45	45	41	38	36	33	31	27
4	73	61	53	47	66	57	49	44	48	42	38	40	35	32	32	29	26	23
5	67	54	46	40	61	50	43	37	43	37	32	35	31	27	29	25	23	19
6	61	49	40	34	56	45	38	32	38	32	28	32	27	24	26	23	20	17
7	57	44	36	30	52	41	33	28	35	29	25	29	24	21	24	20	18	15
8	52	40	32	26	48	37	30	25	32	26	22	26	22	19	22	18	16	13
9	49	36	29	23	45	34	27	22	29	23	19	24	20	17	20	17	14	12
10	46	33	26	21	42	31	24	20	27	21	17	22	18	15	18	15	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9386	9386	9386
5°	9414	9173	9199
10°	9357	9022	9016
15°	9273	8849	8800
20°	9147	8658	8591
25°	9004	8442	8360
30°	8849	8228	8124
35°	8675	8010	7917
40°	8536	7801	7700
45°	8329	7610	7515
50°	8153	7388	7319
55°	7973	7179	7089
60°	7689	6913	6880
65°	7380	6628	6622
70°	7004	6302	6322
75°	6483	5945	6051
80°	5900	5600	5784
85°	5162	5295	5626



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	110.1	1.5
10°-20°	315.4	4.2
20°-30°	477.0	6.4
30°-40°	577.1	7.7
40°-50°	610.1	8.2
50°-60°	574.2	7.7
60°-70°	476.4	6.4
70°-80°	334.6	4.5
80°-90°	191.8	2.6
90°-100°	460.6	6.2
100°-110°	808.0	10.8
110°-120°	705.1	9.4
120°-130°	577.6	7.7
130°-140°	469.0	6.3
140°-150°	350.7	4.7
150°-160°	244.6	3.3
160°-170°	143.8	1.9
170°-180°	46.8	0.6
0°-30°	902.5	12.1
0°-40°	1479.6	19.8
0°-60°	2663.8	35.6
0°-90°	3666.6	49.1
90°-120°	1973.7	26.4
90°-150°	3371.0	45.1
90°-180°	3806.0	50.9
0°-180°	7472.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1163	1163	1163	1163	1163	
5°	1164	1160	1151	1161	1160	110
15°	1116	1117	1113	1124	1124	314
25°	1021	1028	1032	1046	1048	470
35°	893	908	922	939	944	559
45°	745	769	794	815	823	575
55°	583	611	650	675	684	520
65°	404	445	490	521	532	400
75°	224	272	327	362	375	238
85°	69	124	182	220	234	73
90°	22	81	146	184	197	15
95°	48	159	885	529	391	48
105°	122	200	707	1455	1462	131
115°	203	266	615	1154	1379	202
125°	277	329	588	966	1090	247
135°	326	388	558	836	954	252
145°	374	426	544	686	759	235
155°	424	457	529	599	624	195
165°	461	476	507	537	545	130
175°	481	482	486	493	491	46
180°	482	482	482	482	482	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1162.6	1162.6	1162.6	1162.6	1162.6	1162.6	1162.6	1162.6	1162.6	1162.6	1162.6
2.5°	1166.8	1166.0	1165.4	1164.7	1164.0	1162.7	1160.8	1159.0	1157.2	1155.3	1156.9
5°	1163.8	1163.0	1162.1	1161.3	1160.4	1158.9	1156.9	1154.9	1152.9	1150.9	1153.2
7.5°	1154.0	1153.5	1152.9	1152.4	1151.9	1150.8	1149.2	1147.5	1145.7	1144.1	1146.7
10°	1145.7	1145.3	1145.1	1144.8	1144.5	1143.6	1142.2	1140.8	1139.3	1137.8	1140.4
12.5°	1134.2	1134.2	1134.1	1134.0	1134.0	1133.4	1132.5	1131.5	1130.5	1129.5	1131.9
15°	1115.7	1116.0	1116.3	1116.6	1116.9	1116.6	1115.7	1114.8	1113.9	1113.1	1115.7
17.5°	1090.5	1091.4	1092.2	1093.1	1093.9	1094.3	1094.1	1093.9	1093.7	1093.6	1096.3
20°	1072.8	1073.6	1074.5	1075.4	1076.2	1076.8	1077.1	1077.4	1077.7	1078.0	1080.8
22.5°	1053.0	1054.0	1055.2	1056.2	1057.4	1058.2	1058.7	1059.2	1059.7	1060.2	1063.2
25°	1020.7	1022.4	1024.2	1025.9	1027.6	1028.9	1029.8	1030.6	1031.5	1032.4	1035.6
27.5°	984.7	987.3	989.9	992.4	994.9	996.9	998.2	999.6	1000.9	1002.2	1005.1
30°	960.7	963.1	965.4	967.8	970.0	972.2	974.2	976.2	978.3	980.3	983.5
32.5°	934.7	937.5	940.3	943.1	945.8	948.4	950.6	952.9	955.1	957.4	961.1
35°	893.1	896.6	900.0	903.5	906.9	910.1	913.1	915.9	918.8	921.7	925.8
37.5°	851.2	855.2	859.2	863.2	867.2	870.9	874.5	878.1	881.7	885.3	889.4
40°	824.1	827.9	831.6	835.4	839.1	843.0	847.1	851.2	855.2	859.2	863.6
42.5°	792.9	797.0	801.3	805.5	809.8	814.2	819.0	823.7	828.4	833.2	838.0
45°	744.7	750.2	755.7	761.2	766.6	772.2	777.6	783.2	788.6	794.2	799.1
47.5°	698.5	704.3	710.0	715.6	721.3	727.3	733.7	740.0	746.4	752.8	757.8
50°	665.3	671.6	678.0	684.4	690.7	697.1	703.4	709.8	716.2	722.5	728.3
52.5°	631.9	638.3	644.7	651.0	657.4	664.2	671.5	678.8	686.1	693.4	699.2
55°	583.3	589.3	595.4	601.4	607.6	614.9	623.6	632.3	641.0	649.6	655.4
57.5°	528.8	536.4	543.9	551.4	558.9	567.0	575.6	584.2	592.9	601.4	608.4
60°	493.4	500.9	508.4	516.0	523.5	532.1	541.6	551.1	560.7	570.2	576.9
62.5°	459.0	467.2	475.5	483.7	491.9	500.8	510.4	519.9	529.5	539.0	545.6
65°	403.6	412.9	422.1	431.4	440.6	450.1	460.0	469.9	479.6	489.5	496.8
67.5°	350.2	360.0	369.9	379.7	389.6	399.7	410.3	420.8	431.3	441.9	449.2
70°	313.7	323.6	333.5	343.2	353.1	363.5	374.5	385.5	396.5	407.5	415.3
72.5°	278.3	288.4	298.5	308.5	318.6	329.5	341.2	352.9	364.5	376.3	383.8
75°	224.0	234.6	245.3	256.0	266.8	278.2	290.3	302.5	314.6	326.8	334.8
77.5°	173.2	184.5	195.8	207.2	218.5	230.6	243.3	256.0	268.7	281.4	289.7
80°	141.9	153.4	165.0	176.6	188.2	200.3	213.0	225.8	238.6	251.3	259.9
82.5°	110.6	122.7	134.8	146.8	158.8	171.2	183.9	196.7	209.4	222.1	231.0
85°	69.0	81.1	93.3	105.4	117.6	130.2	143.2	156.2	169.3	182.3	190.9
87.5°	38.7	50.9	63.3	75.3	87.2	99.5	113.3	126.0	139.0	152.1	160.3
90°	21.8	35.2	49.7	62.2	74.7	86.7	104.8	117.2	131.6	145.9	153.4
92.5°	30.6	45.9	65.2	87.2	111.5	142.6	203.2	289.1	373.2	423.1	381.1
95°	48.2	60.6	79.6	101.4	133.7	184.3	278.5	445.7	684.0	885.4	915.0
97.5°	71.4	79.7	96.0	115.6	143.3	186.7	261.9	401.9	638.8	918.4	1110.2
100°	86.3	93.8	108.0	126.9	152.4	192.2	259.3	377.6	582.2	860.6	1111.0
102.5°	101.5	109.6	122.1	139.3	163.1	200.7	262.4	367.6	543.1	791.0	1048.7
105°	122.5	131.2	141.7	158.9	181.7	217.4	273.6	363.0	506.3	707.4	937.3
107.5°	148.5	155.1	164.6	181.4	202.4	237.0	288.8	370.6	494.0	657.4	846.2
110°	164.9	170.8	179.6	195.0	216.1	248.7	300.6	377.0	491.4	638.9	799.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	180.5	186.0	195.0	209.2	229.8	262.0	311.9	384.1	491.1	626.8	770.9
115°	203.0	208.4	217.7	229.8	250.3	281.8	329.0	395.1	492.4	615.4	741.1
117.5°	227.7	232.0	239.4	251.4	269.8	301.4	346.0	406.9	494.6	606.7	723.1
120°	243.4	246.1	253.6	264.9	281.8	313.0	357.4	415.1	496.4	601.4	712.4
122.5°	258.5	260.6	267.4	277.2	295.1	324.8	368.8	422.9	498.5	595.5	701.1
125°	277.1	280.6	286.0	296.1	313.8	343.8	385.1	436.0	502.9	587.8	684.3
127.5°	294.5	297.2	303.8	315.4	333.9	363.2	401.7	447.3	504.9	578.0	662.8
130°	303.3	306.8	314.1	328.0	345.7	375.4	412.2	453.8	506.7	571.9	649.1
132.5°	313.2	315.8	325.5	338.6	357.8	385.5	421.4	461.3	508.7	567.0	637.2
135°	325.6	329.5	338.9	355.1	375.0	400.6	433.8	470.0	510.9	558.3	617.9
137.5°	339.5	342.8	352.9	368.0	388.3	412.2	442.4	475.2	510.6	552.2	601.7
140°	349.4	351.9	362.0	377.8	397.5	420.2	448.9	479.5	512.0	548.3	592.8
142.5°	358.9	361.7	371.3	386.6	405.7	427.5	455.0	482.9	513.4	546.3	585.7
145°	373.7	376.2	385.4	398.4	416.0	436.8	461.4	487.0	514.5	543.8	575.8
147.5°	390.4	391.2	399.2	412.5	427.2	445.8	469.0	491.3	515.4	540.4	567.4
150°	401.1	401.8	409.0	420.1	434.1	451.9	472.7	493.6	515.4	538.1	561.8
152.5°	409.9	410.0	417.6	428.1	440.8	457.2	475.8	495.1	513.9	534.3	555.7
155°	423.5	424.4	430.1	439.6	450.0	464.2	480.3	496.4	511.6	528.6	546.7
157.5°	436.9	436.9	442.2	449.6	458.7	469.9	483.6	496.4	509.2	522.8	537.4
160°	445.2	445.2	449.1	455.7	463.3	473.7	485.0	496.4	506.9	518.2	530.5
162.5°	452.8	452.1	455.1	461.0	467.8	476.0	486.6	496.4	504.6	513.6	524.5
165°	461.4	461.4	463.3	468.0	472.7	478.4	487.0	494.6	500.2	506.9	514.5
167.5°	469.9	469.0	469.9	473.5	476.1	480.5	486.7	492.3	495.7	500.0	505.3
170°	473.7	472.7	473.7	476.5	478.4	481.3	486.0	490.7	492.6	495.5	499.3
172.5°	477.4	476.5	476.7	478.8	480.0	482.0	485.3	489.3	489.6	490.9	494.0
175°	481.3	480.3	480.3	481.3	482.2	482.2	484.1	487.0	486.0	486.0	487.9
177.5°	483.0	482.2	481.4	482.2	482.2	482.2	483.0	484.5	483.0	483.0	483.7
180°	482.2	482.2	482.2	482.2	482.2	482.2	482.2	482.2	482.2	482.2	482.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1162.6	1162.6	1162.6	1162.6	1162.6	1162.6	1162.6	1162.6
2.5°	1158.5	1160.2	1161.8	1162.5	1162.2	1162.0	1161.8	1161.6
5°	1155.5	1157.8	1160.1	1161.1	1160.8	1160.6	1160.3	1160.0
7.5°	1149.3	1151.9	1154.5	1155.7	1155.4	1155.1	1154.8	1154.5
10°	1143.0	1145.7	1148.3	1149.4	1149.2	1148.8	1148.5	1148.3
12.5°	1134.2	1136.6	1139.0	1140.2	1140.1	1140.0	1140.0	1140.0
15°	1118.3	1121.0	1123.5	1124.7	1124.4	1124.1	1123.8	1123.5
17.5°	1098.9	1101.6	1104.2	1105.5	1105.2	1105.0	1104.7	1104.5
20°	1083.8	1086.6	1089.6	1091.0	1091.0	1091.0	1091.0	1091.0
22.5°	1066.0	1068.9	1071.8	1073.5	1074.0	1074.4	1074.9	1075.4
25°	1038.8	1042.0	1045.1	1046.8	1047.2	1047.4	1047.7	1048.0
27.5°	1008.1	1011.1	1014.0	1015.6	1016.0	1016.4	1016.7	1017.0
30°	986.7	989.9	993.0	994.9	995.5	996.1	996.6	997.3
32.5°	964.7	968.3	972.0	974.1	974.7	975.3	975.8	976.4
35°	929.8	933.8	937.9	940.4	941.3	942.2	943.0	943.9
37.5°	893.5	897.6	901.7	904.2	905.1	906.0	907.0	907.9
40°	867.9	872.3	876.6	879.4	880.5	881.7	882.8	883.9
42.5°	842.8	847.6	852.4	855.2	856.2	857.1	858.0	859.0
45°	804.0	808.9	813.8	817.0	818.5	819.9	821.3	822.8
47.5°	763.0	768.0	773.1	776.5	778.3	780.0	781.7	783.5
50°	734.1	739.9	745.7	749.4	751.2	752.9	754.6	756.4
52.5°	705.0	710.8	716.5	720.3	722.0	723.7	725.5	727.2
55°	661.2	667.0	672.8	676.5	678.2	680.0	681.8	683.5
57.5°	615.2	622.2	629.0	633.2	634.9	636.5	638.1	639.8
60°	583.5	590.2	596.8	601.3	603.6	605.9	608.3	610.6
62.5°	552.3	559.0	565.6	570.1	572.4	574.7	577.0	579.4
65°	503.9	511.2	518.4	523.2	525.5	527.8	530.2	532.5
67.5°	456.6	463.9	471.2	476.1	478.3	480.5	482.8	485.1
70°	423.1	430.9	438.7	443.7	445.6	447.7	449.7	451.8
72.5°	391.4	399.0	406.6	411.5	413.8	416.0	418.2	420.5
75°	343.0	351.1	359.1	364.5	367.1	369.7	372.3	375.0
77.5°	297.9	306.1	314.3	319.8	322.6	325.4	328.2	330.9
80°	268.6	277.3	286.0	291.5	293.8	296.1	298.4	300.8
82.5°	239.9	248.8	257.7	263.5	266.0	268.6	271.1	273.6
85°	199.6	208.3	217.0	222.7	225.7	228.5	231.5	234.3
87.5°	168.8	177.4	186.1	191.5	194.2	197.0	199.3	201.9
90°	162.7	172.0	181.4	186.8	190.0	193.3	194.6	197.0
92.5°	325.0	287.1	266.7	253.0	244.1	241.3	240.4	242.7
95°	830.9	691.9	572.7	486.0	442.2	415.5	401.0	391.3
97.5°	1157.6	1110.5	1025.5	931.6	866.1	811.5	785.6	768.3
100°	1257.1	1283.9	1245.3	1180.1	1099.7	1043.9	1017.5	1011.9
102.5°	1246.1	1347.7	1368.7	1344.4	1296.2	1256.5	1228.8	1225.0
105°	1161.5	1332.6	1433.6	1477.2	1481.4	1476.2	1465.3	1461.8
107.5°	1045.5	1227.1	1366.3	1455.4	1504.3	1528.0	1539.5	1544.1
110°	975.2	1145.7	1289.8	1398.5	1468.0	1510.2	1529.5	1540.3



TEST NUMBER: P332711-930

CATALOG NUMBER: SA4XXDIP-C1195D1205U930-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	921.8	1073.2	1209.4	1317.9	1396.6	1447.1	1473.2	1489.4
115°	865.9	988.8	1106.0	1201.2	1278.1	1336.9	1369.2	1378.8
117.5°	833.9	936.4	1029.6	1110.8	1177.0	1227.1	1260.0	1268.3
120°	817.7	911.5	993.1	1064.5	1120.7	1164.7	1191.7	1204.4
122.5°	803.3	894.2	969.0	1031.8	1079.5	1117.3	1140.2	1152.7
125°	780.7	867.7	938.6	994.3	1033.9	1063.2	1082.9	1090.3
127.5°	753.4	836.5	906.9	959.9	1000.0	1026.4	1043.5	1051.2
130°	733.0	813.1	882.7	936.4	977.0	1002.4	1019.3	1026.7
132.5°	712.5	787.7	855.7	909.2	949.0	977.5	993.6	1001.0
135°	682.2	748.4	810.9	861.4	901.1	929.3	946.2	953.7
137.5°	655.6	711.9	764.8	810.5	847.3	874.9	888.9	897.2
140°	640.1	688.4	734.8	777.2	811.8	834.1	848.8	857.9
142.5°	626.5	669.0	708.9	745.7	776.2	796.8	809.8	816.3
145°	607.9	641.9	672.0	700.0	724.8	742.1	752.7	758.6
147.5°	592.6	618.4	641.3	662.8	681.1	695.9	704.0	706.6
150°	584.6	606.3	625.3	642.3	657.5	669.8	675.5	676.5
152.5°	576.2	594.9	612.4	626.4	639.3	649.3	652.7	653.7
155°	563.7	578.9	593.0	604.5	613.9	621.5	624.4	624.4
157.5°	550.2	563.0	574.9	584.0	591.2	596.9	598.6	598.6
160°	541.9	552.3	562.7	570.3	576.0	581.7	582.6	582.6
162.5°	533.5	542.5	550.7	557.4	561.6	567.3	568.3	567.4
165°	522.0	527.7	534.3	539.1	542.8	546.7	545.7	544.8
167.5°	510.9	515.2	520.5	523.3	525.2	527.7	527.5	526.8
170°	504.0	506.9	510.6	513.5	515.4	516.3	515.4	515.4
172.5°	497.9	500.0	502.3	504.3	505.5	506.5	505.5	504.0
175°	489.8	490.7	492.6	492.6	492.6	494.6	492.6	490.7
177.5°	484.5	485.3	485.3	486.0	485.3	486.0	484.5	483.0
180°	482.2	482.2	482.2	482.2	482.2	482.2	482.2	482.2

(END OF REPORT)