

LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: STREETWORKS

Report Number: P598842

Luminaire Tested: **IFLD-L-SA7D-830-U-SLR**

Issue Date: 05/03/2022

Tested By:

Approved By:



Cooper Lighting Solutions laboratories have been accredited by National Voluntary Laboratory Accreditation Program (NVLAP) that it adheres to the requirements of ISO/IEC 17025:2005 and appropriate IESNA test methods. This report must not be used to claim product certification, approval or endorsement by NVLAP, NIST or any agency of the Federal Government. Results contained in this report are valid for luminaire sample tested, as supplied by requestor. Information related to the luminaire tested has been supplied by requestor and can affect the validity of the test results. Report shall not be reproduced except in full without approval of Cooper Lighting Solutions Lighting Laboratory. Test performed at address noted above.

Test Information

Test Method: LM-79-08
 Report Number: P598842
 Test Lab: INNOVATION CENTER(G1)
 Issue Date: 05/03/2022
 Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
 Product Line: STREETWORKS
 Catalog Number: IFLD-L-SA7D-830-U-SLR
 Description: Infrastructure Flood – Middle Tier Light Square Luminaire w/ SLR distribution lens
 Light Source: (112) 3000K CCT, 80 CRI LEDS
 Ballast/Driver: ELECTRONIC DRIVER

Summary

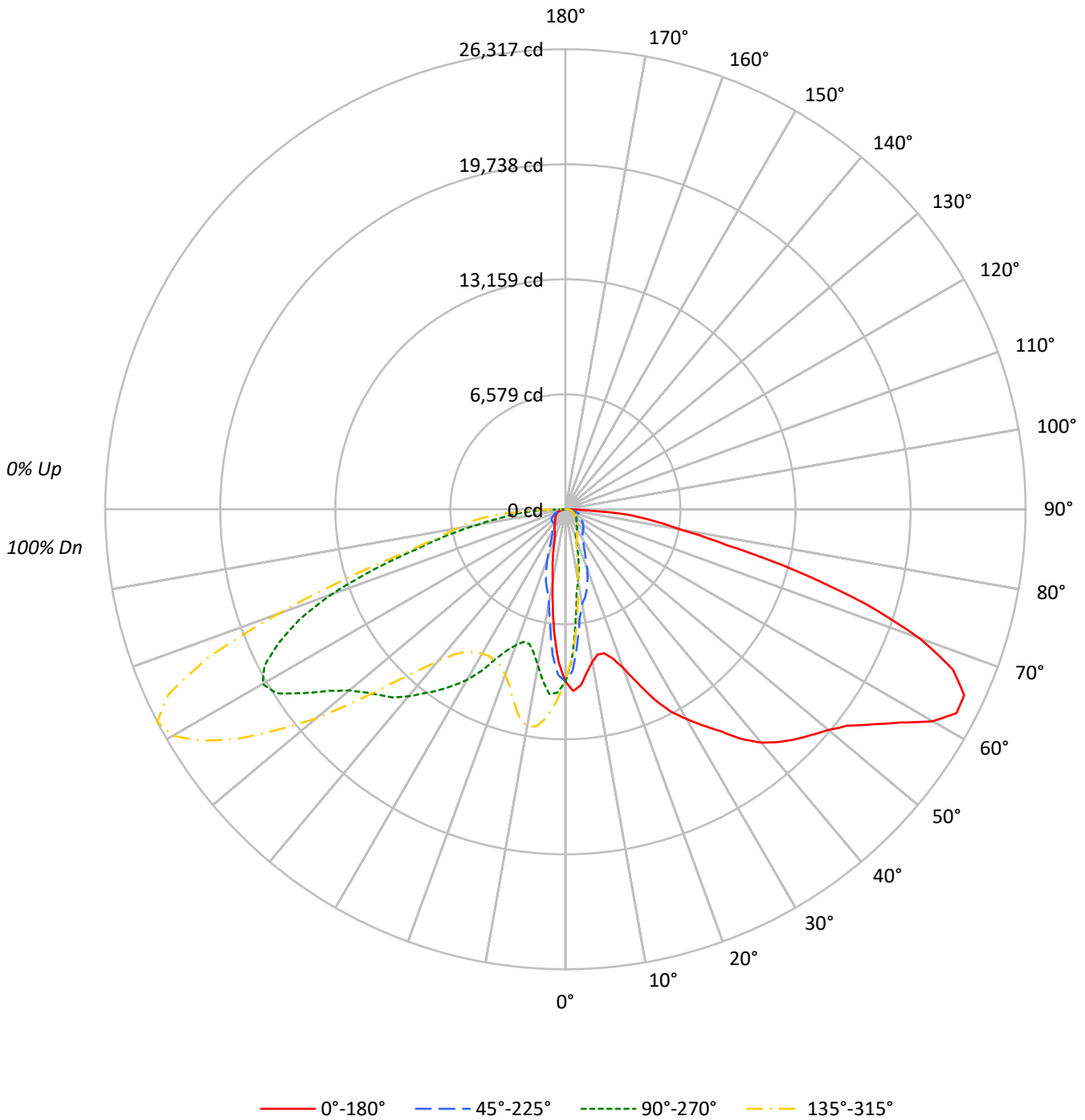
Lumens per Lamp: N/A
 Luminaire Lumens: 32968.3 lumens
 Efficiency: N/A
 Efficacy: 78.0 lumens/watt
 Spacing Criteria (0/90/45): 1.13 / 0.53 / 0.8
 Luminous Opening: Rectangular (W 2' x L: 1' x H: 0')
 CIE Type: Direct

Input Watts (W): 422.6
 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

Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	GONIO 1 IN0055	4/22/2021	10/22/2021
Power Meter	XITRON 2801 IN0197	12/1/2020	12/1/2021
AC Power Source	CHROMA 61505 IN0196	12/1/2020	12/1/2021
DC Power Supply	AGILENT E3634A IN0198	11/30/2020	11/30/2021
Room Thermometer	ONSET IN0143	12/1/2020	12/1/2021

TEST NUMBER: P598842
CATALOG NUMBER: IFLD-L-SA7D-830-U-SLR

Luminous Intensity Polar Plot



TEST NUMBER: P598842
 CATALOG NUMBER: IFLD-L-SA7D-830-U-SLR

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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	102	102	100
1	105	99	94	89	102	97	92	87	92	88	84	88	85	82	85	82	79	85	82	79	77
2	93	83	74	67	90	81	73	66	77	70	64	73	68	63	70	65	61	70	65	61	59
3	83	70	60	52	80	68	59	51	65	57	50	62	55	49	59	53	48	59	53	48	46
4	74	60	49	41	72	59	49	41	56	47	40	53	46	40	51	44	39	51	44	39	36
5	68	52	42	34	65	51	41	34	49	40	33	47	39	33	45	38	32	45	38	32	30
6	62	46	36	28	60	45	35	28	43	34	28	41	34	28	40	33	27	40	33	27	25
7	57	41	31	24	55	40	31	24	39	30	24	37	29	24	36	29	23	36	29	23	21
8	53	37	28	21	51	36	27	21	35	27	21	34	26	21	32	26	20	32	26	20	18
9	49	34	25	19	47	33	24	18	32	24	18	31	23	18	30	23	18	30	23	18	16
10	46	31	22	17	44	31	22	17	29	22	16	28	21	16	28	21	16	28	21	16	14

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	53003	53003	53003	53003
5°	54547	35470	38749	57304
10°	48393	22538	22764	49524
15°	47495	15986	15140	44421
20°	55219	10112	10191	47319
25°	71014	8682	8437	55943
30°	86060	8229	7715	70031
35°	101860	7250	6978	83010
40°	122391	6880	6395	98068
45°	141621	6823	6194	114325
50°	164453	6929	6236	135005
55°	201252	7118	6342	172003
60°	261006	7127	6681	215129
65°	320388	7202	6850	230280
70°	339023	7597	7163	224207
75°	285383	8031	7170	182990
80°	207334	9403	7268	158172
85°	219747	13628	5965	164387

TEST NUMBER: P598842
 CATALOG NUMBER: IFLD-L-SA7D-830-U-SLR

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	762.2	2.3
10°-20°	1595.1	4.8
20°-30°	2298.7	7.0
30°-40°	3309.2	10.0
40°-50°	4700.6	14.3
50°-60°	6758.1	20.5
60°-70°	7807.8	23.7
70°-80°	4420.9	13.4
80°-90°	1315.7	4.0
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	4656.0	14.1
0°-40°	7965.3	24.2
0°-60°	19423.9	58.9
0°-90°	32968.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	32968.3	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	9848	9848	9848	9848	9848	
5°	10096	6566	7172	10607	10096	916
15°	8524	2869	2717	7972	8524	2507
25°	11959	1462	1421	9421	11959	5551
35°	15503	1103	1062	12634	15503	9839
45°	18607	896	814	15021	18607	14408
55°	21448	759	676	18331	21448	19425
65°	25158	566	538	18083	25158	24125
75°	13724	386	345	8800	13724	14562
85°	3559	221	97	2662	3559	3544
90°	0	0	0	0	0	

TEST NUMBER: P598842
 CATALOG NUMBER: IFLD-L-SA7D-830-U-SLR

CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	9848.2	9848.2	9848.2	9848.2	9848.2	9848.2	9848.2	9848.2	9848.2	9848.2	9848.2
2.5°	10400.0	10386.2	10303.4	10041.3	9765.5	9503.4	9255.1	8993.1	8855.1	8689.6	8620.7
5°	10096.5	10068.9	9834.4	9255.1	8744.8	8193.1	7724.1	7351.7	7048.2	6744.8	6634.5
7.5°	9406.9	9365.5	9089.6	8289.6	7544.8	6827.6	6262.0	5779.3	5379.3	5200.0	4993.1
10°	8855.1	8786.2	8427.5	7544.8	6579.3	5862.0	5489.6	5158.6	4813.8	4524.1	4220.7
12.5°	8510.3	8427.5	8055.1	7020.7	6082.7	5544.8	5158.6	4786.2	4358.6	4000.0	3668.9
15°	8524.1	8427.5	7972.4	6882.7	5958.6	5268.9	4731.0	4220.7	3724.1	3324.1	2951.7
17.5°	8924.1	8800.0	8317.2	7075.8	5862.0	4910.3	4193.1	3531.0	2965.5	2537.9	2234.5
20°	9641.3	9558.6	9006.9	7365.5	5765.5	4524.1	3641.4	2841.4	2248.3	1917.2	1793.1
22.5°	10717.2	10620.6	10027.5	7806.9	5737.9	4179.3	3048.3	2234.5	1806.9	1669.0	1600.0
25°	11958.6	11779.3	11227.5	8551.7	5793.1	3862.1	2565.5	1848.3	1613.8	1517.2	1475.9
27.5°	13034.4	12924.1	12303.4	9255.1	5820.7	3613.8	2234.5	1682.8	1503.4	1420.7	1393.1
30°	13848.2	13806.8	13199.9	10027.5	5751.7	3310.3	2027.6	1613.8	1503.4	1420.7	1337.9
32.5°	14662.0	14675.8	14027.5	10620.6	5655.1	3048.3	1834.5	1434.5	1324.1	1269.0	1282.8
35°	15503.4	15572.3	15020.6	11200.0	5448.3	2951.7	1696.5	1337.9	1241.4	1158.6	1117.2
37.5°	16565.4	16744.8	16206.8	11848.2	5241.4	2869.0	1627.6	1269.0	1172.4	1103.4	1048.3
40°	17420.6	17751.6	17434.4	12455.1	5103.4	2772.4	1572.4	1200.0	1131.0	1048.3	1006.9
42.5°	18055.1	18441.3	18331.0	12924.1	5103.4	2675.9	1517.2	1158.6	1103.4	1006.9	951.7
45°	18606.8	19006.8	18993.0	13406.8	5213.8	2620.7	1448.3	1158.6	1075.9	979.3	924.1
47.5°	19103.4	19503.4	19641.3	14013.7	5393.1	2593.1	1365.5	1131.0	1075.9	965.5	882.8
50°	19641.3	20082.7	20496.5	14979.2	5613.8	2524.1	1310.3	1089.7	1089.7	951.7	855.2
52.5°	20330.9	20827.5	21586.1	16179.2	5834.5	2400.0	1227.6	1062.1	1089.7	937.9	827.6
55°	21448.2	21862.0	22855.1	17613.7	6110.3	2248.3	1158.6	993.1	1034.5	896.5	786.2
57.5°	22703.4	23062.0	23889.6	18717.2	6193.1	2055.2	1062.1	924.1	993.1	855.2	731.0
60°	24248.2	24427.5	24427.5	19034.4	5917.2	1875.9	993.1	869.0	896.5	813.8	689.7
62.5°	25227.5	25227.5	24427.5	18455.1	5393.1	1724.1	937.9	813.8	786.2	758.6	648.3
65°	25158.5	25048.2	23862.0	16772.3	4786.2	1627.6	882.8	744.8	703.4	689.7	606.9
67.5°	23999.9	23806.8	22193.0	14399.9	4151.7	1586.2	827.6	675.9	648.3	620.7	551.7
70°	21544.7	21048.2	19062.0	11586.2	3531.0	1558.6	813.8	620.7	593.1	565.5	510.3
72.5°	17986.1	17351.6	14882.7	8910.3	2965.5	1462.1	772.4	551.7	537.9	510.3	455.2
75°	13724.1	12551.7	10386.2	6813.8	2303.4	1269.0	662.1	482.8	482.8	469.0	413.8
77.5°	9462.0	8855.1	7241.3	5034.5	1682.8	979.3	537.9	427.6	427.6	441.4	386.2
80°	6689.6	6124.1	5158.6	3613.8	1062.1	662.1	413.8	358.6	400.0	427.6	358.6
82.5°	5117.2	4703.4	3834.5	2634.5	620.7	455.2	317.2	289.7	344.8	372.4	303.4
85°	3558.6	3062.1	1944.8	1765.5	358.6	275.9	234.5	234.5	303.4	372.4	275.9
87.5°	1006.9	427.6	124.1	524.1	151.7	110.3	82.8	55.2	82.8	82.8	55.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P598842
 CATALOG NUMBER: IFLD-L-SA7D-830-U-SLR

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	9848.2	9848.2	9848.2	9848.2	9848.2	9848.2	9848.2	9848.2	9848.2	9848.2	9848.2
2.5°	8551.7	8468.9	8468.9	8441.3	8455.1	8468.9	8455.1	8551.7	8593.1	8648.2	8758.6
5°	6565.5	6675.8	6593.1	6675.8	6786.2	6951.7	6993.1	7117.2	7131.0	7227.6	7172.4
7.5°	4868.9	4855.2	4786.2	4882.7	5186.2	5420.7	5531.0	5600.0	5613.8	5613.8	5544.8
10°	4124.1	4000.0	3875.8	3806.9	3834.5	4082.7	4165.5	4206.9	4179.3	4220.7	4165.5
12.5°	3531.0	3420.7	3241.4	3117.2	3034.5	3103.4	3186.2	3227.6	3255.2	3324.1	3379.3
15°	2869.0	2758.6	2648.3	2579.3	2510.3	2455.2	2524.1	2565.5	2634.5	2689.6	2717.2
17.5°	2179.3	2124.1	2069.0	2110.3	2110.3	2082.7	2110.3	2124.1	2151.7	2193.1	2179.3
20°	1765.5	1751.7	1737.9	1806.9	1862.1	1862.1	1889.6	1848.3	1834.5	1793.1	1779.3
22.5°	1572.4	1572.4	1586.2	1641.4	1696.5	1724.1	1724.1	1655.2	1586.2	1558.6	1572.4
25°	1462.1	1462.1	1503.4	1517.2	1544.8	1544.8	1558.6	1489.6	1448.3	1406.9	1420.7
27.5°	1379.3	1379.3	1393.1	1393.1	1406.9	1406.9	1420.7	1393.1	1337.9	1324.1	1324.1
30°	1324.1	1324.1	1310.3	1310.3	1310.3	1310.3	1324.1	1282.8	1255.2	1241.4	1241.4
32.5°	1269.0	1255.2	1241.4	1241.4	1227.6	1227.6	1241.4	1200.0	1186.2	1186.2	1186.2
35°	1103.4	1089.7	1103.4	1131.0	1131.0	1144.8	1144.8	1131.0	1103.4	1075.9	1062.1
37.5°	1034.5	1020.7	1020.7	1020.7	1048.3	1062.1	1075.9	1048.3	1006.9	965.5	965.5
40°	979.3	979.3	965.5	965.5	965.5	993.1	1020.7	979.3	924.1	910.3	910.3
42.5°	937.9	924.1	910.3	896.5	882.8	924.1	951.7	896.5	869.0	869.0	869.0
45°	896.5	882.8	869.0	855.2	841.4	855.2	882.8	827.6	813.8	813.8	813.8
47.5°	855.2	841.4	813.8	800.0	786.2	786.2	813.8	772.4	758.6	772.4	772.4
50°	827.6	800.0	772.4	758.6	744.8	744.8	744.8	731.0	731.0	731.0	744.8
52.5°	800.0	772.4	731.0	717.2	703.4	703.4	703.4	703.4	689.7	703.4	717.2
55°	758.6	731.0	703.4	689.7	675.9	662.1	675.9	662.1	662.1	675.9	675.9
57.5°	703.4	675.9	648.3	648.3	634.5	634.5	648.3	634.5	634.5	648.3	648.3
60°	662.1	634.5	606.9	606.9	593.1	606.9	620.7	606.9	606.9	606.9	620.7
62.5°	606.9	593.1	565.5	565.5	565.5	565.5	579.3	565.5	579.3	579.3	579.3
65°	565.5	537.9	524.1	524.1	524.1	524.1	551.7	524.1	537.9	537.9	537.9
67.5°	524.1	496.5	482.8	482.8	482.8	482.8	510.3	482.8	496.5	510.3	496.5
70°	482.8	455.2	441.4	441.4	441.4	441.4	455.2	441.4	441.4	455.2	455.2
72.5°	427.6	413.8	400.0	400.0	386.2	400.0	413.8	400.0	400.0	400.0	400.0
75°	386.2	372.4	372.4	358.6	358.6	358.6	372.4	344.8	344.8	344.8	344.8
77.5°	358.6	331.0	331.0	331.0	317.2	331.0	317.2	289.7	289.7	289.7	289.7
80°	303.4	275.9	289.7	289.7	275.9	275.9	262.1	234.5	234.5	234.5	234.5
82.5°	248.3	220.7	234.5	234.5	234.5	234.5	206.9	193.1	179.3	165.5	165.5
85°	220.7	179.3	206.9	206.9	193.1	193.1	137.9	137.9	110.3	110.3	96.6
87.5°	41.4	27.6	55.2	69.0	69.0	82.8	55.2	69.0	41.4	27.6	27.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P598842
 CATALOG NUMBER: IFLD-L-SA7D-830-U-SLR

CANDELA DISTRIBUTION (continued):

	185°	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°
0°	9848.2	9848.2	9848.2	9848.2	9848.2	9848.2	9848.2	9848.2	9848.2	9848.2	9848.2
2.5°	8744.8	8896.5	9103.4	9255.1	9489.6	9668.9	9944.8	10179.3	10400.0	10496.5	10593.1
5°	7337.9	7434.5	7751.7	8000.0	8372.4	8772.4	9268.9	9806.9	10358.6	10606.9	10896.5
7.5°	5489.6	5668.9	5848.3	6206.9	6662.0	7310.3	7944.8	8744.8	9517.2	9889.6	10386.2
10°	4262.1	4400.0	4606.9	4979.3	5406.9	5944.8	6703.4	7655.1	8579.3	9062.0	9572.4
12.5°	3420.7	3613.8	3889.6	4275.8	4772.4	5324.1	5875.8	6758.6	7834.4	8386.2	8965.5
15°	2772.4	2924.1	3227.6	3710.3	4289.6	4855.2	5434.5	6165.5	7337.9	7972.4	8662.0
17.5°	2206.9	2317.2	2593.1	3075.8	3655.2	4289.6	4951.7	5875.8	7172.4	7944.8	8758.6
20°	1793.1	1875.9	2055.2	2413.8	2965.5	3655.2	4482.7	5600.0	7268.9	8262.0	9255.1
22.5°	1572.4	1600.0	1682.8	1875.9	2331.0	3062.1	4055.2	5365.5	7448.2	8731.0	10068.9
25°	1420.7	1448.3	1475.9	1600.0	1862.1	2551.7	3682.7	5227.6	7834.4	9420.6	11006.8
27.5°	1324.1	1351.7	1365.5	1420.7	1600.0	2179.3	3365.5	5144.8	8358.6	10427.5	12165.5
30°	1241.4	1241.4	1282.8	1365.5	1489.6	1917.2	3089.6	4951.7	8910.3	11268.9	13075.8
32.5°	1172.4	1186.2	1241.4	1282.8	1365.5	1696.5	2813.8	4703.4	9406.9	11958.6	13972.4
35°	1048.3	1048.3	1062.1	1131.0	1241.4	1517.2	2565.5	4455.2	9682.7	12634.4	14772.4
37.5°	965.5	979.3	1006.9	1062.1	1158.6	1393.1	2358.6	4179.3	9972.4	13268.9	15710.3
40°	910.3	924.1	951.7	1006.9	1103.4	1282.8	2179.3	3958.6	10275.8	13958.6	16717.2
42.5°	869.0	882.8	910.3	965.5	1048.3	1255.2	1986.2	3779.3	10455.1	14593.0	17668.9
45°	827.6	841.4	882.8	937.9	1006.9	1227.6	1875.9	3655.2	10524.1	15020.6	18427.5
47.5°	786.2	800.0	841.4	924.1	1006.9	1186.2	1834.5	3586.2	10579.3	15503.4	19034.4
50°	744.8	772.4	827.6	910.3	1020.7	1131.0	1806.9	3572.4	10896.5	16124.1	19613.7
52.5°	717.2	758.6	813.8	910.3	1006.9	1048.3	1793.1	3613.8	11531.0	17048.2	20441.3
55°	689.7	731.0	786.2	910.3	965.5	979.3	1724.1	3682.7	12496.5	18331.0	21613.7
57.5°	662.1	689.7	758.6	882.8	910.3	924.1	1586.2	3779.3	13462.0	19586.1	22813.7
60°	620.7	648.3	717.2	882.8	827.6	869.0	1406.9	3806.9	14151.7	19986.1	22924.0
62.5°	579.3	606.9	675.9	910.3	758.6	813.8	1255.2	3710.3	14289.6	19406.8	22303.4
65°	537.9	565.5	620.7	758.6	703.4	758.6	1158.6	3448.3	13834.4	18082.7	21172.3
67.5°	496.5	524.1	565.5	620.7	634.5	689.7	1117.2	3034.5	12689.6	16441.3	19627.5
70°	441.4	469.0	510.3	551.7	565.5	648.3	1048.3	2634.5	10841.3	14248.2	17737.9
72.5°	400.0	413.8	455.2	482.8	510.3	593.1	1006.9	2303.4	8289.6	11531.0	14468.9
75°	344.8	344.8	386.2	413.8	441.4	524.1	924.1	1917.2	5848.3	8800.0	10634.4
77.5°	289.7	289.7	317.2	344.8	372.4	455.2	786.2	1558.6	4055.2	6979.3	7710.3
80°	220.7	220.7	248.3	275.9	303.4	386.2	634.5	1144.8	2510.3	5103.4	5613.8
82.5°	151.7	151.7	193.1	206.9	220.7	303.4	482.8	786.2	1475.9	3682.7	4013.8
85°	82.8	82.8	110.3	124.1	151.7	220.7	358.6	551.7	882.8	2662.1	2675.9
87.5°	13.8	13.8	41.4	41.4	69.0	110.3	206.9	303.4	496.5	1475.9	937.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P598842
 CATALOG NUMBER: IFLD-L-SA7D-830-U-SLR

CANDELA DISTRIBUTION (continued):

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	9848.2	9848.2	9848.2	9848.2	9848.2	9848.2	9848.2	9848.2	9848.2	9848.2
2.5°	10772.4	10924.1	10937.9	10937.9	10868.9	10882.7	10689.6	10482.7	10413.7	10400.0
5°	11337.9	11737.9	11848.2	11903.4	11724.1	11448.2	10951.7	10413.7	10137.9	10096.5
7.5°	11227.5	12027.5	12455.1	12510.3	12151.7	11503.4	10634.4	9806.9	9489.6	9406.9
10°	10579.3	11655.1	12427.5	12620.6	12234.4	11406.8	10275.8	9310.3	8924.1	8855.1
12.5°	10124.1	11158.6	11917.2	12179.3	11999.9	11282.7	10096.5	8993.1	8606.9	8510.3
15°	9875.8	10827.5	11324.1	11406.8	11393.1	11089.6	10096.5	9062.0	8634.4	8524.1
17.5°	10082.7	10731.0	10800.0	10606.9	10717.2	10868.9	10317.2	9434.4	9020.7	8924.1
20°	10496.5	10689.6	10358.6	10068.9	10124.1	10606.9	10662.0	10137.9	9806.9	9641.3
22.5°	11365.5	10841.3	10082.7	9682.7	9724.1	10400.0	11117.2	11089.6	10800.0	10717.2
25°	12248.2	11268.9	10000.0	9531.0	9586.2	10358.6	11655.1	12151.7	11999.9	11958.6
27.5°	13227.5	11986.2	10055.1	9462.0	9531.0	10413.7	12027.5	13048.2	13075.8	13034.4
30°	13889.6	12331.0	10220.6	9544.8	9641.3	10551.7	12110.3	13586.1	13834.4	13848.2
32.5°	14441.3	12675.8	10565.5	9682.7	9848.2	10800.0	12331.0	14096.5	14648.2	14662.0
35°	14882.7	13062.0	10993.1	9931.0	10179.3	11213.7	12620.6	14579.2	15406.8	15503.4
37.5°	15448.2	13489.6	11489.6	10468.9	10744.8	11806.8	13131.0	15144.8	16303.4	16565.4
40°	16055.1	13917.2	12206.8	11337.9	11737.9	12689.6	13710.3	15779.2	17062.0	17420.6
42.5°	16731.0	14372.4	13020.6	12510.3	13117.2	13806.8	14372.4	16358.6	17641.3	18055.1
45°	17393.0	14924.1	14206.8	14110.3	14786.1	15131.0	15020.6	16772.3	18193.0	18606.8
47.5°	17862.0	15724.1	15641.3	16220.6	16855.1	16675.8	15779.2	17075.8	18648.2	19103.4
50°	18289.6	16717.2	17448.2	18579.2	18965.4	18358.5	16593.0	17489.6	19131.0	19641.3
52.5°	18924.1	17779.2	19310.3	20717.2	21089.6	20124.1	17475.8	18165.4	19875.8	20330.9
55°	20220.6	18979.2	21255.1	22868.9	22937.8	21737.8	18662.0	19310.3	20924.0	21448.2
57.5°	21668.9	20455.1	22799.9	24648.2	24620.6	23351.6	19999.9	20855.1	22344.7	22703.4
60°	22979.2	21944.7	24482.7	25917.1	25848.2	24524.0	21558.5	22606.8	23972.3	24248.2
62.5°	23751.6	23296.5	25227.5	26317.1	26055.1	24910.2	22882.7	24165.4	25130.9	25227.5
65°	23627.5	24068.9	24358.5	25034.4	24662.0	23834.4	23530.9	25158.5	25255.1	25158.5
67.5°	22689.6	23627.5	21972.3	22041.3	21848.2	21144.7	22524.0	24896.4	24234.4	23999.9
70°	21268.9	21337.8	18372.3	17503.4	17806.8	16841.3	19324.1	22855.1	21834.4	21544.7
72.5°	18910.3	18055.1	13889.6	13006.8	13462.0	12772.4	15503.4	19917.2	18924.1	17986.1
75°	15862.0	14303.4	10579.3	9324.1	9558.6	9531.0	12013.7	16455.1	14662.0	13724.1
77.5°	12289.6	11144.8	7806.9	7324.1	7075.8	7131.0	8386.2	12234.4	10634.4	9462.0
80°	8979.3	7793.1	6041.4	6317.2	6179.3	5848.3	5875.8	8193.1	7393.1	6689.6
82.5°	6206.9	5544.8	4896.5	5531.0	5200.0	4689.6	4579.3	5903.4	5544.8	5117.2
85°	4165.5	4565.5	3889.6	4234.5	3668.9	3379.3	4303.4	4937.9	3986.2	3558.6
87.5°	2717.2	4179.3	2800.0	2124.1	1213.8	1627.6	2634.5	3241.4	1862.1	1006.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)