

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: P598896

Luminaire Tested: **IFLD-M-SA4E-727-U-SLL**

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: P598896
 Test Lab: INNOVATION CENTER(G1)
 Issue Date: 05/03/2022
 Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
 Product Line: STREETWORKS
 Catalog Number: IFLD-M-SA4E-727-U-SLL
 Description: Infrastructure Flood – Middle Tier Light Square Luminaire w/ SLL distribution lens
 Light Source: (64) 2700K CCT, 70 CRI LEDs
 Ballast/Driver: ELECTRONIC DRIVER

Summary

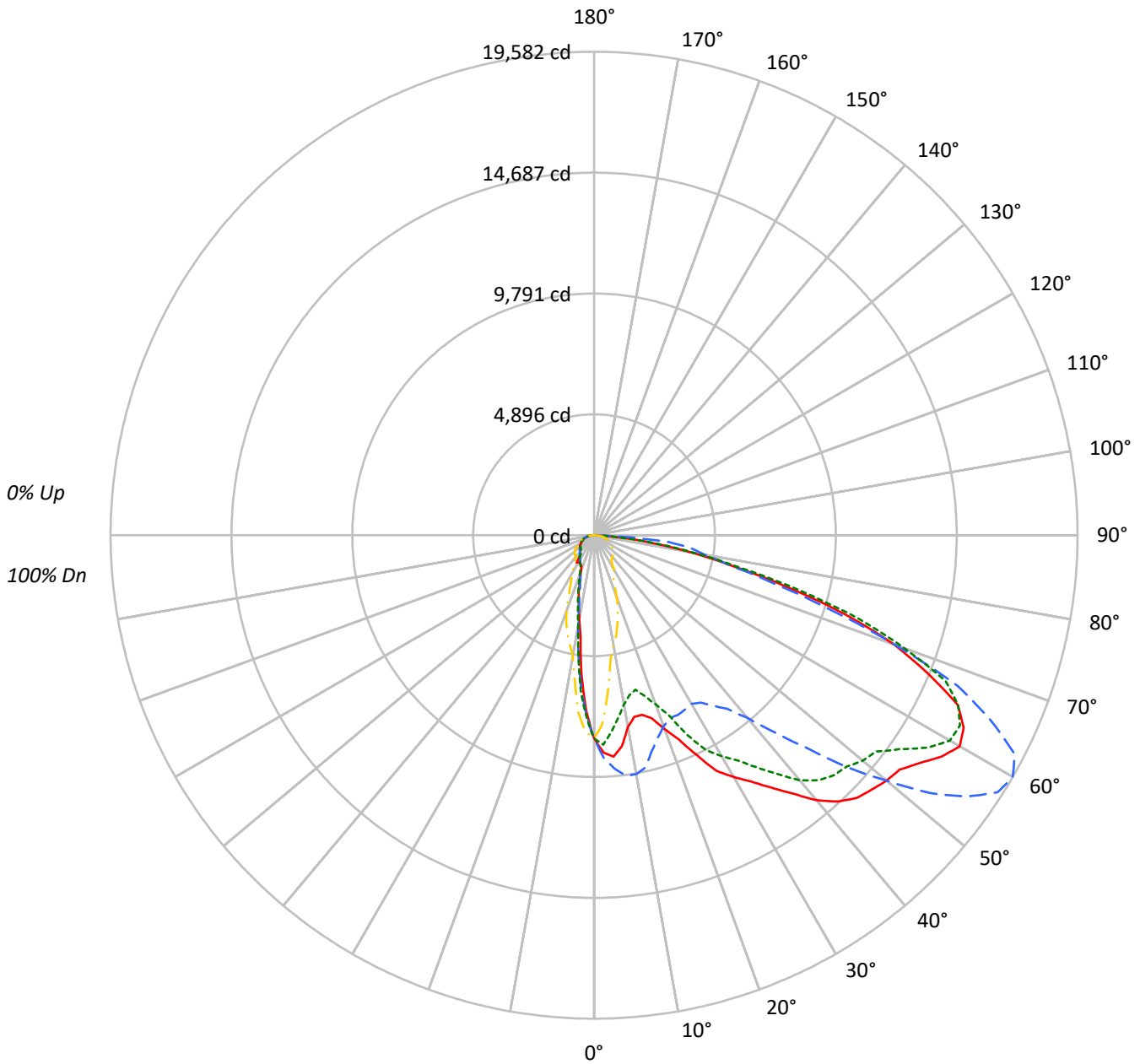
Lumens per Lamp: N/A
 Luminaire Lumens: 25754.5 lumens
 Efficiency: N/A
 Efficacy: 81.8 lumens/watt
 Spacing Criteria (0/90/45): 1.12 / 0.52 / 0.8
 Luminous Opening: Rectangular (W 2' x L: 0.5' x H: 0')
 CIE Type: Direct

Input Watts (W): 314.8
 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

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: P598896
CATALOG NUMBER: IFLD-M-SA4E-727-U-SLL

Luminous Intensity Polar Plot



— 0°-180° - - 45°-225° ···· 90°-270° - · - · 135°-315°

TEST NUMBER: P598896

CATALOG NUMBER: IFLD-M-SA4E-727-U-SLL

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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	106	100	94	89	103	97	92	88	93	89	85	89	85	82	85	82	80	77
2	94	83	75	68	91	81	74	67	78	71	65	74	69	64	71	66	62	60
3	84	71	61	53	81	69	60	53	66	58	52	63	56	51	60	55	50	47
4	75	61	51	43	73	60	50	42	57	48	42	54	47	41	52	46	40	38
5	68	53	43	35	66	52	42	35	50	41	34	48	40	34	46	39	34	31
6	63	47	37	30	60	46	37	29	44	36	29	42	35	29	41	34	29	26
7	58	42	32	25	56	41	32	25	40	31	25	38	31	25	37	30	25	22
8	53	38	29	22	52	37	28	22	36	28	22	35	27	22	33	27	22	19
9	50	35	26	20	48	34	26	20	33	25	19	32	25	19	31	24	19	17
10	46	32	23	18	45	31	23	18	30	23	17	29	22	17	28	22	17	15

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	88542	88542	88542	88542
5°	97274	86411	61969	67648
10°	86162	76047	37587	40334
15°	83899	72186	26609	27627
20°	95664	83493	17405	19237
25°	116556	105837	15197	15740
30°	140438	128368	15763	14627
35°	163786	150726	13061	12310
40°	196814	182044	12201	11559
45°	229043	209218	12348	11478
50°	258850	237805	12626	11861
55°	301877	283439	13078	12435
60°	368188	358105	13035	13035
65°	413779	414362	13384	13968
70°	406657	421039	14024	14383
75°	335449	357782	14731	15679
80°	242201	254239	16290	16997
85°	134049	143917	18340	22576

TEST NUMBER: P598896
 CATALOG NUMBER: IFLD-M-SA4E-727-U-SLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	639.0	2.5
10°-20°	1349.2	5.2
20°-30°	1974.1	7.7
30°-40°	2781.3	10.8
40°-50°	3822.4	14.8
50°-60°	5209.5	20.2
60°-70°	5701.5	22.1
70°-80°	3291.7	12.8
80°-90°	985.7	3.8
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°	3962.3	15.4
0°-40°	6743.7	26.2
0°-60°	15775.5	61.3
0°-90°	25754.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	25754.5	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	8226	8226	8226	8226	8226	
5°	9003	7997	5735	6261	9003	817
15°	7529	6478	2388	2479	7529	2200
25°	9814	8911	1280	1325	9814	4596
35°	12464	11470	994	937	12464	7904
45°	15046	13744	811	754	15046	11564
55°	16086	15104	697	663	16086	14514
65°	16246	16269	526	548	16246	15549
75°	8066	8603	354	377	8066	8664
85°	1085	1165	148	183	1085	1506
90°	0	0	0	0	0	

TEST NUMBER: P598896
 CATALOG NUMBER: IFLD-M-SA4E-727-U-SLL

CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	8225.8	8225.8	8225.8	8225.8	8225.8	8225.8	8225.8	8225.8	8225.8	8225.8	8225.8
2.5°	8808.5	8774.2	8808.5	8934.2	8968.5	9025.6	9025.6	8945.6	8797.1	8728.5	8614.3
5°	9002.7	8945.6	9231.2	9494.0	9699.6	9676.8	9482.6	9322.6	9025.6	8580.0	8157.3
7.5°	8614.3	8671.4	8877.1	9562.5	10042.4	10133.8	9825.3	9505.4	8865.6	8248.7	7677.5
10°	7883.1	7963.1	8408.6	9117.0	9871.0	10019.5	9825.3	9436.9	8671.4	7905.9	7243.3
12.5°	7528.9	7711.7	7974.5	8831.4	9368.3	9722.5	9631.1	9379.7	8522.9	7620.3	6980.5
15°	7528.9	7574.6	7963.1	8682.8	8991.3	9002.7	9037.0	9082.7	8568.6	7746.0	6889.1
17.5°	7768.8	7894.5	8225.8	8671.4	8728.5	8591.4	8591.4	8785.7	8660.0	8100.2	7220.5
20°	8351.5	8305.8	8740.0	8922.8	8614.3	8271.5	8237.3	8568.6	8762.8	8477.2	7826.0
22.5°	8934.2	9139.8	9494.0	9082.7	8511.5	8054.5	8008.8	8420.1	9071.3	9128.4	8522.9
25°	9813.9	10019.5	10202.3	9699.6	8500.0	7997.3	8031.6	8351.5	9448.3	10053.8	9688.2
27.5°	10762.1	10887.8	11150.6	10373.7	8774.2	7928.8	7963.1	8442.9	9802.5	10659.3	10602.2
30°	11299.1	11436.2	11379.1	10499.4	8957.0	7974.5	7883.1	8568.6	9608.2	10659.3	11196.3
32.5°	11824.6	11744.7	11710.4	10705.0	9185.5	8260.1	8031.6	8831.4	9722.5	10830.7	11961.7
35°	12464.4	12350.2	12258.8	11104.9	9562.5	8534.3	8431.5	9174.1	9973.8	11184.9	12578.7
37.5°	13172.8	13172.8	12727.2	11401.9	10008.1	8979.9	8865.6	9665.4	10373.7	11401.9	13424.1
40°	14006.8	14041.1	13252.7	11801.8	10510.8	9688.2	9653.9	10305.1	10762.1	11721.8	14235.3
42.5°	14623.7	14646.6	13709.7	11950.3	11093.5	10670.7	10819.3	11333.4	11207.7	12007.4	14292.4
45°	15046.4	14932.2	14029.6	12373.0	11733.2	12144.5	12190.2	12338.8	11790.4	12178.8	14520.9
47.5°	15252.1	15229.2	14166.7	12864.3	13081.4	13641.2	13904.0	13698.3	12327.3	11996.0	14520.9
50°	15457.7	15263.5	14292.4	13538.4	14395.2	15526.3	15469.1	15092.1	13069.9	12224.5	14303.8
52.5°	15594.8	15423.4	14543.7	14143.9	15651.9	16931.5	17160.0	16463.1	13938.2	12647.2	14406.6
55°	16086.1	15949.0	15297.8	14966.5	17102.9	18416.7	18451.0	17479.9	14852.2	13344.1	15080.7
57.5°	16680.2	16760.1	16337.4	16131.8	18211.1	19502.1	19376.4	18233.9	15629.1	14189.6	15857.6
60°	17102.9	17228.6	17125.7	17148.6	18759.5	19867.7	19582.1	18702.4	16200.3	14829.4	16805.8
62.5°	16874.4	17125.7	17548.5	17457.1	18782.3	19604.9	19205.1	18085.4	16268.9	15663.4	17525.6
65°	16246.0	16268.9	17091.5	17594.2	17754.1	18245.4	17719.8	16794.4	15560.5	16177.5	17422.8
67.5°	14635.1	14817.9	15560.5	16543.1	15869.0	15983.3	15937.6	14600.9	14486.6	15823.3	16634.5
70°	12921.4	13047.1	13858.3	15012.2	13401.3	12864.3	12967.1	11973.2	12441.6	14726.5	15046.4
72.5°	10682.2	10762.1	11687.5	12704.4	10750.7	9791.0	10031.0	9219.8	9882.4	12887.1	12692.9
75°	8065.9	8214.4	8934.2	10133.8	7917.4	7300.4	7540.4	7209.0	7826.0	10613.6	9848.2
77.5°	5735.2	5621.0	6512.1	7928.8	5952.3	5586.7	5609.6	5666.7	6329.3	8945.6	7071.9
80°	3907.3	3941.5	4741.3	5815.2	4672.7	4615.6	4558.5	5015.5	5312.5	7083.4	5141.1
82.5°	2319.2	2319.2	3198.9	4135.8	3690.2	4158.6	3895.8	4307.1	4158.6	5209.7	3370.3
85°	1085.4	1085.4	1645.2	2981.9	2856.2	3427.4	2913.3	3256.1	3073.3	3633.1	1519.5
87.5°	182.8	159.9	331.3	1462.4	1176.8	1336.7	525.5	1736.6	1930.8	2536.3	377.0
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: P598896
 CATALOG NUMBER: IFLD-M-SA4E-727-U-SLL

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	8225.8	8225.8	8225.8	8225.8	8225.8	8225.8	8225.8	8225.8	8225.8	8225.8	8225.8
2.5°	8488.6	8408.6	8248.7	8043.0	7871.7	7654.6	7586.1	7437.5	7231.9	7209.0	7117.6
5°	7997.3	7723.1	7380.4	6957.7	6672.1	6375.0	6123.7	5975.2	5803.8	5780.9	5735.2
7.5°	7460.4	7117.6	6546.4	6043.7	5552.4	5084.0	4855.5	4569.9	4375.7	4227.2	4158.6
10°	6957.7	6637.8	5929.5	5244.0	4809.8	4501.4	4227.2	3930.1	3690.2	3507.4	3438.9
12.5°	6626.4	6249.4	5483.9	4832.7	4512.8	4158.6	3850.1	3530.3	3221.8	2981.9	2856.2
15°	6477.8	6123.7	5346.8	4627.0	4158.6	3667.4	3313.2	2993.3	2616.3	2444.9	2387.8
17.5°	6832.0	6306.5	5301.1	4387.1	3724.5	3164.7	2730.5	2387.8	2113.6	1942.2	1873.7
20°	7289.0	6637.8	5381.1	4101.5	3313.2	2684.8	2205.0	1839.4	1656.6	1530.9	1519.5
22.5°	7871.7	7129.1	5506.7	3895.8	2856.2	2159.3	1725.1	1508.1	1382.4	1371.0	1348.1
25°	8911.3	8020.2	5712.4	3621.7	2490.6	1782.3	1473.8	1348.1	1291.0	1256.7	1279.6
27.5°	9802.5	8602.9	5860.9	3450.3	2342.1	1679.4	1428.1	1291.0	1233.9	1222.5	1233.9
30°	10328.0	9139.8	5815.2	3130.4	2045.0	1599.5	1519.5	1473.8	1359.5	1268.2	1268.2
32.5°	10807.8	9482.6	5803.8	2844.8	1748.0	1336.7	1268.2	1233.9	1302.4	1348.1	1313.8
35°	11470.5	10019.5	5769.5	2684.8	1622.3	1233.9	1119.6	1028.2	982.5	959.7	994.0
37.5°	12178.8	10385.1	5678.1	2662.0	1553.8	1176.8	1085.4	994.0	948.3	925.4	914.0
40°	12955.7	10773.6	5575.3	2547.7	1519.5	1142.5	1051.1	971.1	914.0	879.7	868.3
42.5°	13458.4	11082.0	5472.5	2490.6	1450.9	1119.6	1016.8	948.3	891.1	845.4	845.4
45°	13744.0	11447.6	5369.6	2433.5	1371.0	1131.1	1016.8	925.4	856.9	834.0	811.2
47.5°	13869.7	11721.8	5335.4	2342.1	1302.4	1085.4	994.0	902.6	834.0	788.3	776.9
50°	14201.0	12304.5	5461.0	2273.5	1222.5	1039.7	1051.1	891.1	822.6	765.5	754.0
52.5°	14395.2	12772.9	5735.2	2170.7	1165.3	982.5	1028.2	868.3	788.3	731.2	731.2
55°	15103.6	13549.8	6032.3	2090.7	1096.8	902.6	948.3	822.6	731.2	696.9	696.9
57.5°	16006.1	14372.4	6283.6	2056.5	1051.1	845.4	845.4	799.7	696.9	651.2	639.8
60°	16634.5	15046.4	6432.1	2033.6	1005.4	788.3	754.0	799.7	662.6	616.9	605.5
62.5°	16703.0	14658.0	6283.6	2022.2	994.0	731.2	685.5	765.5	628.4	582.7	559.8
65°	16268.9	13869.7	5872.3	1976.5	982.5	674.1	639.8	662.6	582.7	548.4	525.5
67.5°	15400.6	12590.1	5278.2	1953.6	971.1	628.4	582.7	571.2	537.0	502.7	479.8
70°	13378.4	10922.1	4581.3	1850.8	948.3	594.1	525.5	514.1	479.8	457.0	445.6
72.5°	11230.6	8934.2	3781.6	1713.7	902.6	537.0	479.8	457.0	445.6	411.3	399.9
75°	8602.9	6877.7	3027.6	1519.5	788.3	479.8	422.7	399.9	388.4	365.6	354.2
77.5°	6043.7	5118.3	2239.3	1233.9	662.6	434.1	377.0	354.2	342.7	308.5	308.5
80°	4101.5	3587.4	1519.5	856.9	514.1	354.2	331.3	308.5	285.6	262.8	262.8
82.5°	2547.7	2513.5	1096.8	559.8	377.0	285.6	262.8	262.8	228.5	205.6	205.6
85°	1165.3	1542.3	765.5	388.4	285.6	217.1	217.1	205.6	182.8	148.5	148.5
87.5°	365.6	514.1	399.9	171.4	159.9	125.7	125.7	114.2	114.2	91.4	91.4
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: P598896
 CATALOG NUMBER: IFLD-M-SA4E-727-U-SLL

CANDELA DISTRIBUTION (continued):

	185°	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°
0°	8225.8	8225.8	8225.8	8225.8	8225.8	8225.8	8225.8	8225.8	8225.8	8225.8	8225.8
2.5°	7209.0	7197.6	7197.6	7151.9	7266.2	7266.2	7334.7	7277.6	7311.9	7323.3	7414.7
5°	5723.8	5815.2	5883.8	6020.9	6100.8	6135.1	6135.1	6226.5	6192.2	6260.8	6397.9
7.5°	4192.9	4307.1	4512.8	4684.2	4821.3	4867.0	4855.5	4878.4	4912.7	4832.7	4855.5
10°	3393.2	3313.2	3381.7	3541.7	3667.4	3815.9	3701.6	3690.2	3724.5	3690.2	3758.8
12.5°	2833.3	2741.9	2684.8	2684.8	2776.2	2844.8	2810.5	2867.6	2993.3	3027.6	3107.5
15°	2296.4	2216.4	2170.7	2113.6	2205.0	2227.8	2262.1	2342.1	2433.5	2479.2	2570.6
17.5°	1839.4	1839.4	1839.4	1793.7	1828.0	1862.2	1873.7	1976.5	1987.9	2033.6	2067.9
20°	1508.1	1542.3	1599.5	1622.3	1656.6	1656.6	1633.7	1690.9	1645.2	1679.4	1702.3
22.5°	1359.5	1405.2	1428.1	1439.5	1485.2	1496.6	1439.5	1450.9	1462.4	1428.1	1439.5
25°	1279.6	1302.4	1279.6	1291.0	1302.4	1279.6	1291.0	1313.8	1302.4	1325.3	1313.8
27.5°	1245.3	1222.5	1211.0	1199.6	1199.6	1176.8	1188.2	1188.2	1211.0	1222.5	1222.5
30°	1245.3	1211.0	1165.3	1131.1	1131.1	1096.8	1119.6	1142.5	1153.9	1176.8	1176.8
32.5°	1279.6	1211.0	1131.1	1096.8	1062.5	1039.7	1062.5	1096.8	1142.5	1153.9	1165.3
35°	1016.8	1051.1	1039.7	994.0	982.5	982.5	971.1	971.1	936.8	936.8	925.4
37.5°	914.0	902.6	925.4	936.8	948.3	914.0	914.0	868.3	856.9	868.3	868.3
40°	856.9	856.9	856.9	891.1	902.6	879.7	845.4	822.6	822.6	822.6	834.0
42.5°	834.0	811.2	799.7	822.6	856.9	834.0	799.7	788.3	788.3	799.7	799.7
45°	799.7	788.3	776.9	765.5	811.2	776.9	765.5	754.0	754.0	754.0	765.5
47.5°	765.5	754.0	731.2	731.2	742.6	731.2	719.8	719.8	719.8	742.6	742.6
50°	742.6	731.2	708.3	708.3	708.3	708.3	696.9	696.9	696.9	708.3	719.8
52.5°	708.3	696.9	685.5	674.1	674.1	674.1	674.1	674.1	674.1	685.5	696.9
55°	674.1	662.6	651.2	651.2	662.6	662.6	651.2	662.6	651.2	662.6	674.1
57.5°	639.8	628.4	616.9	628.4	639.8	628.4	628.4	628.4	628.4	628.4	639.8
60°	594.1	594.1	594.1	594.1	616.9	616.9	616.9	616.9	594.1	605.5	616.9
62.5°	571.2	559.8	559.8	571.2	582.7	582.7	594.1	582.7	571.2	582.7	582.7
65°	525.5	525.5	525.5	537.0	537.0	548.4	548.4	548.4	537.0	548.4	548.4
67.5°	491.3	491.3	491.3	491.3	514.1	514.1	514.1	514.1	502.7	502.7	514.1
70°	434.1	445.6	434.1	457.0	479.8	468.4	479.8	479.8	468.4	457.0	479.8
72.5°	399.9	399.9	399.9	399.9	434.1	434.1	434.1	445.6	434.1	422.7	434.1
75°	354.2	354.2	354.2	365.6	388.4	388.4	388.4	388.4	388.4	377.0	377.0
77.5°	308.5	319.9	308.5	319.9	342.7	331.3	342.7	354.2	342.7	331.3	331.3
80°	262.8	262.8	262.8	274.2	285.6	285.6	285.6	297.0	285.6	274.2	274.2
82.5°	205.6	205.6	217.1	217.1	228.5	228.5	228.5	239.9	228.5	217.1	217.1
85°	159.9	159.9	159.9	171.4	171.4	182.8	182.8	194.2	194.2	182.8	182.8
87.5°	102.8	91.4	102.8	102.8	114.2	114.2	102.8	91.4	102.8	91.4	80.0
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: P598896
 CATALOG NUMBER: IFLD-M-SA4E-727-U-SLL

CANDELA DISTRIBUTION (continued):

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	8225.8	8225.8	8225.8	8225.8	8225.8	8225.8	8225.8	8225.8	8225.8	8225.8
2.5°	7506.1	7711.7	7860.2	7963.1	8111.6	8397.2	8511.5	8717.1	8774.2	8808.5
5°	6455.0	6672.1	6992.0	7220.5	7483.2	8020.2	8431.5	8740.0	8877.1	9002.7
7.5°	5061.2	5346.8	5678.1	5975.2	6409.3	7071.9	7608.9	8248.7	8488.6	8614.3
10°	3953.0	4215.7	4581.3	4946.9	5552.4	6112.3	6877.7	7460.4	7791.7	7883.1
12.5°	3336.0	3644.5	4078.6	4524.2	4901.2	5541.0	6317.9	7163.3	7471.8	7528.9
15°	2833.3	3256.1	3701.6	4158.6	4592.8	5152.6	5986.6	7014.8	7471.8	7528.9
17.5°	2342.1	2719.1	3244.6	3735.9	4238.6	5004.1	6043.7	7140.5	7597.5	7768.8
20°	1862.2	2227.8	2639.1	3256.1	3941.5	4752.7	6169.4	7563.2	8168.7	8351.5
22.5°	1542.3	1702.3	2102.2	2696.2	3507.4	4581.3	6295.1	8225.8	8865.6	8934.2
25°	1348.1	1462.4	1713.7	2273.5	3164.7	4467.1	6592.1	8991.3	9813.9	9813.9
27.5°	1256.7	1302.4	1473.8	1976.5	2924.7	4364.3	6889.1	9836.7	10602.2	10762.1
30°	1233.9	1348.1	1439.5	1759.4	2662.0	4078.6	7163.3	10499.4	11287.7	11299.1
32.5°	1211.0	1188.2	1256.7	1530.9	2342.1	3781.6	7391.8	11173.4	11790.4	11824.6
35°	948.3	994.0	1108.2	1348.1	2102.2	3564.5	7506.1	11539.0	12430.2	12464.4
37.5°	891.1	948.3	1039.7	1245.3	1942.2	3381.7	7540.4	12247.4	13104.2	13172.8
40°	868.3	914.0	982.5	1153.9	1816.5	3153.2	7608.9	12978.5	14098.2	14006.8
42.5°	822.6	879.7	948.3	1108.2	1713.7	2981.9	7620.3	13378.4	14623.7	14623.7
45°	811.2	845.4	925.4	1108.2	1599.5	2833.3	7437.5	13778.3	15229.2	15046.4
47.5°	765.5	834.0	902.6	1073.9	1462.4	2684.8	7220.5	13983.9	15309.2	15252.1
50°	754.0	822.6	936.8	1016.8	1382.4	2616.3	7174.8	14498.0	15469.1	15457.7
52.5°	731.2	799.7	971.1	971.1	1279.6	2524.9	7391.8	14726.5	15503.4	15594.8
55°	696.9	799.7	902.6	891.1	1188.2	2410.6	7631.8	15320.6	16108.9	16086.1
57.5°	674.1	776.9	856.9	811.2	1085.4	2330.7	7985.9	15891.9	16840.1	16680.2
60°	639.8	776.9	765.5	754.0	1005.4	2262.1	8283.0	16006.1	17000.1	17102.9
62.5°	616.9	811.2	674.1	696.9	936.8	2227.8	8157.3	15149.3	16783.0	16874.4
65°	594.1	696.9	616.9	639.8	914.0	2159.3	7666.0	14121.0	15846.2	16246.0
67.5°	548.4	571.2	571.2	594.1	891.1	1999.3	6660.6	12270.2	14418.1	14635.1
70°	502.7	514.1	514.1	548.4	868.3	1816.5	5495.3	10613.6	12510.1	12921.4
72.5°	457.0	457.0	457.0	502.7	799.7	1668.0	4524.2	8157.3	10396.5	10682.2
75°	399.9	399.9	399.9	445.6	719.8	1519.5	3564.5	6066.6	7654.6	8065.9
77.5°	354.2	354.2	342.7	399.9	628.4	1233.9	2570.6	4284.3	5392.5	5735.2
80°	297.0	285.6	285.6	319.9	491.3	891.1	1656.6	3027.6	3758.8	3907.3
82.5°	239.9	228.5	217.1	239.9	354.2	559.8	1028.2	2113.6	2410.6	2319.2
85°	228.5	239.9	194.2	182.8	251.3	365.6	651.2	1302.4	1085.4	1085.4
87.5°	91.4	80.0	80.0	68.5	125.7	137.1	285.6	239.9	182.8	182.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)