

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: INVUE

Report Number: P367952

Luminaire Tested: **MSA-SA3C-730-U-SLL**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367952
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-24)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA3C-730-U-SLL
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND SPILL LIGHT ELIMINATOR LEFT OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14203 lumens
Efficiency: N/A
Efficacy: 85.6 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G3

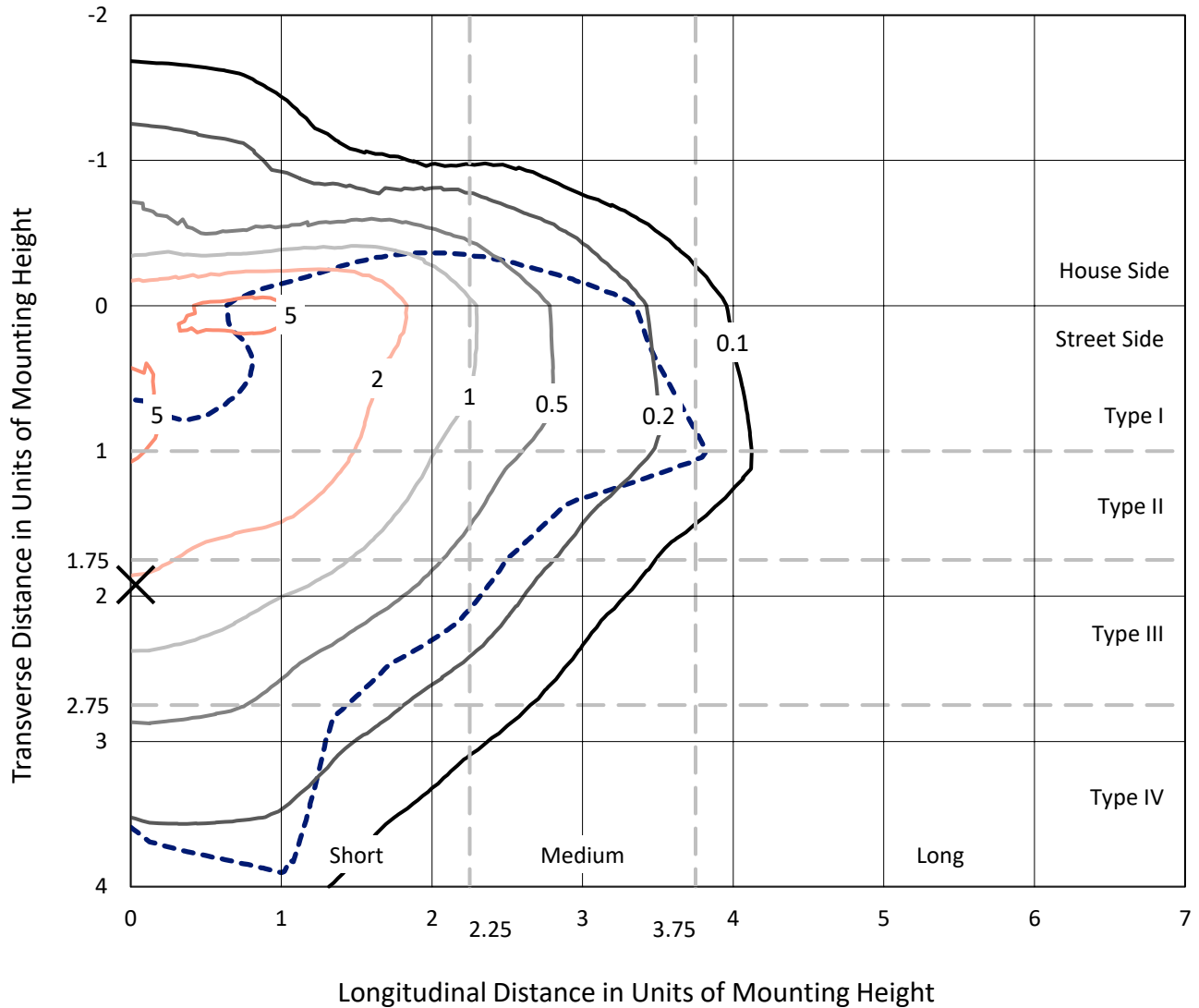
Input Watts (W): 166
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

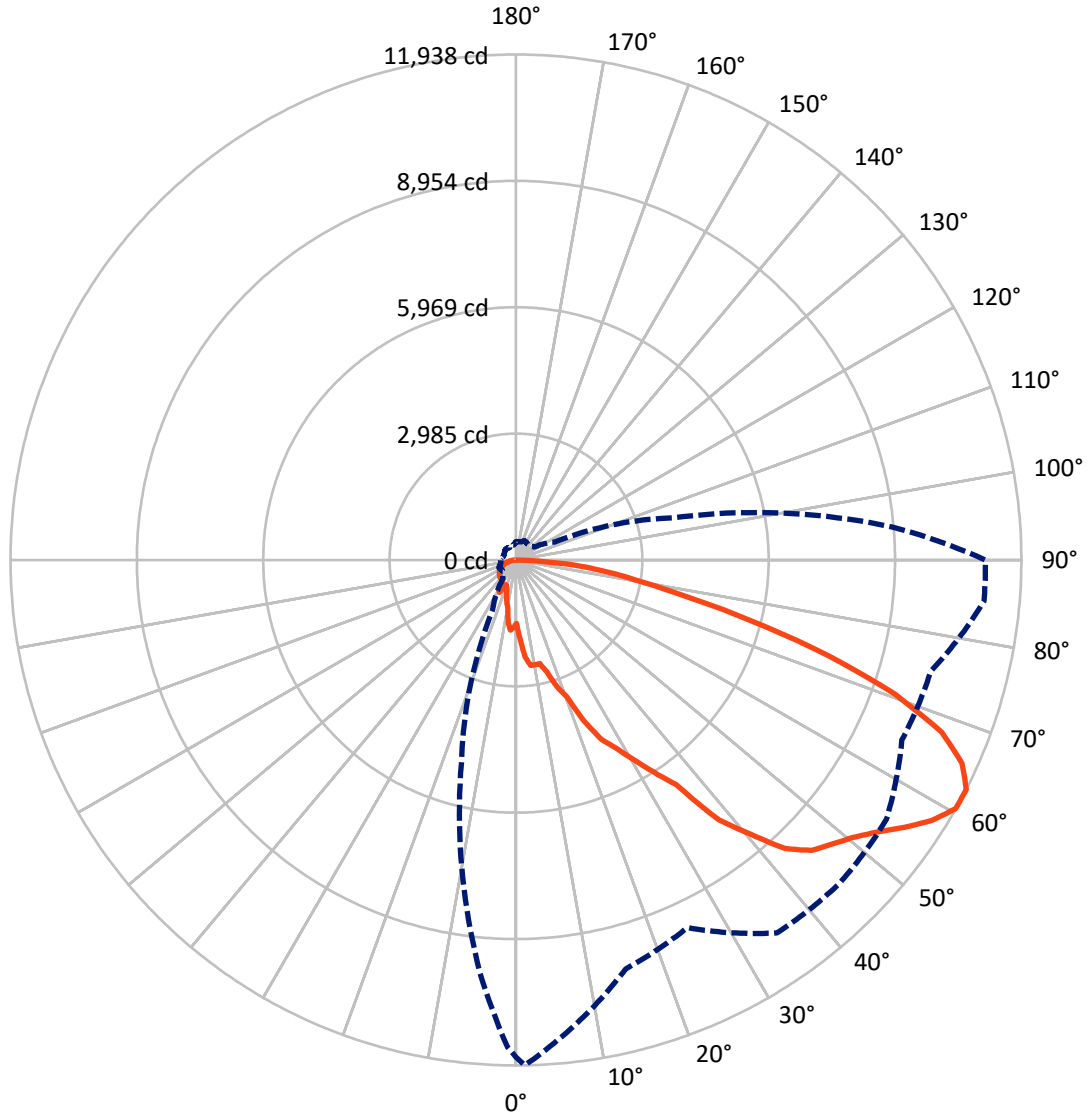
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 6.1 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 1-Deg Lateral - - - Horizontal Cone Through 62.5-Deg Vertical

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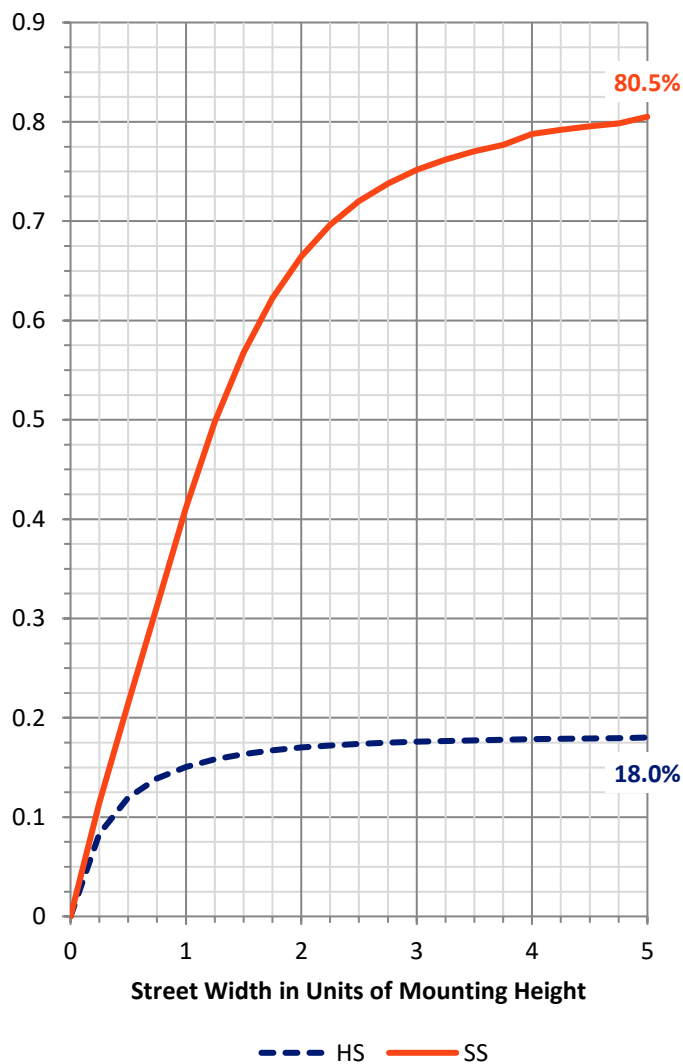
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2586.3	0.0	2586.3
	% Fixture	18.2	0.0	18.2
Street Side	Lumens	11616.7	0.0	11616.7
	% Fixture	81.8	0.0	81.8
Total	Lumens	14203.0	0.0	14203.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	171.7	1.2
10°-20°	498.9	3.5
20°-30°	880.8	6.2
30°-40°	1372.0	9.7
40°-50°	2259.1	15.9
50°-60°	3224.3	22.7
60°-70°	3419.1	24.1
70°-80°	1888.6	13.3
80°-90°	488.5	3.4
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°-90°	14203.0	100.0
0°-180°	14203.0	100.0

Coefficient of Utilization



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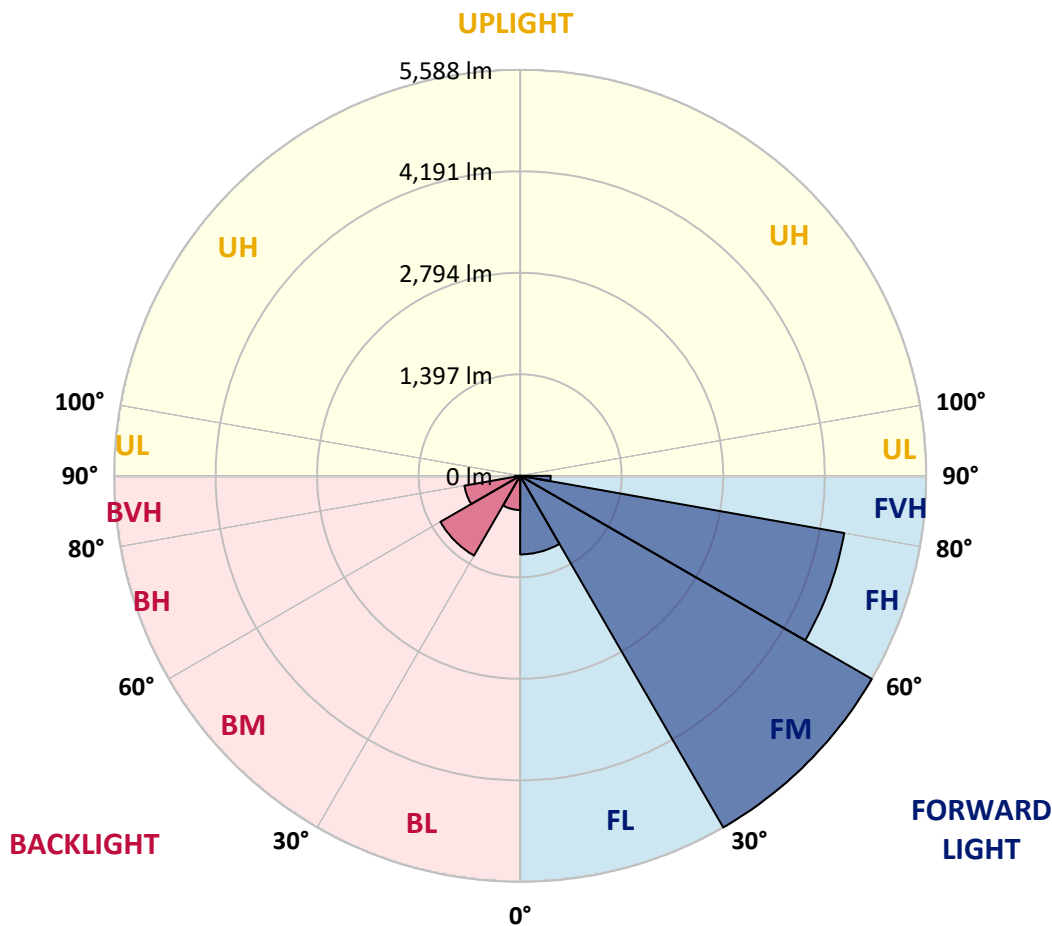
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1081.1	7.6			
FM (30°-60°)	5587.6	39.3			
FH (60°-80°)	4528.5	31.9			G2/5000
FVH (80°-90°)	419.6	3.0			G3/500
BL (0°-30°)	470.4	3.3	B1/500		
BM (30°-60°)	1267.8	8.9	B2/2500		
BH (60°-80°)	779.2	5.5	B2/1000		G2/1000
BVH (80°-90°)	68.9	0.5			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G3

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	1497.7	1497.7	1497.7	1497.7	1497.7	1497.7	1497.7	1497.7	1497.7	1497.7	1497.7
2.5°	1841.6	1857.5	1825.1	1788.5	1637.6	1783.0	1739.6	1820.3	1794.1	1619.0	1939.5
5°	2275.8	2304.8	2273.1	2382.7	2389.6	2417.8	2156.6	2319.3	2262.7	2248.3	2410.2
7.5°	2485.4	2515.0	2595.6	2790.7	2943.0	2805.2	2652.8	2619.1	2575.0	2459.9	2557.7
10°	2498.5	2515.0	2623.2	3036.7	3110.5	3208.4	3109.8	2877.5	2781.7	2531.5	2457.1
12.5°	2459.2	2510.9	2650.8	3154.6	3373.8	3480.6	3504.7	3246.3	3011.2	2725.9	2688.0
15°	2723.1	2741.7	2942.3	3238.7	3389.6	3479.9	3558.5	3399.3	3325.5	3099.5	2795.5
17.5°	3101.5	3153.2	3317.3	3426.8	3528.8	3546.1	3481.3	3419.3	3302.1	3604.0	3280.7
20°	3357.9	3457.9	3659.1	3679.8	3465.4	3503.3	3494.4	3498.5	3431.7	3989.9	3812.1
22.5°	4036.1	4144.3	4171.9	4052.0	3648.1	3475.1	3509.5	3609.5	3872.8	4351.1	4552.3
25°	4650.2	4692.3	4943.8	4635.1	3991.3	3614.3	3557.8	3816.3	4245.6	4959.0	5102.4
27.5°	4970.7	5025.2	5192.6	4520.6	4034.1	3435.1	3302.8	3696.3	4134.0	4673.0	5302.2
30°	5380.8	5467.6	5695.8	4635.1	4162.9	3552.3	3259.4	3635.7	4119.5	4860.4	5725.4
32.5°	5803.3	5972.2	6141.7	5038.3	4145.0	3731.5	3537.1	3567.4	4250.5	5253.3	6163.8
35°	6363.0	6511.8	6657.9	5271.2	4506.2	3881.0	3688.1	4009.2	4586.8	5708.9	6775.1
37.5°	7559.5	7795.2	7409.9	5934.3	4899.0	4555.1	4207.0	4397.3	4942.5	6088.6	7773.8
40°	8321.7	8498.9	8126.7	6385.7	5591.0	5009.3	4952.1	4968.0	5432.5	6414.0	8445.8
42.5°	9079.2	9319.0	8727.0	7005.3	6427.7	5947.3	5652.4	5632.4	5981.1	6998.4	9210.2
45°	9644.4	9785.7	8933.1	7527.7	7325.1	6968.8	6747.5	6396.7	6702.1	7403.0	9683.0
47.5°	9913.2	10028.3	9264.6	7831.7	7906.8	7925.4	8324.5	7726.2	7332.0	7676.6	9931.1
50°	10248.8	10303.3	9459.7	8099.1	8459.6	9277.0	9372.8	8359.0	7945.4	7975.1	10077.9
52.5°	10649.9	10672.7	9744.3	8407.9	9018.5	10166.1	10017.9	9431.4	8529.2	8520.2	10354.3
55°	11154.5	11140.7	10101.3	8823.5	9417.6	10694.7	10582.4	10155.1	9165.4	8971.7	10784.3
57.5°	11603.2	11594.9	10574.8	9206.0	9753.3	10966.3	10999.4	10886.4	9598.2	9294.9	11250.3
60°	11823.0	11928.5	11113.8	9624.4	9774.6	11089.0	11101.4	10921.5	10082.0	9709.8	11374.3
62.5°	11737.5	11938.1	11378.5	10000.7	9578.2	10754.0	10805.7	10681.7	10060.0	10145.4	11097.3
65°	11348.8	11580.4	11148.9	10201.3	9457.6	10193.0	10206.1	9892.5	9745.0	10434.2	10448.0
67.5°	10619.6	10836.7	10418.4	9881.5	8631.9	8680.8	8973.1	8998.6	8783.5	10216.4	9536.2
70°	9343.2	9496.2	9234.3	9091.6	7214.8	6928.1	7245.2	7380.9	7478.8	9430.0	8441.7
72.5°	7396.8	7692.5	7733.8	7826.9	5808.8	5331.2	5566.2	5364.9	6002.5	8026.1	6897.1
75°	5472.5	5722.0	5990.1	6509.1	4578.5	3991.3	3962.4	3859.7	4455.2	6454.6	5115.4
77.5°	3867.3	4026.5	4232.5	5199.5	3455.1	3074.0	3091.9	2987.8	3217.3	4878.4	3533.7
80°	2772.1	2855.5	2951.3	3425.5	2548.8	2652.1	2654.9	2556.3	2392.3	3313.1	2358.5
82.5°	1975.3	2040.1	2149.7	2259.3	1900.2	2173.8	2171.8	2165.6	1896.8	2239.3	1475.6
85°	1100.0	1186.9	1377.1	1769.9	1372.3	1554.2	1366.7	1505.3	1392.2	1490.8	747.1
87.5°	77.2	68.9	308.1	1025.6	640.3	468.0	245.4	485.9	623.1	778.8	104.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1497.7	1497.7	1497.7	1497.7	1497.7	1497.7	1497.7	1497.7	1497.7	1497.7	1497.7
2.5°	2005.7	2029.8	1935.4	1793.4	1832.0	1789.9	1736.9	1654.1	1483.9	1589.4	1590.0
5°	2408.9	2317.2	2243.4	2173.8	2056.7	1879.5	1856.1	1714.1	1634.2	1676.2	1670.0
7.5°	2535.0	2404.7	2293.8	2044.9	1827.8	1552.8	1470.1	1386.0	1350.9	1452.9	1493.6
10°	2396.4	2260.7	2151.8	1849.2	1701.7	1530.1	1302.6	1186.2	1117.2	1144.1	1160.0
12.5°	2508.1	2369.6	2027.0	1858.2	1614.9	1510.1	1310.9	1140.0	1038.0	1062.8	1033.2
15°	2615.6	2428.8	2086.3	1749.9	1552.8	1401.2	1239.9	1063.5	943.6	900.8	878.1
17.5°	3008.5	2698.3	2079.4	1689.3	1463.2	1288.9	1094.5	901.5	821.6	777.4	739.5
20°	3487.5	3055.3	2116.6	1626.6	1368.1	1148.3	936.7	757.5	701.6	672.7	662.3
22.5°	4057.5	3513.0	2329.6	1617.6	1278.5	1045.6	849.8	738.2	675.4	643.7	630.6
25°	4510.3	3986.5	2486.7	1678.3	1273.7	960.8	797.4	820.2	791.2	800.9	724.4
27.5°	4950.0	4115.4	2398.5	1651.4	1145.5	810.5	785.0	832.6	857.4	865.0	862.2
30°	5321.5	4659.9	2417.8	1499.8	967.7	660.3	601.0	624.4	692.7	800.9	821.6
32.5°	5865.3	4920.4	2582.5	1408.1	865.0	590.7	524.5	515.5	531.4	570.7	604.5
35°	6501.5	5520.0	2628.7	1384.0	794.0	559.7	513.5	492.8	501.1	530.7	537.6
37.5°	7687.6	5957.0	2799.6	1354.3	767.8	541.0	505.2	497.6	515.5	539.7	553.4
40°	8341.7	6742.7	2807.9	1328.8	734.0	533.5	510.7	507.3	518.3	551.4	559.7
42.5°	9213.6	7190.7	2937.5	1299.2	722.3	543.8	521.7	520.4	530.0	549.3	564.5
45°	9745.0	7490.5	2944.4	1282.0	719.6	589.3	536.2	531.4	529.3	541.0	554.8
47.5°	10087.5	7922.7	3028.5	1262.7	736.1	601.0	553.4	532.8	525.9	530.7	541.0
50°	10412.2	8268.0	3187.7	1259.9	753.3	589.3	583.8	532.1	518.3	516.2	523.8
52.5°	10810.5	8835.9	3384.1	1286.1	749.2	572.1	606.5	529.3	504.5	499.7	507.3
55°	11390.2	9444.5	3592.9	1264.0	706.5	539.0	584.5	527.3	490.0	481.1	488.0
57.5°	11765.8	9793.2	3826.6	1245.4	641.7	514.2	564.5	528.6	491.4	471.4	475.6
60°	11641.1	9605.8	3918.3	1131.7	580.3	494.9	516.9	517.6	479.0	460.4	463.9
62.5°	11089.7	8926.9	3832.8	999.4	534.8	467.3	468.0	496.9	443.2	430.1	435.6
65°	10319.1	8082.6	3486.8	913.2	513.5	438.3	427.3	436.3	394.9	385.3	396.3
67.5°	9373.5	7041.8	2972.0	822.2	505.9	399.1	386.0	382.5	356.3	345.3	356.3
70°	8187.3	5896.3	2375.8	758.2	476.9	356.3	346.0	342.5	320.5	312.2	321.9
72.5°	6580.7	4604.0	1833.3	709.2	445.2	317.0	308.1	303.9	285.3	273.6	285.3
75°	4680.5	3518.5	1361.9	634.1	400.4	277.1	266.7	261.2	244.0	233.0	243.3
77.5°	3326.2	2641.1	951.1	524.5	330.1	234.3	228.1	219.2	204.0	190.9	201.3
80°	2459.2	1887.1	613.4	404.6	252.3	187.5	184.0	177.8	163.3	147.5	155.1
82.5°	1619.0	1360.5	351.5	274.3	183.3	135.1	137.8	133.7	119.9	103.4	107.5
85°	725.1	805.7	186.8	150.9	119.2	81.3	88.9	86.2	75.8	60.0	61.3
87.5°	69.6	135.8	57.2	55.1	44.1	25.5	31.7	26.9	22.7	14.5	11.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	185°	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°
0°	1497.7	1497.7	1497.7	1497.7	1497.7	1497.7	1497.7	1497.7	1497.7	1497.7	1497.7
2.5°	1614.2	1517.0	1419.8	1479.1	1480.5	1496.3	1498.4	1439.8	1486.7	1522.5	1559.7
5°	1639.7	1576.3	1579.7	1522.5	1491.5	1531.5	1523.2	1507.3	1535.6	1574.9	1622.4
7.5°	1455.0	1413.6	1406.7	1351.6	1217.9	1188.2	1213.0	1223.4	1261.3	1321.9	1372.9
10°	1135.8	1217.9	1125.5	1104.1	1069.0	1000.1	960.1	955.3	1035.9	1084.8	1127.6
12.5°	1023.5	1002.8	991.8	933.2	933.2	860.2	836.7	858.1	982.1	1017.3	1072.4
15°	871.9	856.7	805.7	776.8	763.0	733.3	758.2	778.8	894.6	897.4	955.3
17.5°	723.7	714.7	666.5	661.0	647.2	634.1	656.8	706.5	769.2	758.2	785.0
20°	647.2	616.2	572.1	587.9	573.4	563.1	553.4	623.8	667.9	682.3	698.2
22.5°	627.9	571.4	545.2	530.7	531.4	514.9	516.9	575.5	642.4	651.3	641.7
25°	717.5	616.9	532.1	490.0	474.2	468.7	484.5	536.2	616.9	636.2	643.7
27.5°	839.5	669.9	547.9	476.3	444.6	447.3	470.1	505.9	601.0	635.5	644.4
30°	805.7	630.0	548.6	465.9	426.6	441.1	449.4	483.8	588.6	640.3	685.1
32.5°	621.7	566.5	552.1	474.2	458.3	435.6	447.3	480.4	552.1	584.5	586.5
35°	526.6	484.5	474.9	455.6	433.5	423.9	437.0	465.9	512.8	532.8	530.0
37.5°	522.4	476.3	438.3	430.1	421.1	418.4	425.9	452.8	500.4	535.5	527.9
40°	529.3	472.1	433.5	419.1	422.5	410.1	417.7	450.8	502.4	535.5	528.6
42.5°	521.1	467.3	427.3	416.3	419.7	402.5	411.5	445.9	496.9	536.2	523.1
45°	504.5	456.3	423.9	405.3	421.1	395.6	406.6	433.5	480.4	523.1	508.0
47.5°	488.0	443.2	409.4	397.7	413.5	388.7	393.5	417.0	463.9	505.9	492.8
50°	470.1	426.6	397.7	394.2	405.3	387.3	379.8	399.1	443.9	485.9	474.9
52.5°	450.8	412.8	389.4	388.0	398.4	378.4	367.4	382.5	422.5	464.5	455.6
55°	432.1	397.7	379.1	382.5	394.2	370.8	357.0	366.7	399.8	441.1	428.7
57.5°	413.5	380.5	365.3	374.9	383.9	361.2	343.9	349.4	376.3	417.0	402.5
60°	397.0	365.3	350.1	361.8	370.1	346.7	326.7	330.1	354.3	390.8	377.7
62.5°	375.6	348.7	328.8	343.9	350.1	327.4	306.0	310.2	329.5	363.9	354.3
65°	345.3	328.1	309.5	319.8	328.1	304.6	284.7	289.5	303.9	336.3	329.5
67.5°	319.1	302.6	290.2	298.4	299.8	281.9	264.0	266.7	278.4	308.8	301.2
70°	290.2	274.3	264.7	270.9	270.2	255.0	241.2	241.9	251.6	279.1	268.8
72.5°	258.5	243.3	238.5	241.9	239.2	225.4	212.3	217.1	223.3	244.0	235.7
75°	224.7	210.9	208.1	211.6	207.5	194.4	182.6	187.5	193.0	210.2	199.9
77.5°	189.5	177.1	177.8	178.5	173.0	164.0	152.3	157.1	160.6	172.3	162.0
80°	150.9	141.3	144.0	144.0	137.8	131.6	120.6	122.0	124.1	128.2	120.6
82.5°	110.3	110.3	110.3	111.0	97.9	99.9	90.3	89.6	87.5	86.8	82.0
85°	65.5	68.2	69.6	71.7	53.1	62.0	53.8	51.7	47.6	43.4	42.0
87.5°	14.5	18.6	18.6	17.9	0.0	6.9	3.4	5.5	1.4	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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 CATALOG NUMBER: MSA-SA3C-730-U-SLL

CANDELA DISTRIBUTION (continued):

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	1497.7	1497.7	1497.7	1497.7	1497.7	1497.7	1497.7	1497.7	1497.7	1497.7
2.5°	1517.0	1475.6	1552.8	1621.8	1610.7	1650.7	1557.7	1695.5	1841.6	1841.6
5°	1610.0	1574.9	1594.9	1634.8	1665.2	1804.4	1920.2	2035.3	2273.1	2275.8
7.5°	1357.8	1433.6	1451.5	1439.8	1570.1	1749.3	1940.2	2268.2	2469.5	2485.4
10°	1269.6	1304.0	1358.5	1388.8	1441.9	1618.3	1855.4	2244.8	2458.5	2498.5
12.5°	1150.3	1277.8	1360.5	1530.1	1572.1	1607.3	1984.3	2321.3	2468.8	2459.2
15°	1020.1	1116.5	1235.8	1423.3	1530.1	1798.9	2060.8	2566.7	2650.1	2723.1
17.5°	813.3	884.3	1042.8	1256.5	1521.1	1768.6	2249.6	2869.9	3025.7	3101.5
20°	669.2	669.9	828.5	1111.7	1399.8	1641.7	2321.3	3121.5	3319.3	3357.9
22.5°	632.7	601.0	684.4	914.6	1266.1	1716.9	2466.1	3526.1	3938.9	4036.1
25°	612.7	574.1	626.5	807.1	1170.3	1756.2	2757.6	4082.3	4612.3	4650.2
27.5°	621.0	638.9	655.5	719.6	1049.0	1682.4	2690.1	4331.1	4899.0	4970.7
30°	676.8	705.8	667.9	689.9	949.1	1575.6	2810.7	4735.0	5260.2	5380.8
32.5°	563.1	552.1	548.6	596.9	849.1	1479.1	3063.6	5303.6	5651.7	5803.3
35°	508.0	490.7	497.6	552.8	800.2	1465.3	3205.6	5774.4	6269.9	6363.0
37.5°	505.9	485.9	494.9	536.2	817.4	1490.1	3433.0	6529.7	7360.3	7559.5
40°	501.1	490.0	494.9	525.9	799.5	1503.9	3564.0	7164.5	8119.8	8321.7
42.5°	500.4	494.9	499.7	534.2	780.9	1510.1	3745.3	7738.0	8920.0	9079.2
45°	498.3	503.8	503.8	541.0	772.6	1551.5	3852.1	8019.2	9447.9	9644.4
47.5°	488.7	505.2	532.1	539.0	738.9	1532.2	4003.0	8445.8	9728.5	9913.2
50°	476.3	503.1	567.9	525.2	733.3	1485.3	4179.5	8784.2	10088.2	10248.8
52.5°	459.7	499.7	559.7	498.3	723.7	1477.0	4426.9	9223.9	10508.0	10649.9
55°	436.3	487.3	534.2	471.4	700.3	1450.8	4805.3	9769.1	11057.3	11154.5
57.5°	414.9	468.7	496.9	456.3	644.4	1456.3	5068.6	10213.7	11518.4	11603.2
60°	395.6	466.6	443.9	440.4	587.2	1382.6	5154.0	10208.8	11690.0	11823.0
62.5°	374.9	440.4	406.6	419.1	536.9	1306.8	4972.8	9771.2	11504.6	11737.5
65°	348.1	377.7	375.6	403.9	538.3	1183.4	4557.2	8999.2	11042.1	11348.8
67.5°	316.4	334.3	346.0	379.1	555.5	1087.6	3888.6	8070.9	10255.0	10619.6
70°	284.0	301.9	315.0	346.7	571.4	1043.5	3095.3	6766.8	8973.1	9343.2
72.5°	250.9	269.5	279.8	307.4	550.0	949.1	2291.0	5265.0	7202.4	7396.8
75°	216.4	234.3	242.6	268.1	477.6	785.0	1581.8	3987.9	5275.3	5472.5
77.5°	181.3	200.6	203.3	224.0	364.6	600.3	1013.9	3058.8	3735.6	3867.3
80°	144.7	164.0	164.0	175.1	256.4	412.8	607.2	2307.5	2720.4	2772.1
82.5°	104.1	124.8	123.4	124.1	177.1	255.7	351.5	1729.3	1965.7	1975.3
85°	61.3	75.8	75.1	68.9	104.8	137.8	190.2	1073.8	1097.3	1100.0
87.5°	11.7	17.9	15.9	6.9	28.9	40.7	55.1	199.2	79.3	77.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)