

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: P367424

Luminaire Tested: **MSA-SA2C-730-U-SLL**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P367424  
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-SA2C-730-U-SLL  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND SPILL LIGHT ELIMINATOR LEFT OPTICS.  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

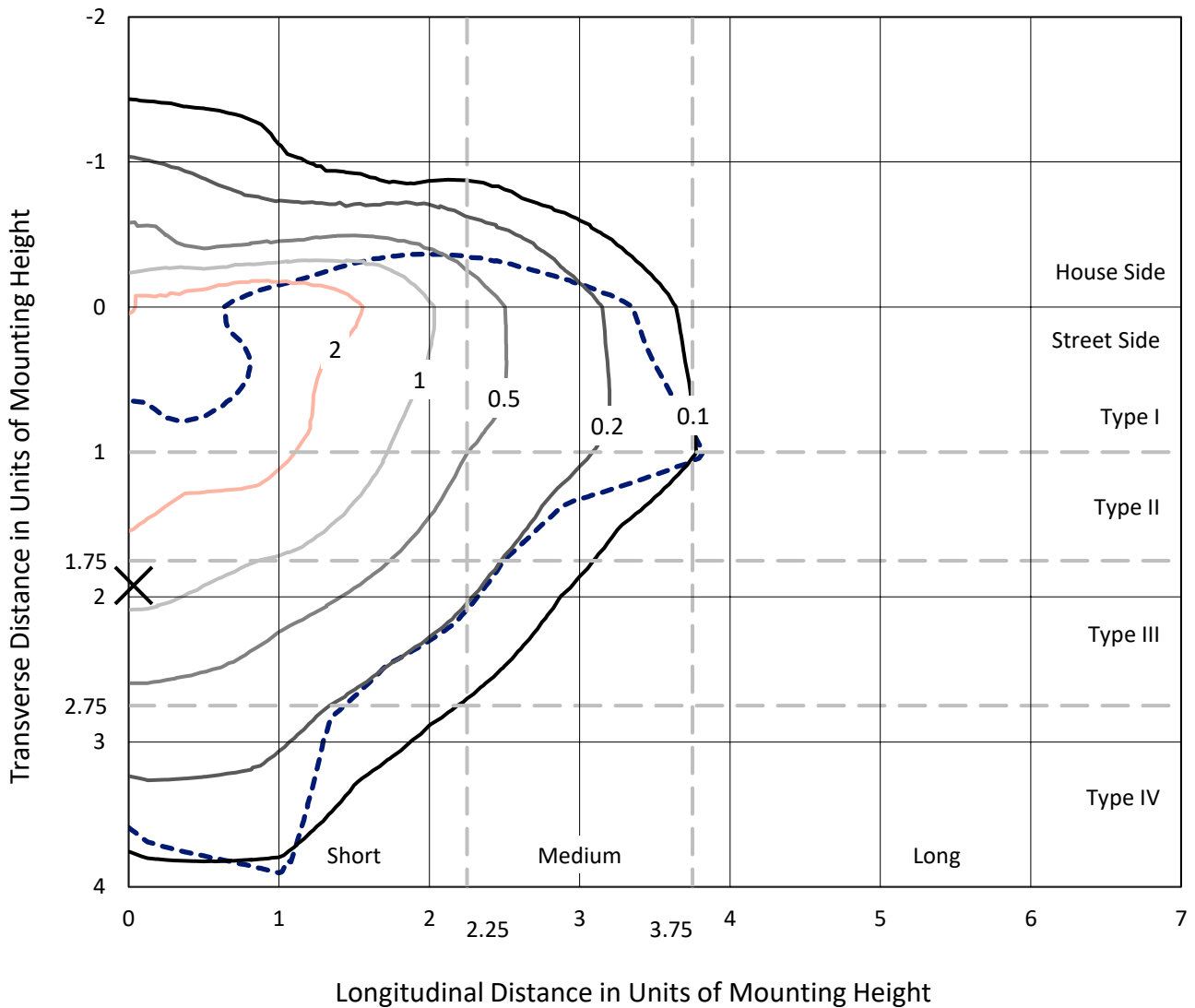
Lumens per Lamp: N/A  
Luminaire Lumens: 9624 lumens  
Efficiency: N/A  
Efficacy: 85.2 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B2 - U0 - G3  
  
Input Watts (W): 113  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage 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

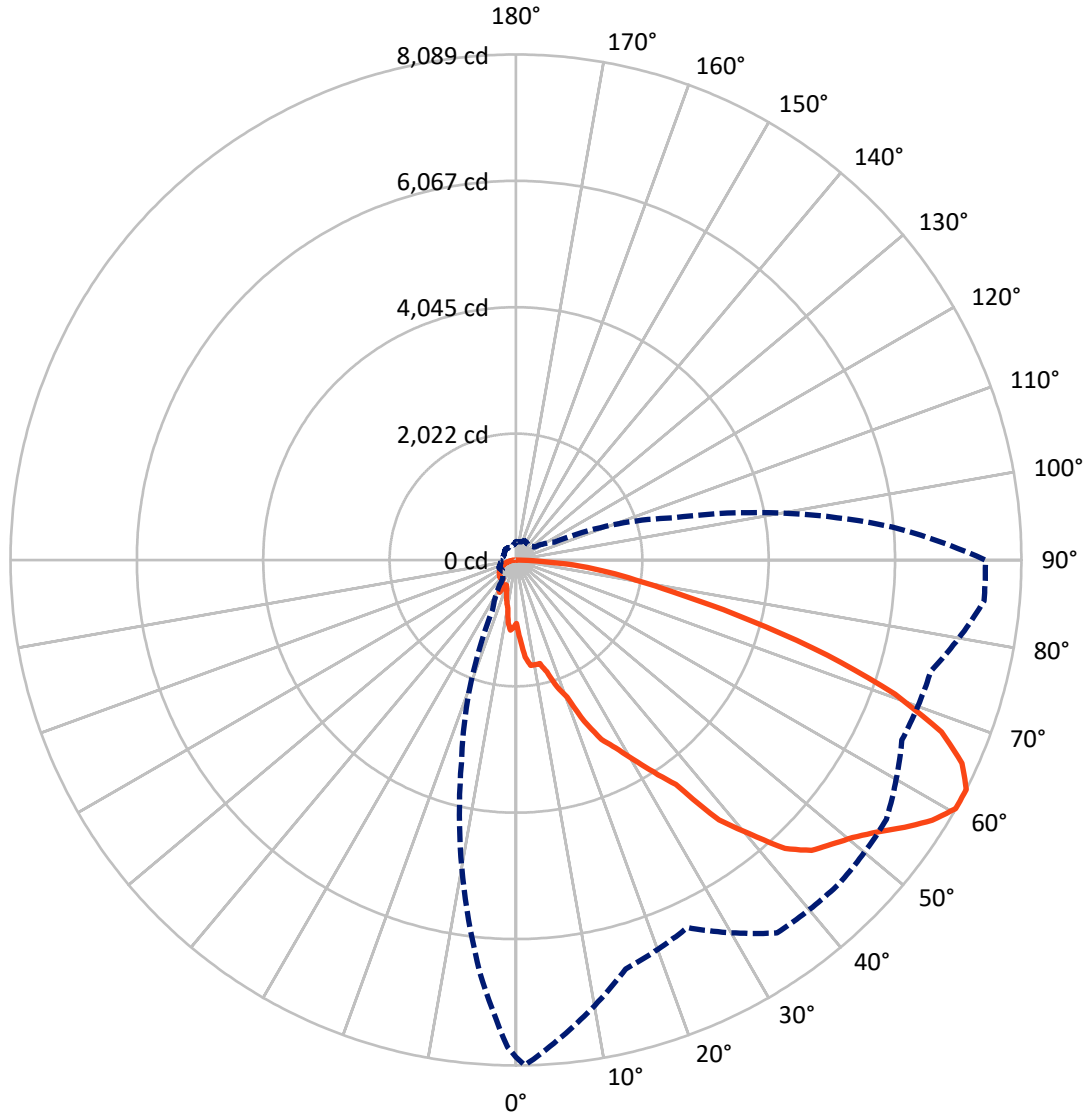
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.1 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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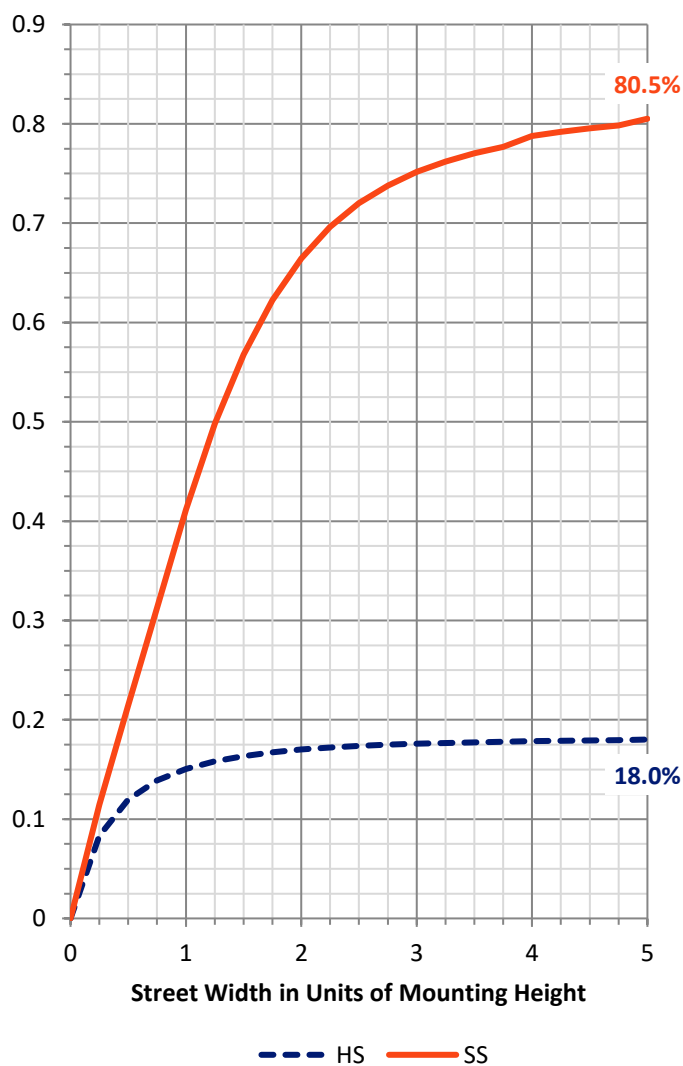
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1752.5	0.0	1752.5
	% Fixture	18.2	0.0	18.2
<b>Street Side</b>	Lumens	7871.5	0.0	7871.5
	% Fixture	81.8	0.0	81.8
<b>Total</b>	Lumens	9624.0	0.0	9624.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	116.3	1.2
10°-20°	338.1	3.5
20°-30°	596.9	6.2
30°-40°	929.7	9.7
40°-50°	1530.8	15.9
50°-60°	2184.8	22.7
60°-70°	2316.8	24.1
70°-80°	1279.7	13.3
80°-90°	331.0	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°	9624.0	100.0
0°-180°	9624.0	100.0

**Coefficient of Utilization**



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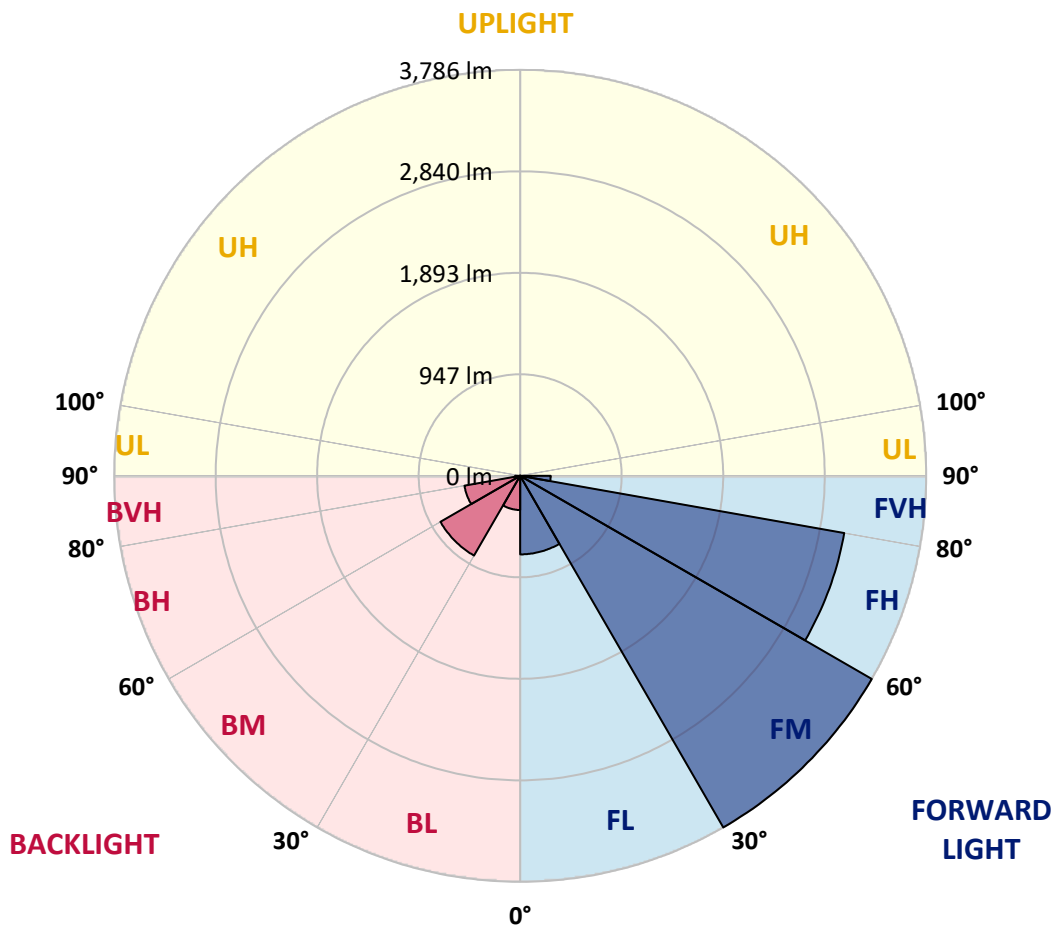
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	732.5	7.6			
FM (30°-60°)	3786.2	39.3			
FH (60°-80°)	3068.5	31.9			G2/5000
FVH (80°-90°)	284.3	3.0			G3/500
BL (0°-30°)	318.7	3.3	B1/500		
BM (30°-60°)	859.1	8.9	B1/1000		
BH (60°-80°)	528.0	5.5	B2/1000		G2/1000
BVH (80°-90°)	46.7	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°	1014.8	1014.8	1014.8	1014.8	1014.8	1014.8	1014.8	1014.8	1014.8	1014.8	1014.8
2.5°	1247.9	1258.6	1236.7	1211.9	1109.6	1208.2	1178.8	1233.4	1215.7	1097.0	1314.2
5°	1542.1	1561.7	1540.2	1614.5	1619.2	1638.3	1461.3	1571.5	1533.2	1523.4	1633.2
7.5°	1684.1	1704.2	1758.8	1891.0	1994.2	1900.8	1797.6	1774.7	1744.8	1666.8	1733.1
10°	1693.0	1704.2	1777.5	2057.7	2107.7	2174.0	2107.2	1949.8	1884.9	1715.4	1664.9
12.5°	1666.3	1701.4	1796.2	2137.6	2286.1	2358.5	2374.8	2199.7	2040.4	1847.1	1821.4
15°	1845.2	1857.8	1993.7	2194.5	2296.8	2358.0	2411.2	2303.4	2253.4	2100.2	1894.2
17.5°	2101.6	2136.6	2247.8	2322.0	2391.2	2402.8	2358.9	2316.9	2237.5	2442.1	2223.0
20°	2275.3	2343.1	2479.4	2493.4	2348.2	2373.9	2367.8	2370.6	2325.3	2703.6	2583.1
22.5°	2734.9	2808.2	2826.9	2745.6	2472.0	2354.7	2378.1	2445.8	2624.2	2948.3	3084.7
25°	3151.0	3179.5	3350.0	3140.7	2704.5	2449.1	2410.8	2585.9	2876.9	3360.2	3457.4
27.5°	3368.2	3405.1	3518.6	3063.2	2733.5	2327.6	2238.0	2504.6	2801.2	3166.4	3592.8
30°	3646.0	3704.9	3859.5	3140.7	2820.8	2407.0	2208.6	2463.5	2791.4	3293.4	3879.6
32.5°	3932.3	4046.8	4161.6	3413.9	2808.7	2528.5	2396.8	2417.3	2880.1	3559.6	4176.6
35°	4311.6	4412.4	4511.4	3571.8	3053.4	2629.8	2499.0	2716.7	3108.0	3868.4	4590.8
37.5°	5122.3	5282.0	5021.0	4021.1	3319.6	3086.6	2850.7	2979.6	3349.0	4125.7	5267.6
40°	5638.8	5758.9	5506.7	4327.0	3788.5	3394.3	3355.6	3366.3	3681.1	4346.1	5722.9
42.5°	6152.1	6314.6	5913.4	4746.8	4355.5	4029.9	3830.1	3816.5	4052.8	4742.2	6240.8
45°	6535.1	6630.8	6053.1	5100.8	4963.5	4722.1	4572.2	4334.4	4541.3	5016.3	6561.2
47.5°	6717.2	6795.2	6277.7	5306.8	5357.7	5370.3	5640.7	5235.3	4968.2	5201.7	6729.3
50°	6944.6	6981.5	6409.9	5488.0	5732.2	6286.1	6351.0	5664.1	5383.8	5403.9	6828.8
52.5°	7216.4	7231.9	6602.8	5697.2	6111.0	6888.6	6788.2	6390.7	5779.4	5773.3	7016.1
55°	7558.3	7549.0	6844.7	5978.8	6381.4	7246.8	7170.7	6881.1	6210.5	6079.2	7307.5
57.5°	7862.3	7856.7	7165.5	6238.0	6608.8	7430.8	7453.2	7376.6	6503.8	6298.3	7623.2
60°	8011.3	8082.8	7530.7	6521.5	6623.3	7513.9	7522.3	7400.4	6831.6	6579.4	7707.3
62.5°	7953.4	8089.3	7710.1	6776.5	6490.2	7287.0	7322.0	7237.9	6816.7	6874.6	7519.5
65°	7690.0	7846.9	7554.6	6912.4	6408.5	6906.8	6915.7	6703.2	6603.2	7070.3	7079.6
67.5°	7195.9	7343.0	7059.5	6695.7	5849.0	5882.2	6080.2	6097.5	5951.7	6922.7	6461.7
70°	6331.0	6434.6	6257.2	6160.5	4888.8	4694.5	4909.3	5001.3	5067.7	6389.8	5720.1
72.5°	5012.1	5212.4	5240.5	5303.5	3936.1	3612.4	3771.7	3635.3	4067.3	5438.5	4673.5
75°	3708.2	3877.2	4058.9	4410.6	3102.4	2704.5	2684.9	2615.3	3018.8	4373.7	3466.2
77.5°	2620.5	2728.3	2868.0	3523.2	2341.2	2082.9	2095.1	2024.5	2180.1	3305.6	2394.4
80°	1878.4	1934.9	1999.8	2321.1	1727.1	1797.1	1799.0	1732.2	1621.0	2245.0	1598.2
82.5°	1338.5	1382.4	1456.6	1530.9	1287.6	1473.0	1471.6	1467.4	1285.2	1517.4	999.9
85°	745.4	804.2	933.1	1199.3	929.8	1053.1	926.1	1020.0	943.4	1010.2	506.3
87.5°	52.3	46.7	208.8	694.9	433.9	317.1	166.3	329.3	422.2	527.7	70.5
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°	1014.8	1014.8	1014.8	1014.8	1014.8	1014.8	1014.8	1014.8	1014.8	1014.8	1014.8
2.5°	1359.0	1375.4	1311.4	1215.2	1241.3	1212.9	1176.9	1120.9	1005.5	1077.0	1077.4
5°	1632.2	1570.1	1520.2	1473.0	1393.6	1273.6	1257.7	1161.5	1107.3	1135.8	1131.6
7.5°	1717.7	1629.4	1554.3	1385.7	1238.5	1052.2	996.2	939.2	915.4	984.5	1012.0
10°	1623.8	1531.8	1458.0	1253.0	1153.1	1036.8	882.7	803.7	757.0	775.3	786.0
12.5°	1699.5	1605.6	1373.5	1259.1	1094.2	1023.2	888.3	772.5	703.3	720.1	700.1
15°	1772.4	1645.8	1413.7	1185.8	1052.2	949.5	840.2	720.6	639.4	610.4	595.0
17.5°	2038.6	1828.4	1409.0	1144.7	991.5	873.3	741.6	610.9	556.7	526.8	501.1
20°	2363.1	2070.3	1434.2	1102.2	927.0	778.1	634.7	513.3	475.4	455.8	448.8
22.5°	2749.4	2380.4	1578.5	1096.1	866.3	708.5	575.8	500.2	457.7	436.2	427.3
25°	3056.2	2701.3	1685.0	1137.2	863.1	651.0	540.3	555.8	536.1	542.7	490.8
27.5°	3354.2	2788.6	1625.2	1119.0	776.2	549.2	531.9	564.2	581.0	586.1	584.2
30°	3605.9	3157.5	1638.3	1016.2	655.7	447.4	407.2	423.1	469.4	542.7	556.7
32.5°	3974.4	3334.1	1749.9	954.1	586.1	400.2	355.4	349.3	360.1	386.7	409.6
35°	4405.4	3740.4	1781.2	937.8	538.0	379.2	347.9	333.9	339.5	359.6	364.3
37.5°	5209.2	4036.5	1897.0	917.7	520.3	366.6	342.3	337.2	349.3	365.7	375.0
40°	5652.4	4568.9	1902.7	900.4	497.4	361.5	346.1	343.7	351.2	373.6	379.2
42.5°	6243.2	4872.5	1990.5	880.3	489.4	368.5	353.5	352.6	359.1	372.2	382.5
45°	6603.2	5075.6	1995.1	868.7	487.6	399.3	363.3	360.1	358.7	366.6	376.0
47.5°	6835.3	5368.4	2052.1	855.6	498.8	407.2	375.0	361.0	356.3	359.6	366.6
50°	7055.3	5602.4	2160.0	853.7	510.5	399.3	395.6	360.5	351.2	349.8	354.9
52.5°	7325.3	5987.2	2293.1	871.5	507.7	387.6	411.0	358.7	341.9	338.6	343.7
55°	7718.0	6399.6	2434.6	856.5	478.7	365.2	396.0	357.3	332.1	326.0	330.7
57.5°	7972.6	6635.9	2592.9	843.9	434.8	348.4	382.5	358.2	333.0	319.4	322.2
60°	7888.0	6508.9	2655.0	766.9	393.2	335.3	350.3	350.7	324.6	312.0	314.3
62.5°	7514.4	6048.9	2597.1	677.2	362.4	316.6	317.1	336.7	300.3	291.4	295.2
65°	6992.3	5476.8	2362.7	618.8	347.9	297.0	289.6	295.6	267.6	261.1	268.5
67.5°	6351.5	4771.6	2013.8	557.2	342.8	270.4	261.5	259.2	241.5	234.0	241.5
70°	5547.8	3995.4	1609.8	513.7	323.2	241.5	234.4	232.1	217.2	211.6	218.1
72.5°	4459.1	3119.7	1242.3	480.6	301.7	214.8	208.8	206.0	193.3	185.4	193.3
75°	3171.6	2384.2	922.8	429.7	271.3	187.7	180.7	177.0	165.3	157.9	164.9
77.5°	2253.9	1789.6	644.5	355.4	223.7	158.8	154.6	148.5	138.2	129.4	136.4
80°	1666.3	1278.7	415.7	274.1	170.9	127.0	124.7	120.5	110.7	99.9	105.1
82.5°	1097.0	921.9	238.2	185.9	124.2	91.5	93.4	90.6	81.3	70.1	72.9
85°	491.3	545.9	126.6	102.3	80.8	55.1	60.2	58.4	51.4	40.6	41.6
87.5°	47.2	92.0	38.8	37.4	29.9	17.3	21.5	18.2	15.4	9.8	7.5
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°	1014.8	1014.8	1014.8	1014.8	1014.8	1014.8	1014.8	1014.8	1014.8	1014.8	1014.8
2.5°	1093.8	1027.9	962.1	1002.2	1003.2	1013.9	1015.3	975.6	1007.4	1031.7	1056.9
5°	1111.0	1068.1	1070.4	1031.7	1010.6	1037.7	1032.1	1021.4	1040.5	1067.1	1099.4
7.5°	985.9	957.9	953.2	915.8	825.2	805.1	822.0	829.0	854.7	895.8	930.3
10°	769.7	825.2	762.6	748.2	724.4	677.7	650.6	647.3	701.9	735.1	764.0
12.5°	693.5	679.5	672.0	632.3	632.3	582.8	567.0	581.4	665.5	689.3	726.7
15°	590.8	580.5	545.9	526.3	517.0	496.9	513.7	527.7	606.2	608.1	647.3
17.5°	490.4	484.3	451.6	447.9	438.5	429.7	445.1	478.7	521.2	513.7	531.9
20°	438.5	417.5	387.6	398.4	388.6	381.6	375.0	422.7	452.5	462.4	473.1
22.5°	425.5	387.2	369.4	359.6	360.1	348.9	350.3	390.0	435.3	441.3	434.8
25°	486.2	418.0	360.5	332.1	321.3	317.6	328.3	363.3	418.0	431.1	436.2
27.5°	568.8	453.9	371.3	322.7	301.2	303.1	318.5	342.8	407.2	430.6	436.7
30°	545.9	426.9	371.8	315.7	289.1	298.9	304.5	327.9	398.8	433.9	464.2
32.5°	421.3	383.9	374.1	321.3	310.6	295.2	303.1	325.5	374.1	396.0	397.4
35°	356.8	328.3	321.8	308.7	293.8	287.2	296.1	315.7	347.5	361.0	359.1
37.5°	354.0	322.7	297.0	291.4	285.4	283.5	288.6	306.8	339.1	362.9	357.7
40°	358.7	319.9	293.8	284.0	286.3	277.9	283.0	305.4	340.5	362.9	358.2
42.5°	353.1	316.6	289.6	282.1	284.4	272.7	278.8	302.2	336.7	363.3	354.5
45°	341.9	309.2	287.2	274.6	285.4	268.1	275.5	293.8	325.5	354.5	344.2
47.5°	330.7	300.3	277.4	269.5	280.2	263.4	266.7	282.5	314.3	342.8	333.9
50°	318.5	289.1	269.5	267.1	274.6	262.5	257.3	270.4	300.8	329.3	321.8
52.5°	305.4	279.7	263.9	262.9	269.9	256.4	248.9	259.2	286.3	314.8	308.7
55°	292.8	269.5	256.9	259.2	267.1	251.3	241.9	248.5	270.9	298.9	290.5
57.5°	280.2	257.8	247.5	254.1	260.1	244.7	233.0	236.8	255.0	282.5	272.7
60°	269.0	247.5	237.2	245.2	250.8	234.9	221.4	223.7	240.0	264.8	255.9
62.5°	254.5	236.3	222.8	233.0	237.2	221.8	207.4	210.2	223.2	246.6	240.0
65°	234.0	222.3	209.7	216.7	222.3	206.4	192.9	196.1	206.0	227.9	223.2
67.5°	216.2	205.0	196.6	202.2	203.2	191.0	178.9	180.7	188.7	209.2	204.1
70°	196.6	185.9	179.3	183.5	183.1	172.8	163.5	163.9	170.5	189.1	182.1
72.5°	175.1	164.9	161.6	163.9	162.1	152.7	143.8	147.1	151.3	165.3	159.7
75°	152.2	142.9	141.0	143.4	140.6	131.7	123.8	127.0	130.8	142.4	135.4
77.5°	128.4	120.0	120.5	121.0	117.2	111.2	103.2	106.5	108.8	116.8	109.8
80°	102.3	95.7	97.6	97.6	93.4	89.2	81.7	82.7	84.1	86.9	81.7
82.5°	74.7	74.7	74.7	75.2	66.3	67.7	61.2	60.7	59.3	58.8	55.6
85°	44.4	46.2	47.2	48.6	36.0	42.0	36.4	35.0	32.2	29.4	28.5
87.5°	9.8	12.6	12.6	12.1	0.0	4.7	2.3	3.7	0.9	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-SA2C-730-U-SLL

**CANDELA DISTRIBUTION (continued):**

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	1014.8	1014.8	1014.8	1014.8	1014.8	1014.8	1014.8	1014.8	1014.8	1014.8
2.5°	1027.9	999.9	1052.2	1098.9	1091.4	1118.5	1055.5	1148.9	1247.9	1247.9
5°	1091.0	1067.1	1080.7	1107.8	1128.3	1222.7	1301.1	1379.1	1540.2	1542.1
7.5°	920.0	971.4	983.6	975.6	1063.9	1185.3	1314.7	1537.0	1673.3	1684.1
10°	860.3	883.6	920.5	941.1	977.0	1096.6	1257.2	1521.1	1665.9	1693.0
12.5°	779.5	865.9	921.9	1036.8	1065.3	1089.1	1344.6	1572.9	1672.9	1666.3
15°	691.2	756.6	837.4	964.4	1036.8	1218.9	1396.4	1739.2	1795.7	1845.2
17.5°	551.1	599.2	706.6	851.4	1030.7	1198.4	1524.4	1944.7	2050.2	2101.6
20°	453.5	453.9	561.4	753.3	948.5	1112.4	1572.9	2115.1	2249.2	2275.3
22.5°	428.7	407.2	463.8	619.7	857.9	1163.4	1671.0	2389.3	2669.0	2734.9
25°	415.2	389.0	424.5	546.9	793.0	1190.0	1868.6	2766.2	3125.3	3151.0
27.5°	420.8	432.9	444.1	487.6	710.8	1140.0	1822.8	2934.8	3319.6	3368.2
30°	458.6	478.2	452.5	467.5	643.1	1067.6	1904.5	3208.4	3564.3	3646.0
32.5°	381.6	374.1	371.8	404.4	575.4	1002.2	2075.9	3593.7	3829.6	3932.3
35°	344.2	332.5	337.2	374.6	542.2	992.9	2172.1	3912.7	4248.5	4311.6
37.5°	342.8	329.3	335.3	363.3	553.9	1009.7	2326.2	4424.6	4987.3	5122.3
40°	339.5	332.1	335.3	356.3	541.7	1019.0	2415.0	4854.7	5502.0	5638.8
42.5°	339.1	335.3	338.6	361.9	529.1	1023.2	2537.8	5243.3	6044.2	6152.1
45°	337.7	341.4	341.4	366.6	523.5	1051.3	2610.2	5433.8	6402.0	6535.1
47.5°	331.1	342.3	360.5	365.2	500.6	1038.2	2712.5	5722.9	6592.0	6717.2
50°	322.7	340.9	384.8	355.9	496.9	1006.4	2832.0	5952.2	6835.8	6944.6
52.5°	311.5	338.6	379.2	337.7	490.4	1000.8	2999.7	6250.2	7120.2	7216.4
55°	295.6	330.2	361.9	319.4	474.5	983.1	3256.1	6619.6	7492.5	7558.3
57.5°	281.1	317.6	336.7	309.2	436.7	986.8	3434.5	6920.8	7804.9	7862.3
60°	268.1	316.2	300.8	298.4	397.9	936.8	3492.4	6917.5	7921.2	8011.3
62.5°	254.1	298.4	275.5	284.0	363.8	885.5	3369.6	6621.0	7795.5	7953.4
65°	235.8	255.9	254.5	273.7	364.7	801.9	3088.0	6097.9	7482.2	7690.0
67.5°	214.4	226.5	234.4	256.9	376.4	737.0	2634.9	5468.8	6948.8	7195.9
70°	192.4	204.6	213.4	234.9	387.2	707.1	2097.4	4585.2	6080.2	6331.0
72.5°	170.0	182.6	189.6	208.3	372.7	643.1	1552.4	3567.6	4880.4	5012.1
75°	146.6	158.8	164.4	181.7	323.6	531.9	1071.8	2702.2	3574.6	3708.2
77.5°	122.8	135.9	137.8	151.8	247.1	406.8	687.0	2072.6	2531.3	2620.5
80°	98.1	111.2	111.2	118.6	173.7	279.7	411.4	1563.6	1843.3	1878.4
82.5°	70.5	84.5	83.6	84.1	120.0	173.3	238.2	1171.8	1331.9	1338.5
85°	41.6	51.4	50.9	46.7	71.0	93.4	128.9	727.6	743.5	745.4
87.5°	7.9	12.1	10.7	4.7	19.6	27.6	37.4	135.0	53.7	52.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)