

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: P368573

Luminaire Tested: **MSA-SA4C-830-U-T3-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368573
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-11)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA4C-830-U-T3-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14120 lumens
Efficiency: N/A
Efficacy: 62.8 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G3

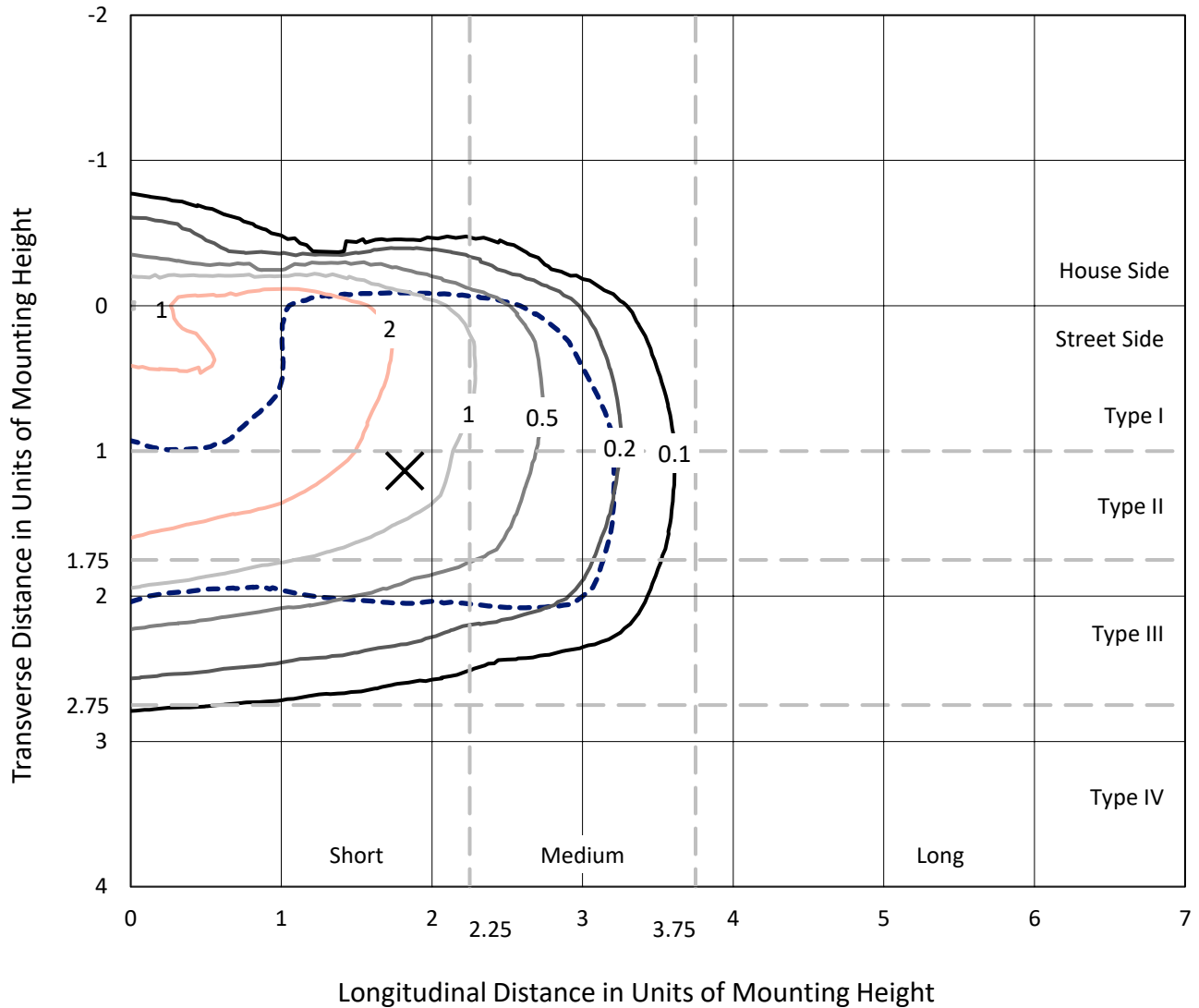
Input Watts (W): 225
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

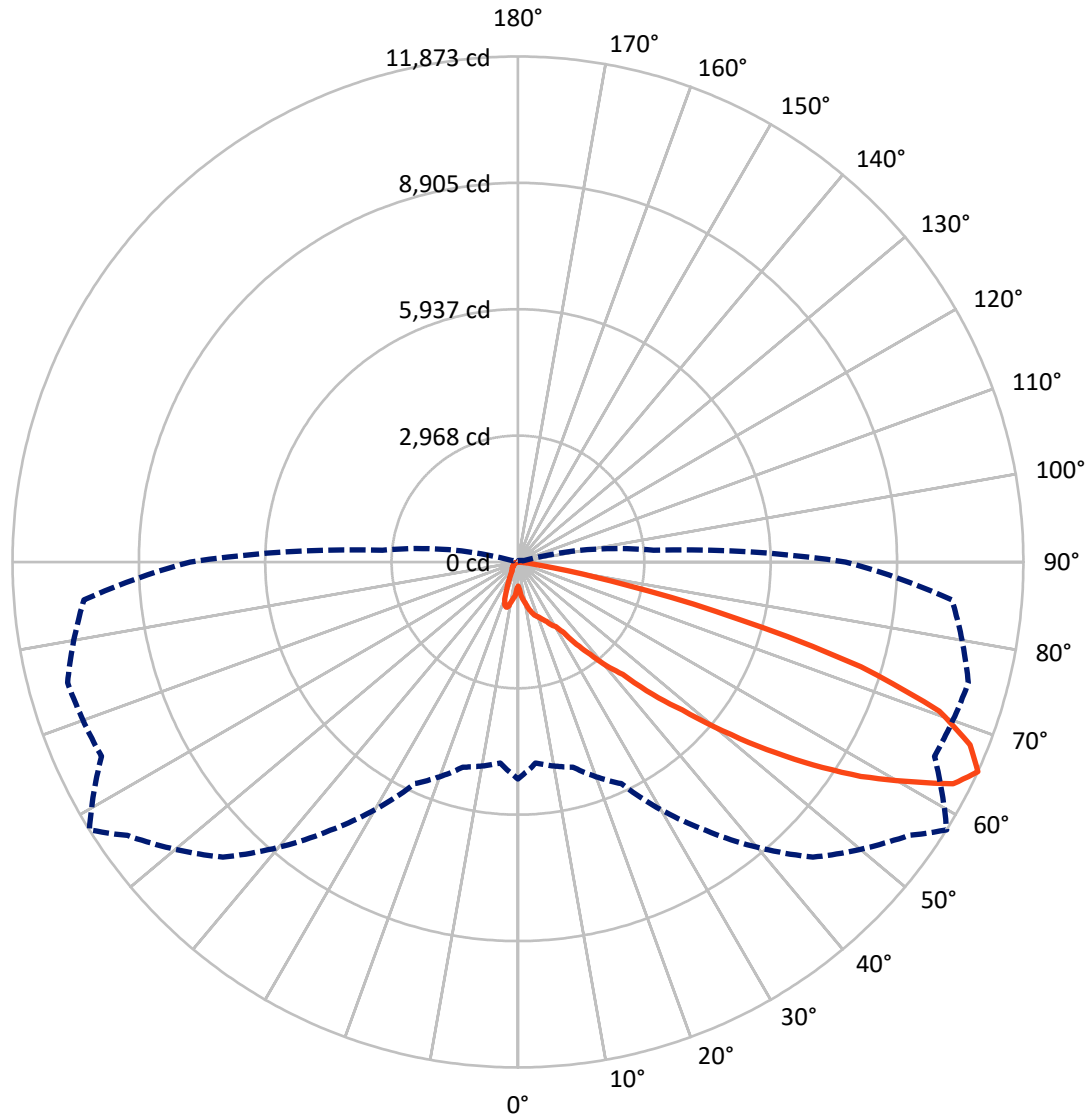
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.7 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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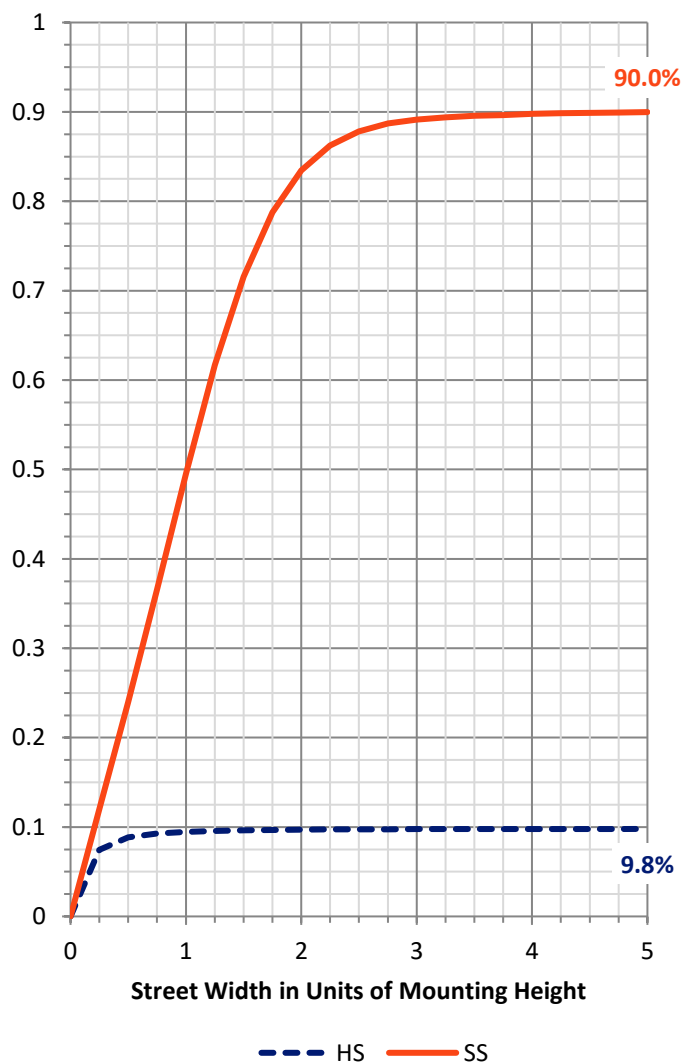
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1393.3	0.0	1393.3
	% Fixture	9.9	0.0	9.9
Street Side	Lumens	12726.7	0.0	12726.7
	% Fixture	90.1	0.0	90.1
Total	Lumens	14120.0	0.0	14120.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	79.4	0.6
10°-20°	289.8	2.1
20°-30°	561.0	4.0
30°-40°	1119.3	7.9
40°-50°	2288.3	16.2
50°-60°	4058.8	28.7
60°-70°	4279.1	30.3
70°-80°	1387.3	9.8
80°-90°	56.7	0.4
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°	14120.0	100.0
0°-180°	14120.0	100.0

Coefficient of Utilization



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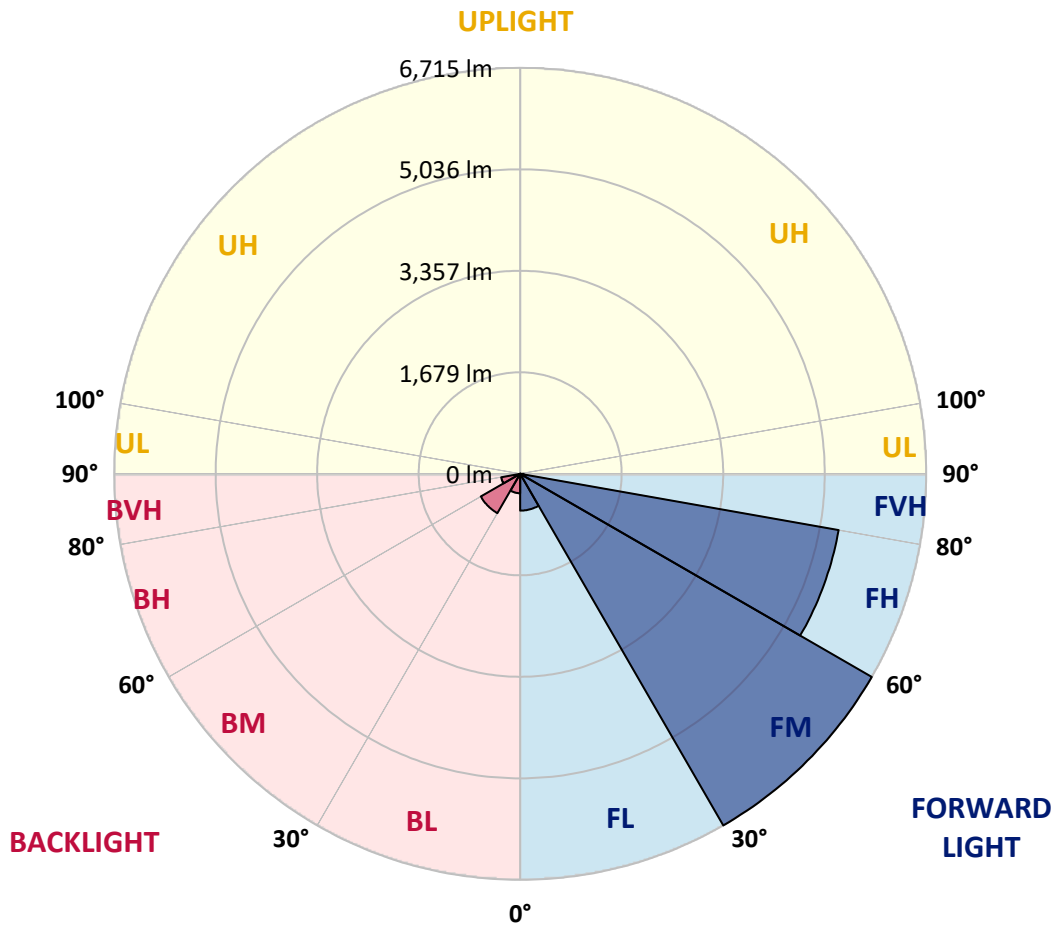
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	609.2	4.3			
FM (30°-60°)	6714.8	47.6			
FH (60°-80°)	5348.5	37.9			G3/7500
FVH (80°-90°)	54.3	0.4			G1/100
BL (0°-30°)	321.2	2.3	B1/500		
BM (30°-60°)	751.7	5.3	B1/1000		
BH (60°-80°)	318.0	2.3	B1/500		G1/500
BVH (80°-90°)	2.4	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G3

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	565.2	565.2	565.2	565.2	565.2	565.2	565.2	565.2	565.2	565.2	565.2
2.5°	690.1	669.4	636.8	642.4	648.7	661.4	651.1	641.6	631.2	617.7	669.4
5°	833.2	799.0	795.8	788.6	783.1	782.3	795.0	791.0	796.6	822.0	848.3
7.5°	885.6	871.3	844.3	855.4	837.9	824.4	880.9	899.1	934.1	946.1	1014.4
10°	880.1	859.4	870.5	876.1	888.0	937.3	973.1	993.0	1023.2	1088.4	1074.8
12.5°	905.5	923.8	935.7	936.5	997.7	1088.4	1113.8	1130.5	1184.6	1210.0	1276.8
15°	990.6	1020.8	1001.7	1009.7	1029.5	1140.0	1199.7	1236.2	1312.5	1395.2	1411.9
17.5°	1112.2	1131.3	1091.5	1062.9	1117.8	1178.2	1286.3	1324.5	1373.0	1566.2	1601.9
20°	1265.6	1298.2	1212.4	1098.7	1171.0	1242.6	1360.2	1378.5	1430.2	1682.2	1738.7
22.5°	1624.2	1575.7	1444.5	1267.2	1245.8	1277.6	1389.7	1461.2	1548.7	1747.4	1878.6
25°	1978.0	1961.3	1768.1	1570.1	1427.0	1355.5	1504.1	1543.9	1687.0	1902.4	1974.8
27.5°	2371.5	2404.9	2082.1	1962.1	1681.4	1447.7	1575.7	1675.1	1844.4	1958.9	2133.0
30°	2890.6	2837.4	2458.9	2338.9	2018.5	1701.3	1760.9	1767.3	2016.1	2144.9	2310.3
32.5°	3297.7	3331.8	2856.4	2672.0	2416.0	2091.6	1900.1	1982.7	2160.8	2447.8	2604.4
35°	3738.1	3734.9	3271.4	3023.4	2688.7	2410.4	2312.7	2373.1	2596.5	2921.6	2963.0
37.5°	4396.4	4339.9	3792.9	3429.6	3145.0	2907.3	2832.6	2752.3	2982.8	3292.9	3447.9
40°	5017.2	4822.5	4316.9	3886.0	3521.9	3424.9	3154.6	3203.9	3272.2	3681.6	4110.2
42.5°	5644.5	5523.7	4847.9	4487.0	4039.4	3808.8	3632.4	3609.3	3934.5	4419.4	4862.2
45°	6472.1	6102.4	5561.8	5244.6	4726.3	4494.9	4352.6	4437.7	4730.3	5438.6	5733.5
47.5°	7166.9	6826.7	6362.4	5880.6	5336.8	5596.8	5329.7	5195.3	5596.8	6329.0	6720.9
50°	7764.0	7384.8	6914.9	6558.0	6469.7	6719.3	6178.7	6228.0	6488.8	7349.0	7570.0
52.5°	8198.0	7799.0	7388.7	7216.2	7577.9	7703.6	7432.5	7323.5	7560.5	8218.7	8326.0
55°	8524.8	8116.2	7795.8	8033.5	8733.1	8691.7	8787.1	8415.1	8641.7	9125.8	9074.9
57.5°	8544.7	8060.5	7872.9	8255.3	9215.6	9855.6	10134.7	9501.8	9630.6	9835.0	9720.5
60°	7919.8	7438.0	7422.9	7965.9	9355.6	10156.9	10767.5	10459.0	10286.5	10438.4	10221.3
62.5°	6674.8	6337.7	6495.2	7095.4	8834.8	9990.8	11104.6	11475.8	10804.1	10838.2	10529.8
65°	5096.7	4743.0	4989.4	5745.5	7696.4	9804.7	11200.0	11873.3	10794.5	10951.9	10234.0
67.5°	3375.6	3170.5	3449.5	4282.7	6119.1	8655.2	11150.7	11456.0	10451.9	10507.5	9136.1
70°	1742.6	1692.6	1918.3	2575.8	4114.1	6649.4	10666.5	10499.6	9756.2	9051.9	7046.9
72.5°	558.1	560.5	777.5	1176.6	2218.1	4048.1	8198.8	8427.8	7806.9	6621.6	4302.5
75°	247.2	243.3	325.2	493.7	924.6	1815.0	5093.6	5340.8	4860.6	3642.7	1808.6
77.5°	178.1	172.5	208.3	288.6	457.9	615.3	2388.2	2577.4	2203.7	1262.5	414.2
80°	125.6	124.8	151.1	202.7	286.2	273.5	754.5	845.9	677.3	306.1	121.6
82.5°	70.8	73.1	104.9	143.1	174.1	136.7	212.3	233.7	228.2	163.0	53.3
85°	34.2	38.2	68.4	103.4	91.4	53.3	75.5	81.9	95.4	94.6	27.0
87.5°	0.0	0.0	27.8	46.9	24.6	8.0	23.1	26.2	25.4	30.2	6.4
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°	565.2	565.2	565.2	565.2	565.2	565.2	565.2	565.2	565.2	565.2	565.2
2.5°	679.7	675.0	614.5	619.3	632.8	627.3	632.0	620.9	608.2	659.9	659.1
5°	859.4	823.6	804.5	787.1	790.2	754.5	775.1	784.7	783.1	812.5	820.4
7.5°	1016.8	969.1	930.9	894.4	838.7	788.6	819.6	839.5	853.0	903.9	923.8
10°	1090.7	1051.8	1036.7	965.1	925.4	894.4	857.0	830.0	841.1	827.6	841.1
12.5°	1252.9	1226.7	1168.7	1096.3	1048.6	985.0	845.9	729.8	658.3	659.1	654.3
15°	1400.8	1399.2	1312.5	1192.5	1054.2	872.9	655.9	509.6	442.0	422.9	416.6
17.5°	1594.0	1570.1	1411.9	1234.6	985.8	675.8	446.8	349.0	342.6	353.8	349.0
20°	1717.2	1682.2	1461.2	1173.4	812.5	457.1	337.1	309.3	328.3	344.2	340.3
22.5°	1840.4	1788.0	1498.6	1098.7	578.0	334.7	304.5	299.7	311.6	331.5	334.7
25°	1908.0	1897.7	1571.7	958.8	395.9	293.4	293.4	291.8	295.7	310.1	307.7
27.5°	2104.4	1964.4	1516.9	748.1	306.1	269.5	273.5	271.9	257.6	271.9	272.7
30°	2226.8	2162.4	1520.8	532.7	269.5	238.5	248.8	236.1	214.7	226.6	224.2
32.5°	2473.2	2312.7	1508.9	359.3	245.7	227.4	211.5	193.2	177.3	182.1	178.1
35°	2760.2	2637.8	1347.5	288.6	229.0	201.1	175.7	157.4	140.7	144.7	143.9
37.5°	3331.1	2942.3	1214.0	260.0	217.8	184.4	155.0	129.6	120.8	123.2	125.6
40°	3859.7	3450.3	965.1	247.2	198.8	164.6	128.0	109.7	104.1	105.7	108.1
42.5°	4650.0	3854.2	729.0	234.5	179.7	139.1	106.5	94.6	89.0	92.2	93.8
45°	5414.7	4197.6	544.6	223.4	163.8	120.0	89.8	81.9	75.5	77.9	81.1
47.5°	6178.7	4579.2	406.2	205.9	146.3	103.4	77.1	71.6	67.6	68.4	72.3
50°	6862.4	4757.3	319.6	184.4	132.0	89.8	70.0	64.4	62.8	63.6	66.8
52.5°	7364.9	4758.9	269.5	165.4	118.5	79.5	66.0	59.6	58.8	60.4	63.6
55°	7818.8	4631.7	233.7	148.7	106.5	72.3	62.8	57.2	57.2	58.8	62.0
57.5°	8120.1	4397.9	202.7	131.2	96.2	68.4	60.4	54.9	54.1	53.3	55.7
60°	8267.2	4079.1	171.7	115.3	86.7	66.0	58.8	48.5	47.7	46.1	47.7
62.5°	8174.2	3680.1	143.9	99.4	77.1	62.8	51.7	42.1	40.5	37.4	39.8
65°	7698.8	3195.1	121.6	85.1	66.8	53.3	43.7	35.8	31.8	27.8	27.0
67.5°	6726.5	2595.7	101.8	73.1	57.2	43.7	35.8	31.8	24.6	21.5	20.7
70°	5041.1	1772.1	84.3	62.8	47.7	37.4	30.2	28.6	23.1	20.7	19.1
72.5°	2957.4	956.4	70.8	54.9	40.5	31.0	24.6	26.2	23.1	19.1	17.5
75°	1181.4	318.0	56.4	43.7	32.6	22.3	20.7	21.5	20.7	17.5	14.3
77.5°	269.5	100.2	43.7	34.2	25.4	14.3	16.7	18.3	18.3	14.3	10.3
80°	84.3	39.8	25.4	21.5	18.3	8.0	11.9	12.7	8.7	4.0	0.0
82.5°	27.0	11.1	8.7	8.7	8.0	1.6	2.4	1.6	0.0	0.0	0.0
85°	10.3	7.2	5.6	5.6	3.2	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	4.0	3.2	2.4	3.2	1.6	0.0	0.0	0.0	0.0	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

(END OF REPORT)