

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: P366994

Luminaire Tested: **MSA-SA1C-830-U-T4W**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P366994
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-14)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA1C-830-U-T4W
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5053 lumens
Efficiency: N/A
Efficacy: 85.6 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

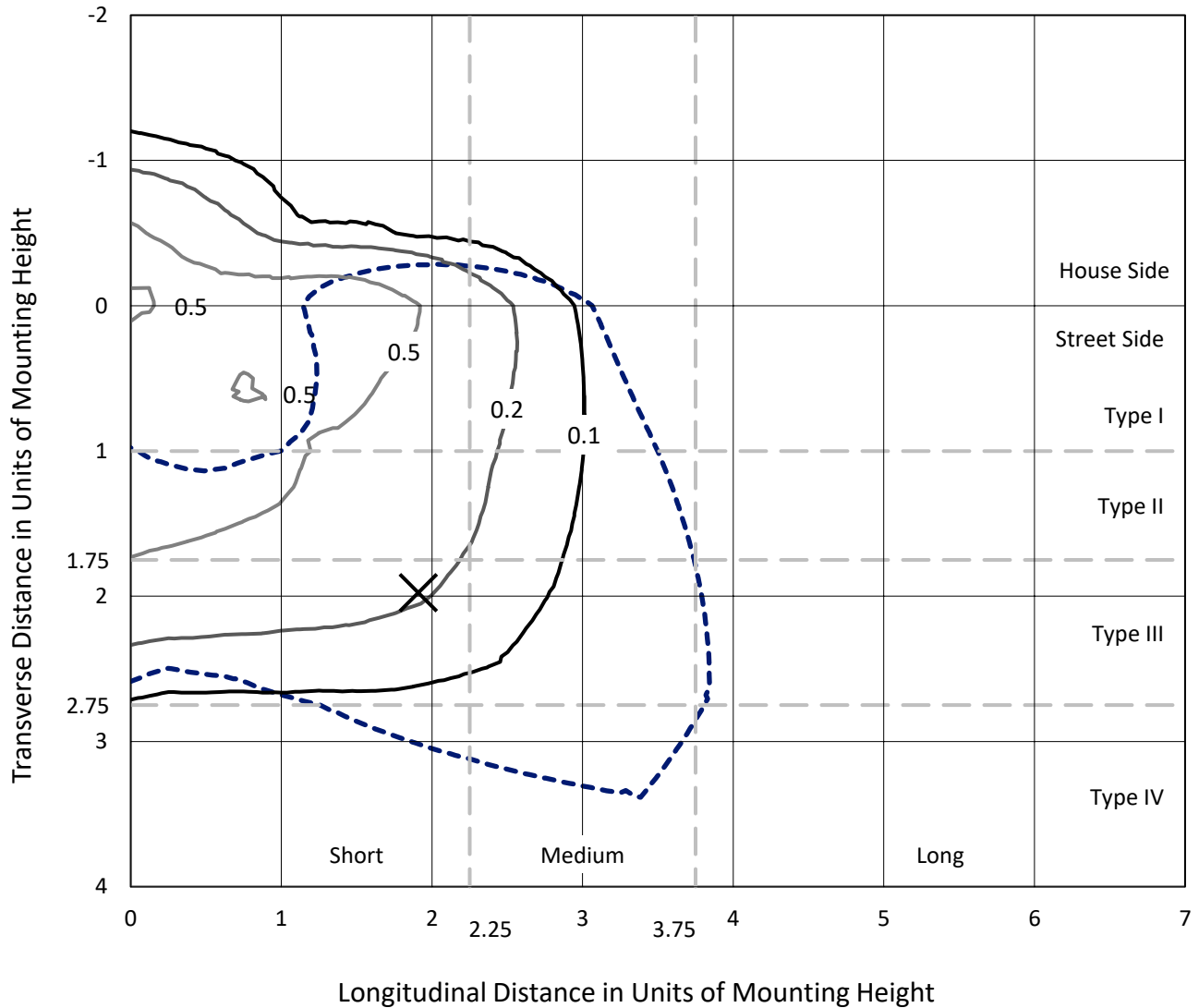
Input Watts (W): 59
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

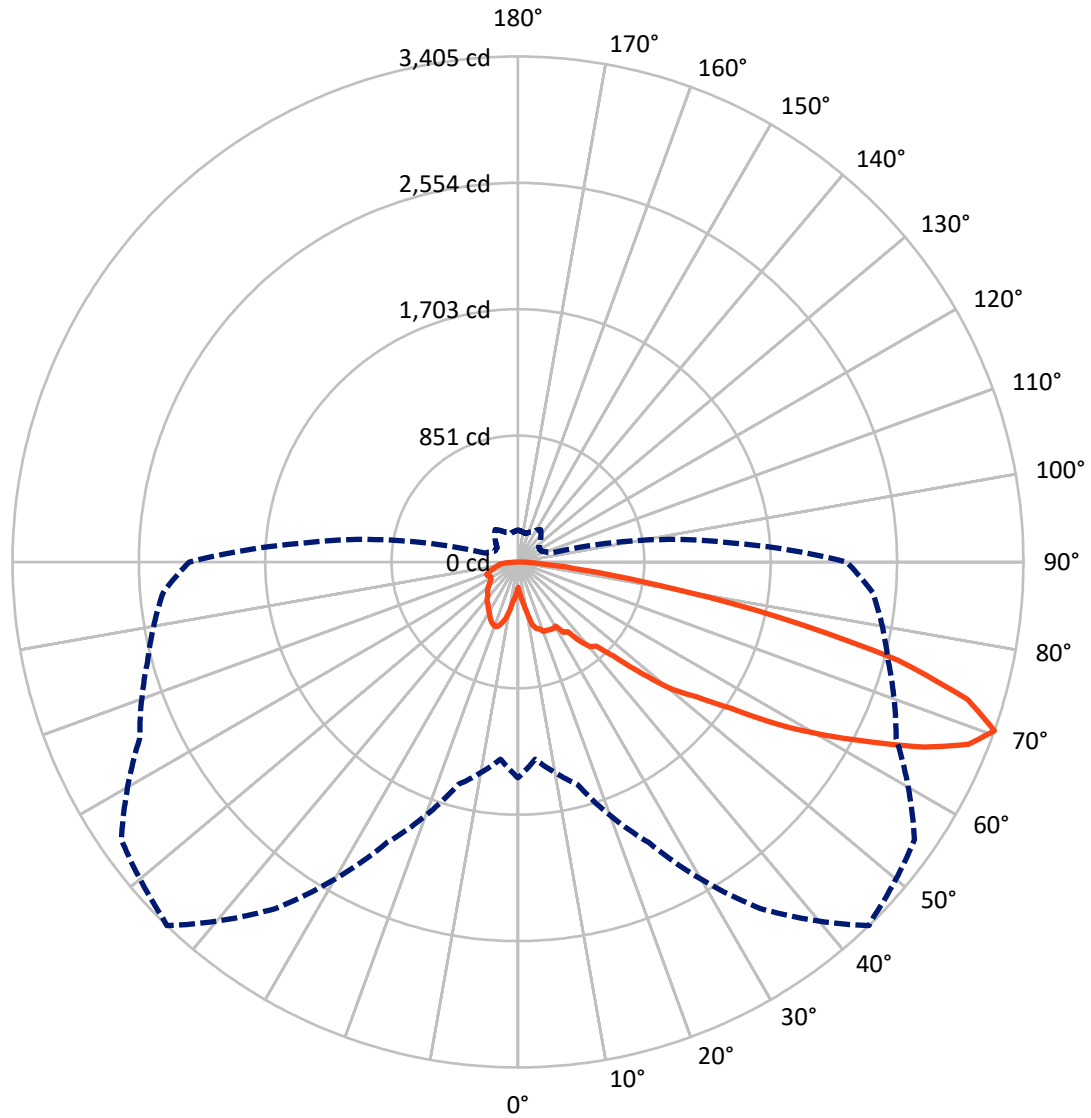
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 44-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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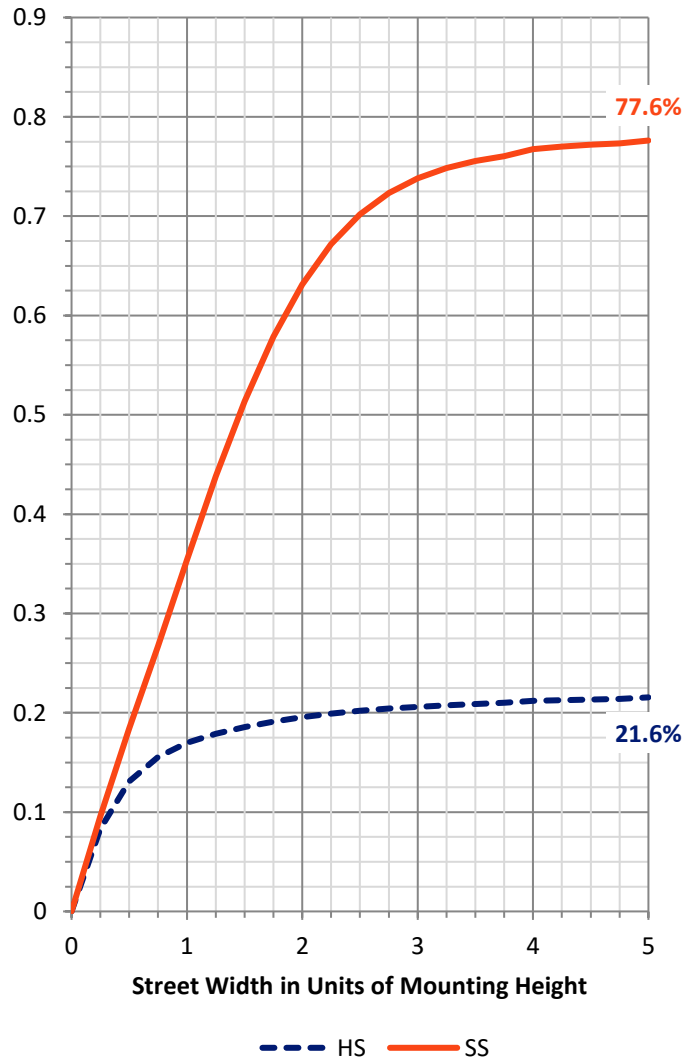
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1114.9	0.0	1114.9
	% Fixture	22.1	0.0	22.1
Street Side	Lumens	3938.1	0.0	3938.1
	% Fixture	77.9	0.0	77.9
Total	Lumens	5053.0	0.0	5053.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	26.9	0.5
10°-20°	124.0	2.5
20°-30°	231.7	4.6
30°-40°	372.0	7.4
40°-50°	627.9	12.4
50°-60°	1118.9	22.1
60°-70°	1530.4	30.3
70°-80°	900.0	17.8
80°-90°	121.2	2.4
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°	5053.0	100.0
0°-180°	5053.0	100.0

Coefficient of Utilization



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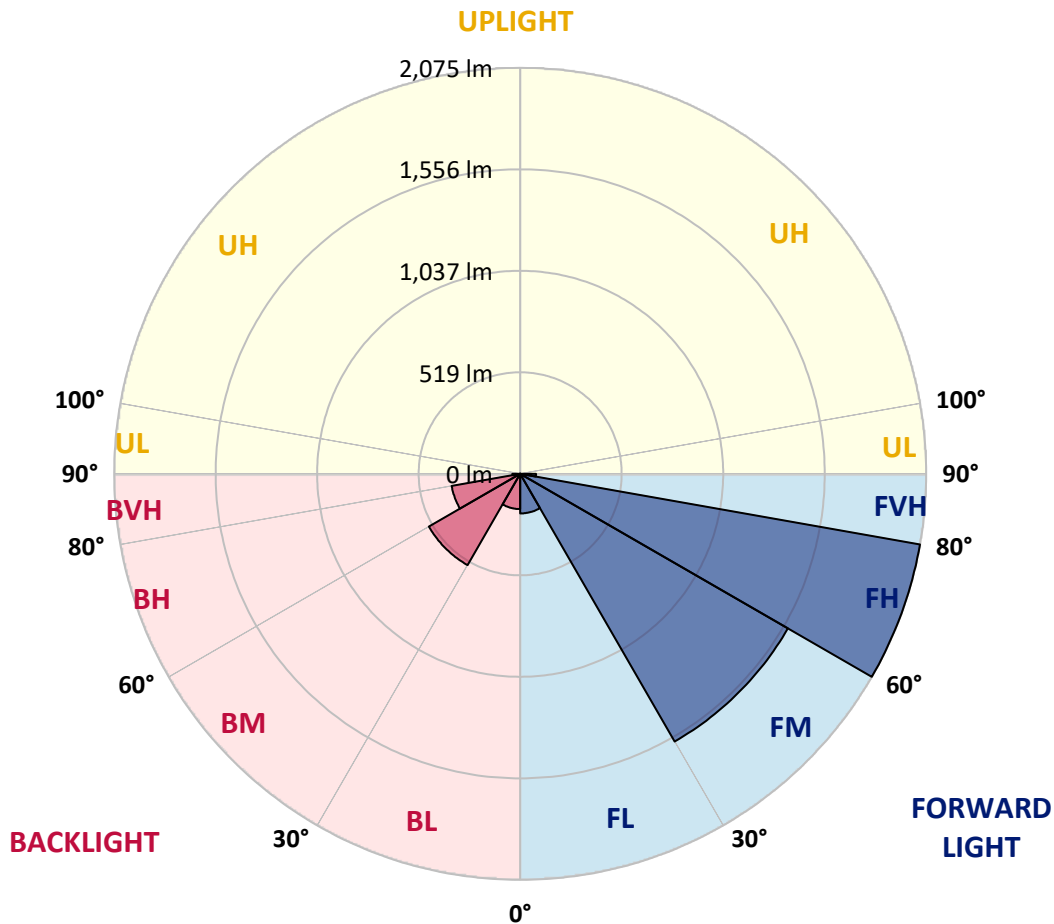
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	202.5	4.0			
FM (30°-60°)	1579.9	31.3			
FH (60°-80°)	2074.9	41.1			G2/5000
FVH (80°-90°)	80.8	1.6			G1/100
BL (0°-30°)	180.2	3.6	B1/500		
BM (30°-60°)	538.8	10.7	B1/1000		
BH (60°-80°)	355.5	7.0	B1/500		G1/500
BVH (80°-90°)	40.4	0.8			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G2

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	171.8	171.8	171.8	171.8	171.8	171.8	171.8	171.8	171.8	171.8	171.8
2.5°	208.4	204.3	194.3	197.7	201.8	203.5	203.0	202.6	196.2	193.9	205.3
5°	283.2	274.1	266.9	264.0	254.4	247.0	242.4	254.4	252.6	255.7	263.5
7.5°	353.7	347.9	331.5	325.7	306.2	293.4	291.9	301.5	303.9	299.0	312.4
10°	399.0	389.1	385.8	371.9	358.4	356.4	355.1	350.8	344.8	344.3	332.3
12.5°	434.3	439.4	442.1	426.2	426.6	434.1	430.1	412.5	402.4	384.5	386.0
15°	497.5	504.9	483.6	473.4	453.9	465.1	463.7	449.0	447.5	435.9	422.5
17.5°	552.6	555.9	520.2	497.0	490.4	474.3	478.6	479.0	460.0	480.7	468.7
20°	557.1	568.9	527.9	481.7	501.6	499.5	500.1	496.0	470.9	505.1	500.6
22.5°	579.5	561.5	524.6	490.8	496.0	499.1	502.0	497.0	495.6	514.7	528.5
25°	575.4	569.6	532.3	503.7	504.3	504.9	506.4	521.3	519.6	545.5	552.8
27.5°	614.1	605.2	534.5	527.5	511.3	507.8	497.9	528.9	553.2	552.6	592.6
30°	687.9	678.7	587.6	567.1	537.9	501.8	520.9	562.3	581.4	587.8	638.6
32.5°	803.1	818.0	692.0	609.3	573.1	565.2	563.1	559.0	606.2	637.9	684.1
35°	968.4	956.6	815.1	699.9	610.2	576.4	581.0	606.2	662.4	682.9	725.6
37.5°	1157.8	1133.3	972.7	802.4	717.1	674.8	659.7	684.1	696.6	712.7	799.9
40°	1350.2	1290.6	1127.5	937.3	781.3	749.4	736.1	706.1	735.3	768.0	878.9
42.5°	1536.1	1489.9	1296.0	1098.3	889.5	775.7	768.5	739.0	829.6	864.2	992.8
45°	1730.8	1623.7	1468.5	1280.0	1047.5	904.8	894.0	841.2	957.2	1029.3	1153.6
47.5°	1861.8	1762.5	1626.6	1427.5	1179.9	1120.7	1100.2	1009.8	1115.1	1208.7	1402.0
50°	1985.7	1883.5	1740.8	1588.9	1419.6	1351.5	1307.8	1157.3	1311.7	1464.2	1720.5
52.5°	2163.0	2071.7	1873.4	1751.6	1677.2	1509.6	1477.0	1394.4	1541.7	1747.4	2068.6
55°	2352.6	2228.1	2048.5	1980.9	1950.9	1736.2	1709.7	1657.1	1847.9	2037.3	2406.9
57.5°	2436.3	2306.4	2207.4	2167.0	2164.5	2065.7	2035.2	1998.5	2161.0	2285.9	2725.3
60°	2502.8	2363.4	2323.8	2346.4	2428.4	2363.4	2323.8	2291.5	2415.8	2531.6	2985.2
62.5°	2490.6	2350.7	2371.0	2439.8	2649.3	2668.4	2637.9	2559.6	2668.4	2733.0	3134.1
65°	2293.4	2164.1	2282.4	2445.6	2854.6	3006.9	3005.2	2800.3	2838.0	2838.0	3118.4
67.5°	1947.8	1813.9	2007.6	2394.5	2996.5	3275.2	3275.6	3055.6	2853.6	2827.5	2874.7
70°	1454.5	1333.2	1551.0	2085.3	2850.1	3405.1	3386.3	3261.5	2810.9	2582.8	2401.3
72.5°	868.7	790.4	990.8	1518.1	2431.1	3166.2	3216.4	3024.3	2573.3	2147.9	1716.5
75°	394.5	360.5	465.5	872.1	1735.6	2641.0	2695.5	2552.3	2043.9	1544.8	992.0
77.5°	168.9	159.7	203.3	386.8	957.0	1806.1	1917.7	1824.1	1384.8	897.7	438.8
80°	108.6	102.8	124.9	186.1	444.4	975.9	1072.0	1037.0	705.5	349.1	154.6
82.5°	64.8	63.0	83.5	116.9	242.4	429.5	484.0	496.8	293.0	156.6	88.5
85°	35.4	35.8	45.8	70.9	145.4	167.2	179.0	194.8	138.0	90.7	42.9
87.5°	11.8	13.7	18.4	28.8	51.8	47.2	47.4	55.1	58.2	37.7	13.7
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°	171.8	171.8	171.8	171.8	171.8	171.8	171.8	171.8	171.8	171.8	171.8
2.5°	207.2	203.5	193.9	194.5	198.1	198.9	199.9	193.9	192.7	204.1	205.1
5°	264.8	252.6	247.0	245.1	239.7	237.9	247.8	252.4	256.9	265.8	270.2
7.5°	311.0	297.3	287.2	277.8	270.0	265.4	282.2	295.0	302.9	321.1	329.4
10°	332.1	320.3	316.6	309.1	315.1	328.8	331.9	332.3	349.7	349.3	352.8
12.5°	374.2	366.5	354.3	357.0	372.7	386.8	382.9	388.9	395.1	410.0	403.2
15°	412.5	410.4	399.0	400.9	404.0	421.6	423.9	429.9	439.4	451.3	443.2
17.5°	459.7	458.9	431.2	428.7	435.9	453.1	447.7	437.2	468.7	481.3	478.0
20°	491.9	485.6	450.0	439.4	457.9	460.2	453.9	437.2	464.5	492.1	499.5
22.5°	518.6	511.3	474.7	453.9	450.2	451.3	451.3	448.1	461.6	484.2	484.0
25°	540.1	547.0	500.4	480.5	460.6	435.7	432.6	435.3	443.0	486.5	485.0
27.5°	594.2	575.4	509.1	494.1	453.3	414.2	422.7	426.8	429.3	476.9	484.8
30°	629.4	635.2	540.1	502.2	442.8	390.1	393.0	405.1	419.6	475.9	478.2
32.5°	676.9	664.4	588.6	488.8	414.6	375.6	370.2	386.4	408.0	459.1	465.3
35°	721.0	735.7	609.1	486.3	394.9	353.9	359.7	365.3	387.6	440.5	447.7
37.5°	824.6	791.0	666.7	474.3	378.5	342.9	336.7	345.2	364.2	405.1	421.8
40°	903.3	905.4	679.2	459.1	347.2	327.1	313.9	322.4	330.5	363.0	370.2
42.5°	1051.1	1005.9	709.6	426.0	327.6	303.5	296.1	299.8	301.0	314.7	326.7
45°	1239.0	1133.1	721.6	381.4	301.7	293.8	278.7	276.8	270.0	271.8	282.4
47.5°	1499.0	1331.6	712.9	334.0	278.7	281.2	259.4	250.9	241.4	243.7	253.6
50°	1835.3	1585.2	712.3	293.8	262.9	264.6	246.8	231.4	221.9	226.7	235.4
52.5°	2212.6	1839.6	715.2	266.2	245.7	244.9	238.5	219.8	212.2	217.1	227.1
55°	2573.5	2058.4	736.8	248.8	227.9	229.4	231.8	216.1	207.6	212.2	222.5
57.5°	2887.6	2231.2	728.7	230.4	211.3	218.0	224.6	210.9	204.5	211.1	221.5
60°	3107.2	2311.4	664.9	212.8	199.1	208.2	221.1	210.3	209.5	223.8	236.2
62.5°	3187.4	2281.8	540.6	198.9	191.9	207.0	229.1	224.0	224.8	242.4	259.6
65°	3070.3	2125.9	403.2	190.0	186.3	213.0	247.8	232.0	220.7	235.2	250.9
67.5°	2737.4	1848.9	294.6	182.3	179.8	222.5	265.0	231.2	210.1	224.8	237.6
70°	2214.6	1459.4	228.1	172.6	171.3	216.1	266.6	225.0	198.7	208.2	215.5
72.5°	1517.4	999.3	189.0	163.3	156.6	191.4	253.2	211.1	185.0	190.6	196.6
75°	848.0	560.9	158.9	151.7	137.2	170.5	237.4	202.8	174.9	176.5	184.8
77.5°	380.6	242.6	134.9	136.3	119.5	150.8	216.9	189.6	159.3	155.6	163.9
80°	144.0	118.3	109.4	115.2	100.5	130.7	195.6	177.6	143.0	138.2	143.0
82.5°	83.5	71.7	81.2	88.7	79.8	120.2	186.7	166.6	126.0	114.0	118.1
85°	38.7	37.1	48.7	57.6	55.7	93.6	159.7	125.3	89.7	75.8	83.9
87.5°	10.2	11.4	17.2	20.3	20.7	32.1	61.5	46.6	35.0	26.5	25.5
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)