

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: P368037

Luminaire Tested: **MSA-SA3C-830-U-SL4-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368037
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-21)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA3C-830-U-SL4-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11965 lumens
Efficiency: N/A
Efficacy: 72.1 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G3

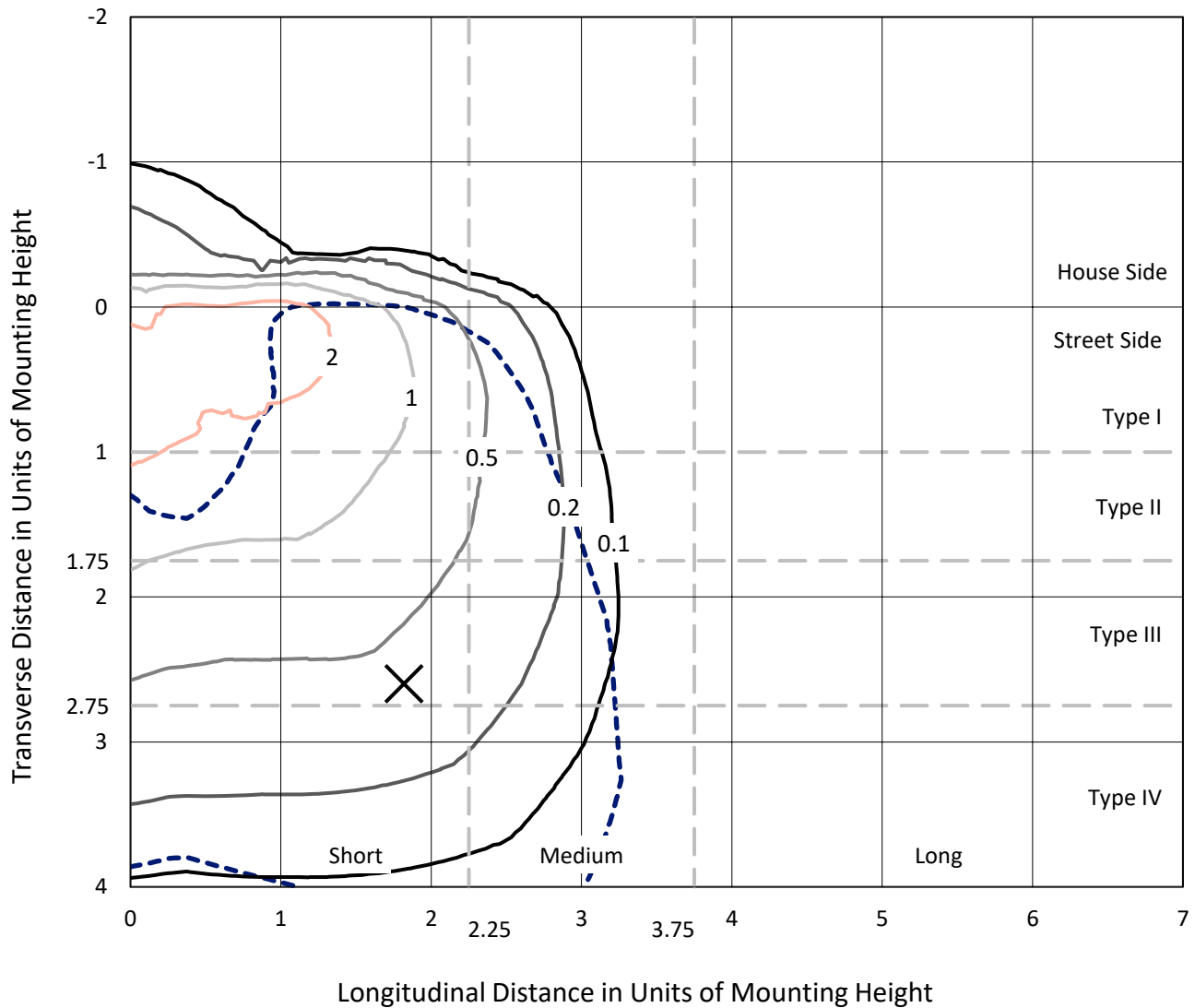
Input Watts (W): 166
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

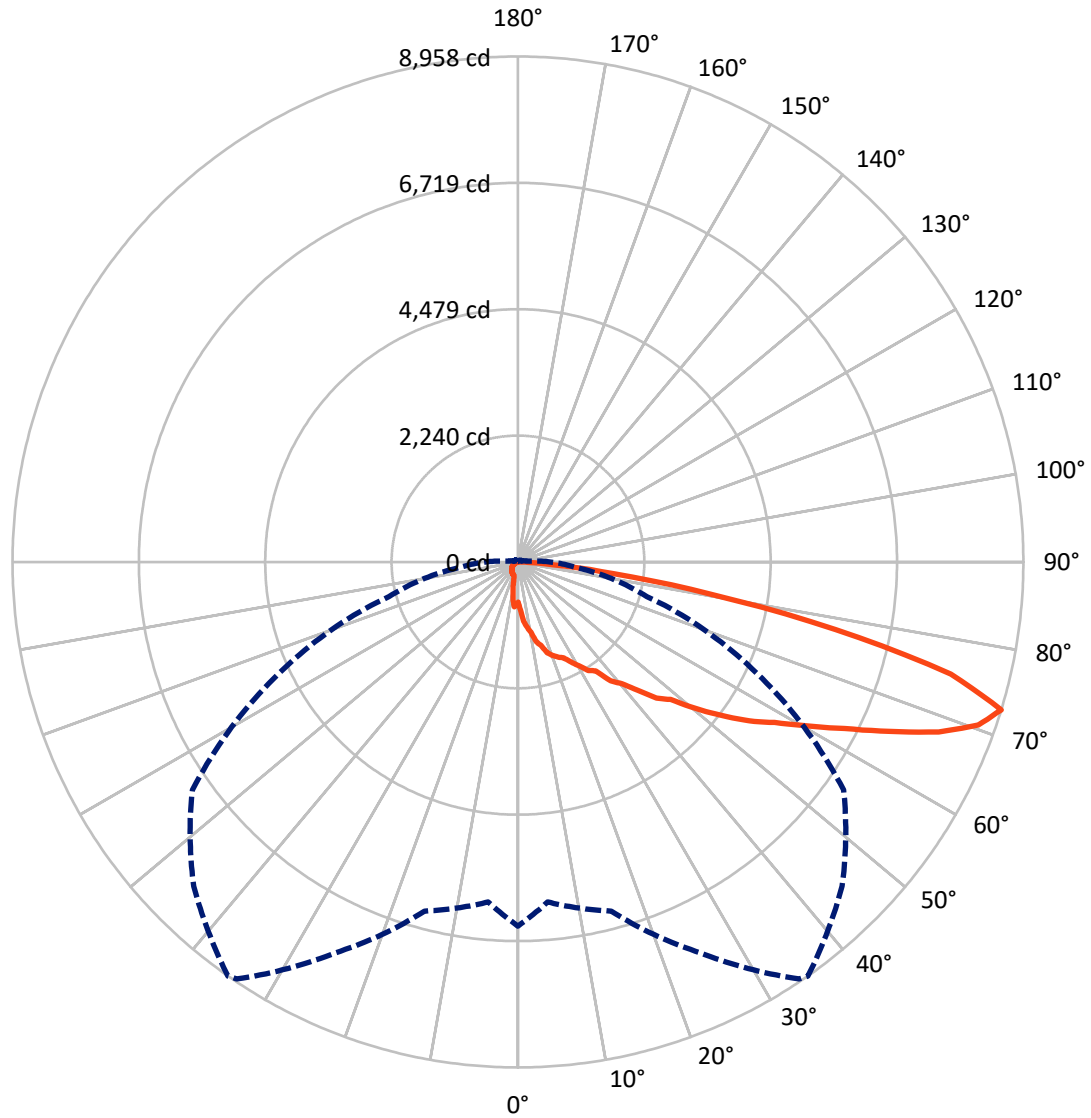
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.7 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 35-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical

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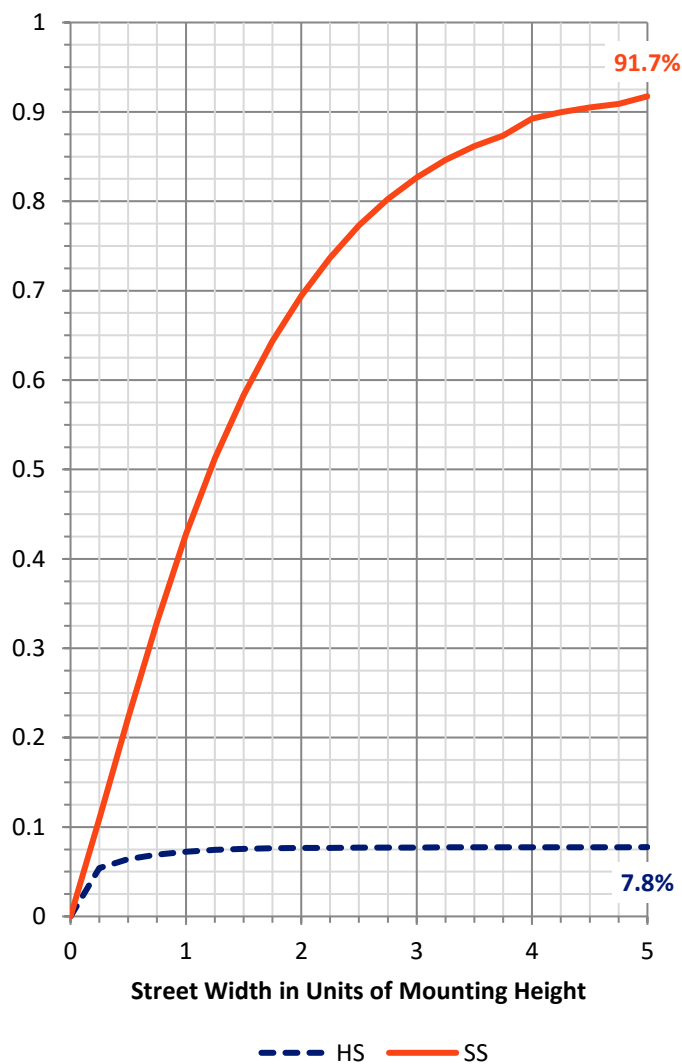
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	933.3	0.0	933.3
	% Fixture	7.8	0.0	7.8
Street Side	Lumens	11031.8	0.0	11031.8
	% Fixture	92.2	0.0	92.2
Total	Lumens	11965.0	0.0	11965.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	90.9	0.8
10°-20°	306.2	2.6
20°-30°	557.6	4.7
30°-40°	961.8	8.0
40°-50°	1709.8	14.3
50°-60°	2551.5	21.3
60°-70°	3259.8	27.2
70°-80°	2267.9	19.0
80°-90°	259.4	2.2
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°	11965.0	100.0
0°-180°	11965.0	100.0

Coefficient of Utilization



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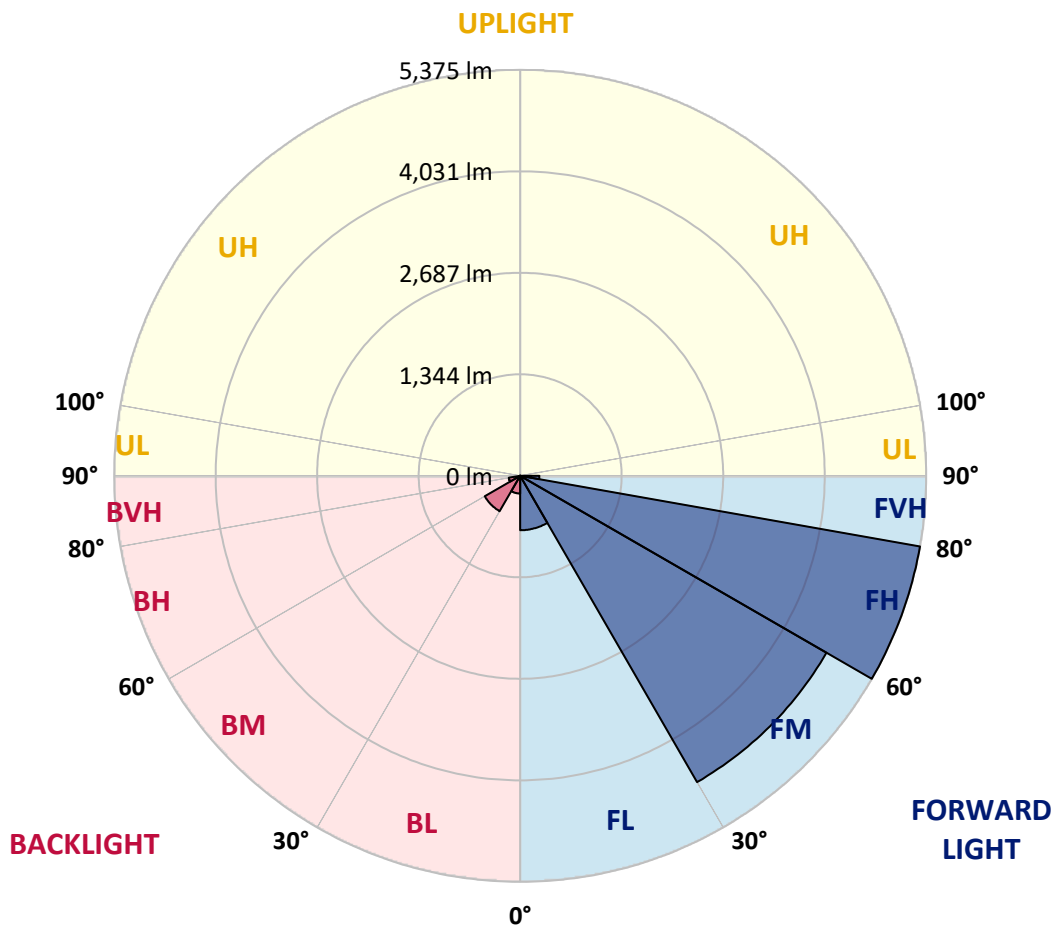
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	720.0	6.0			
FM (30°-60°)	4682.0	39.1			
FH (60°-80°)	5374.7	44.9			G3/7500
FVH (80°-90°)	255.1	2.1			G3/500
BL (0°-30°)	234.7	2.0	B1/500		
BM (30°-60°)	541.2	4.5	B1/1000		
BH (60°-80°)	153.0	1.3	B1/500		G1/500
BVH (80°-90°)	4.4	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 IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	34°	35°	45°	55°	65°	75°	85°
0°	712.8	712.8	712.8	712.8	712.8	712.8	712.8	712.8	712.8	712.8	712.8
2.5°	907.0	871.5	813.8	818.0	843.9	849.3	857.1	836.7	818.6	786.7	848.7
5°	1162.1	1110.9	1078.5	1068.2	1053.2	1054.4	1017.7	1030.9	1027.3	1050.8	1079.1
7.5°	1305.8	1277.5	1236.6	1225.2	1169.9	1163.9	1118.8	1179.5	1185.5	1177.1	1223.4
10°	1363.0	1325.7	1330.5	1287.8	1260.1	1267.3	1274.5	1279.3	1287.2	1295.0	1238.4
12.5°	1396.6	1403.3	1468.8	1424.3	1452.0	1452.0	1500.7	1449.0	1450.8	1394.2	1403.9
15°	1548.2	1584.9	1555.4	1554.8	1524.8	1532.6	1589.1	1548.2	1569.3	1552.4	1487.5
17.5°	1738.3	1745.5	1689.6	1664.9	1692.0	1692.6	1668.5	1666.7	1593.3	1717.2	1638.4
20°	1799.0	1839.9	1760.5	1664.3	1776.8	1771.4	1769.6	1741.3	1619.2	1791.2	1726.2
22.5°	1964.4	1906.1	1852.0	1788.8	1832.7	1832.7	1826.1	1764.1	1716.6	1784.6	1812.3
25°	2016.2	2023.4	1953.0	1932.6	1933.8	1879.6	1874.8	1848.3	1802.6	1918.7	1863.4
27.5°	2194.2	2191.2	2022.2	2079.3	2006.5	2007.1	1874.2	1933.8	1941.6	1925.3	1987.3
30°	2369.2	2417.9	2162.9	2235.1	2158.7	2135.9	2005.9	2058.9	2072.7	2054.1	2132.2
32.5°	2592.4	2664.0	2416.1	2345.2	2228.5	2293.4	2203.8	2078.7	2147.3	2313.9	2357.8
35°	2828.8	2863.6	2599.6	2500.4	2368.6	2368.0	2365.0	2375.2	2451.0	2638.7	2676.0
37.5°	3253.4	3171.0	2932.2	2704.9	2734.3	2668.8	2623.1	2671.2	2750.0	3059.1	3218.5
40°	3490.4	3430.8	3094.6	2959.9	2813.7	2837.8	2961.7	2956.3	3166.2	3489.8	3728.6
42.5°	3720.8	3664.2	3333.4	3224.5	3036.9	3102.4	3156.6	3225.1	3655.2	4177.3	4308.4
45°	3925.9	3759.8	3526.5	3530.7	3433.2	3441.1	3536.7	3599.9	4221.8	4757.1	4849.1
47.5°	4049.8	3913.2	3689.5	3685.3	3679.3	3642.6	4093.1	4150.8	4673.5	5309.3	5317.7
50°	4224.2	4053.4	3857.3	3860.9	3999.8	4077.4	4615.2	4609.1	5109.6	5770.0	5575.7
52.5°	4441.3	4232.6	4016.7	4177.3	4392.0	4518.3	4955.0	5133.0	5578.1	6059.3	5676.8
55°	4719.2	4458.2	4250.1	4455.8	4924.3	4973.0	5287.6	5663.5	6088.8	6354.6	5709.2
57.5°	5045.2	4733.6	4565.2	4896.6	5364.0	5365.2	5771.8	6228.9	6402.1	6474.9	5672.6
60°	5396.5	5033.2	4863.6	5161.9	5848.8	5898.1	6310.1	6541.1	6720.3	6535.7	5607.0
62.5°	5705.6	5304.4	5172.7	5523.4	6380.5	6497.2	6779.3	6746.2	6950.1	6612.1	5440.4
65°	6073.7	5655.7	5569.1	6087.0	7074.6	7235.2	7306.2	7110.1	7027.1	6553.1	5006.7
67.5°	6438.2	6047.3	6044.9	6711.9	7984.6	8040.0	7965.4	7623.2	6937.5	6033.4	4212.2
70°	6695.1	6275.2	6433.4	7396.4	8811.7	8656.5	8342.5	7865.5	6290.3	4624.2	2751.8
72.5°	6453.9	6049.1	6405.8	7640.0	8913.9	8958.4	8124.2	7045.7	4673.5	2365.0	996.1
75°	4904.5	4656.7	5561.9	6778.1	7914.3	7924.5	6781.1	4969.4	2301.3	642.4	275.5
77.5°	2470.3	2391.5	3520.5	4811.8	5774.2	5757.4	4659.1	2662.1	740.4	213.5	138.9
80°	1250.5	1187.3	1498.3	2596.0	3429.0	3454.3	2660.3	1192.1	373.5	116.1	96.2
82.5°	768.1	729.0	819.8	1174.7	1664.3	1704.6	1009.3	754.9	231.6	68.6	87.8
85°	148.6	156.4	471.0	588.2	664.6	649.0	298.9	621.3	69.8	40.9	63.8
87.5°	0.0	2.4	108.9	191.9	192.5	170.8	68.0	137.7	9.6	11.4	7.8
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°	712.8	712.8	712.8	712.8	712.8	712.8	712.8	712.8	712.8	712.8	712.8
2.5°	858.9	849.9	774.7	766.3	768.1	755.5	751.2	724.8	718.2	759.1	766.3
5°	1067.0	1006.9	937.1	911.8	872.7	806.6	797.0	780.1	761.5	768.7	763.3
7.5°	1194.5	1114.5	1040.0	907.0	797.0	700.7	685.1	656.2	627.3	627.9	646.6
10°	1215.0	1147.6	1044.8	883.0	757.3	637.0	532.3	456.5	422.2	391.6	400.6
12.5°	1333.5	1270.9	1081.5	875.8	699.5	511.9	374.7	300.7	268.3	257.4	256.2
15°	1428.5	1379.2	1144.0	853.5	571.4	360.3	268.3	246.6	240.6	250.8	247.8
17.5°	1569.9	1480.8	1137.4	761.5	435.5	273.7	247.2	244.2	251.4	257.4	259.2
20°	1631.8	1503.7	1092.3	617.1	326.0	250.8	241.2	235.2	248.4	266.5	262.8
22.5°	1694.4	1542.8	1039.4	505.2	262.2	240.0	234.6	229.8	240.0	257.4	261.6
25°	1722.6	1605.3	980.4	394.6	243.6	227.4	223.8	225.6	234.0	249.6	247.8
27.5°	1865.2	1612.6	867.9	311.6	235.8	218.3	218.3	222.5	222.5	243.6	241.8
30°	1954.2	1734.7	776.5	262.2	226.8	205.7	212.9	214.7	211.7	234.6	236.4
32.5°	2110.6	1768.4	687.5	240.6	212.3	203.9	202.7	203.9	206.3	228.6	229.2
35°	2351.2	1934.4	566.0	232.2	205.1	194.9	186.5	193.1	199.1	215.3	218.3
37.5°	2821.5	2104.6	461.3	225.6	201.5	186.5	183.5	182.2	193.1	211.7	217.7
40°	3202.3	2405.9	375.3	220.1	194.3	181.6	173.8	174.4	184.1	197.9	206.9
42.5°	3741.2	2623.7	318.2	211.7	184.1	171.4	162.4	167.8	172.0	186.5	192.5
45°	4191.1	2792.7	280.3	206.3	173.8	161.8	154.6	160.6	156.4	163.6	172.0
47.5°	4549.0	2940.0	252.0	193.1	167.2	156.4	147.4	145.6	138.3	140.1	148.0
50°	4745.7	2915.4	228.6	179.8	158.8	151.0	138.3	125.7	116.1	115.5	120.3
52.5°	4815.4	2783.6	209.3	168.4	148.6	138.9	124.5	107.1	97.4	94.4	98.6
55°	4834.7	2594.2	191.9	155.8	138.9	123.9	108.9	90.2	80.0	75.2	79.4
57.5°	4772.1	2302.5	175.0	143.8	127.5	109.5	93.2	74.0	64.4	58.3	62.0
60°	4617.6	1932.0	160.0	128.7	115.5	96.8	78.8	59.5	49.3	43.9	45.7
62.5°	4275.3	1514.5	143.8	114.9	102.9	84.8	66.2	46.9	37.3	32.5	33.1
65°	3754.4	1129.0	125.1	101.7	91.4	73.4	52.9	36.1	28.3	24.1	23.5
67.5°	2991.2	765.1	106.5	87.8	81.2	62.0	42.1	28.3	22.3	19.2	18.0
70°	1758.1	385.5	88.4	75.8	69.8	51.7	33.1	22.9	20.5	18.0	16.8
72.5°	579.8	166.6	69.2	62.6	57.7	41.5	25.9	21.1	19.8	17.4	16.2
75°	202.1	96.2	51.1	48.1	45.7	31.3	21.7	19.2	19.2	16.8	15.0
77.5°	132.3	74.6	37.9	34.9	34.3	22.9	18.6	18.0	16.8	13.8	11.4
80°	110.1	42.1	26.5	24.7	24.1	14.4	15.0	13.2	10.2	6.0	2.4
82.5°	101.7	25.3	13.8	15.0	13.8	5.4	8.4	7.2	5.4	2.4	0.0
85°	59.5	11.4	7.8	7.8	6.0	1.2	4.2	4.2	2.4	0.6	0.0
87.5°	6.6	5.4	4.2	4.2	3.0	0.0	1.8	1.2	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)