

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: P368021

Luminaire Tested: **MSA-SA3C-760-U-T2-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368021
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-9)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA3C-760-U-T2-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13731 lumens
Efficiency: N/A
Efficacy: 82.7 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B1 - U0 - G3

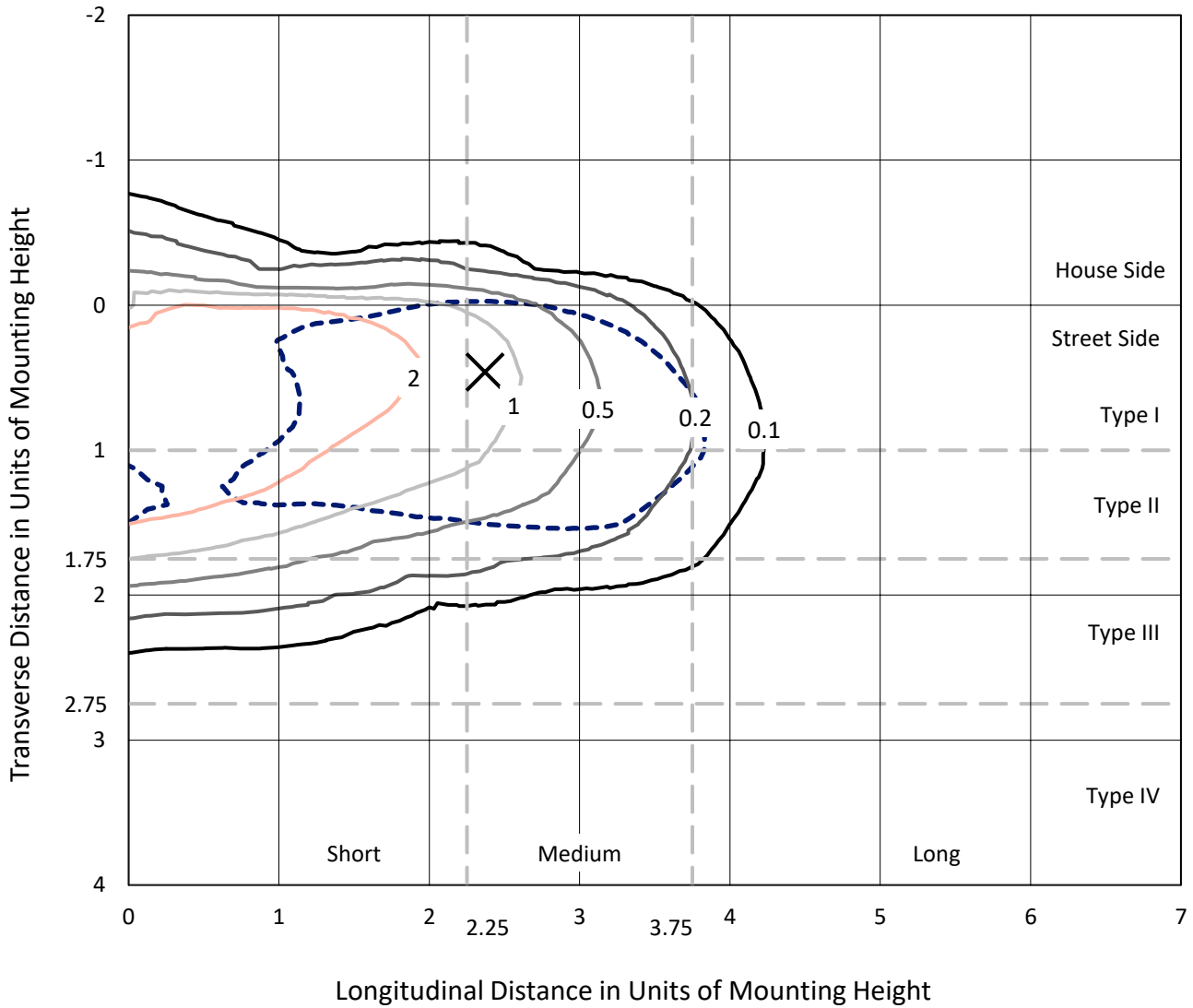
Input Watts (W): 166
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P368021
 CATALOG NUMBER: MSA-SA3C-760-U-T2-HSS

Iso-Footcandle Lines of Horizontal Illumination

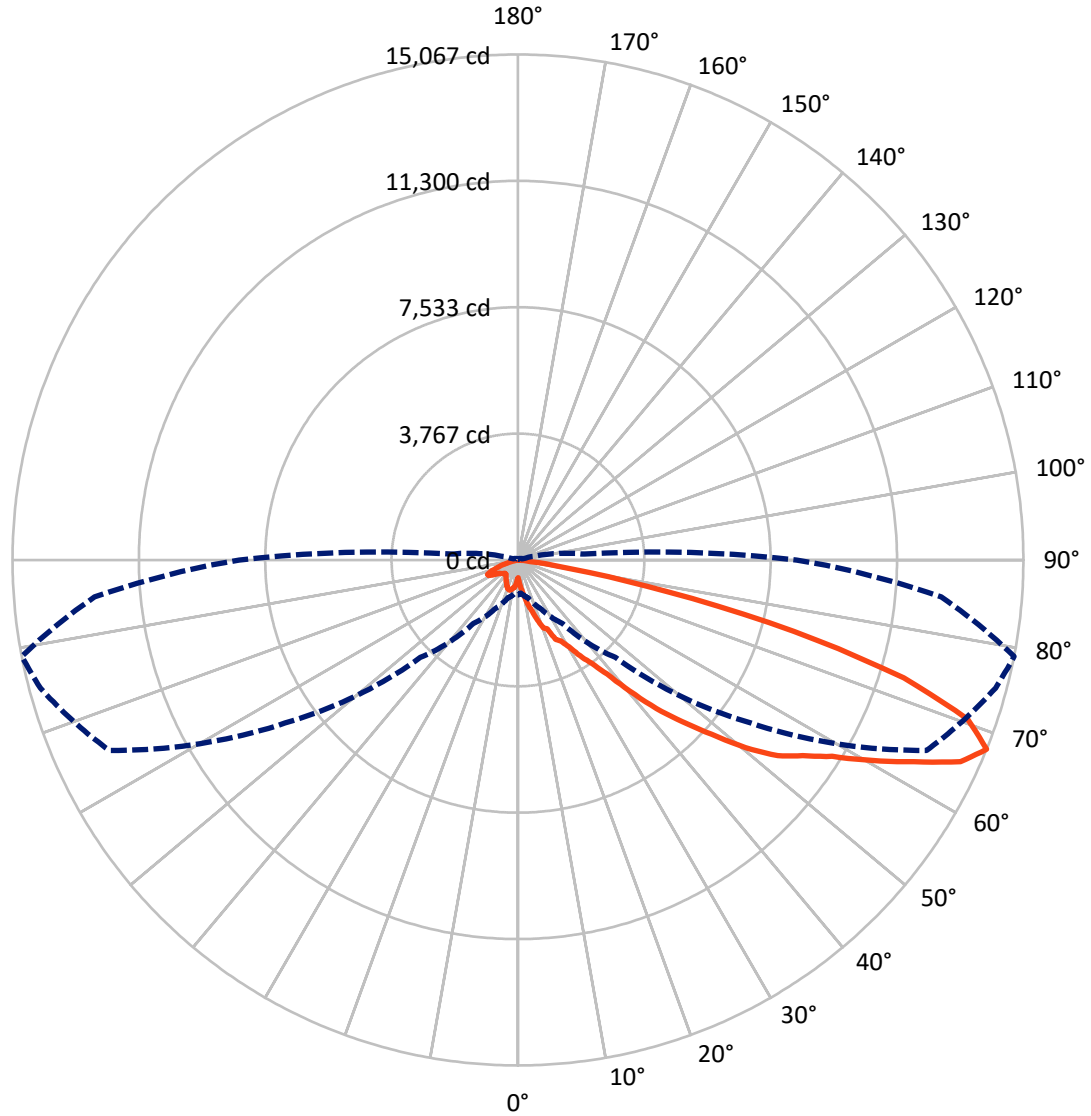
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.1 fc
 Type II - Medium - N/A

REPORT NUMBER: P368021
CATALOG NUMBER: MSA-SA3C-760-U-T2-HSS

Luminous Intensity Polar Plot



— Vertical Plane Through 79-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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 CATALOG NUMBER: MSA-SA3C-760-U-T2-HSS

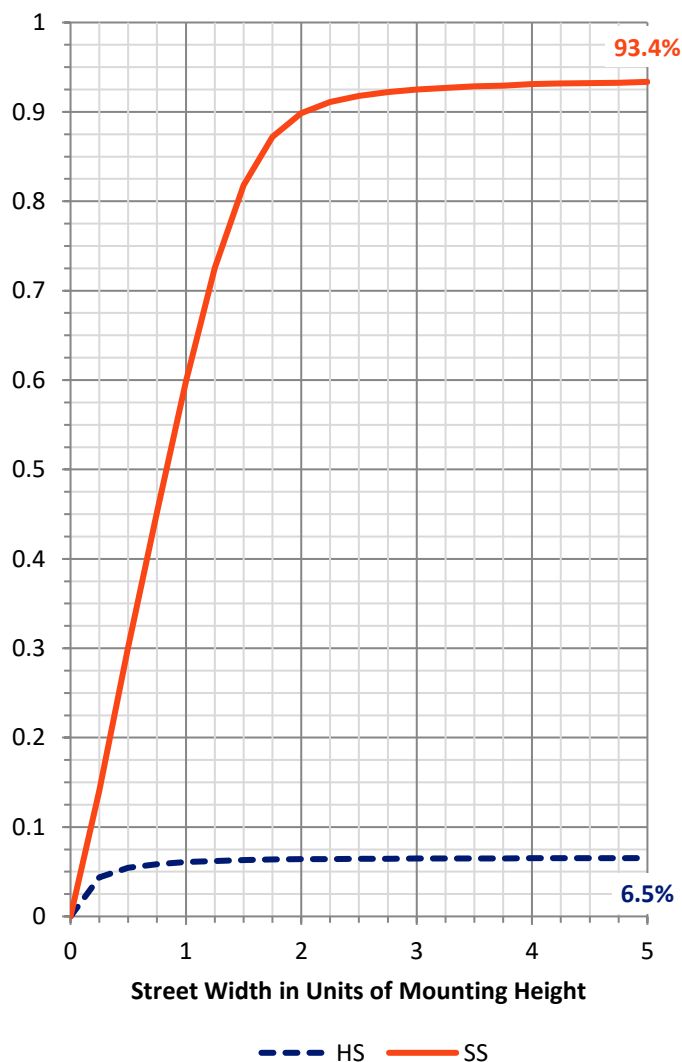
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	902.2	0.0	902.2
	% Fixture	6.6	0.0	6.6
Street Side	Lumens	12828.8	0.0	12828.8
	% Fixture	93.4	0.0	93.4
Total	Lumens	13731.0	0.0	13731.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	76.9	0.6
10°-20°	306.8	2.2
20°-30°	591.9	4.3
30°-40°	1162.7	8.5
40°-50°	2329.2	17.0
50°-60°	3723.0	27.1
60°-70°	3745.9	27.3
70°-80°	1689.9	12.3
80°-90°	104.6	0.8
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°	13731.0	100.0
0°-180°	13731.0	100.0

Coefficient of Utilization



REPORT NUMBER: P368021

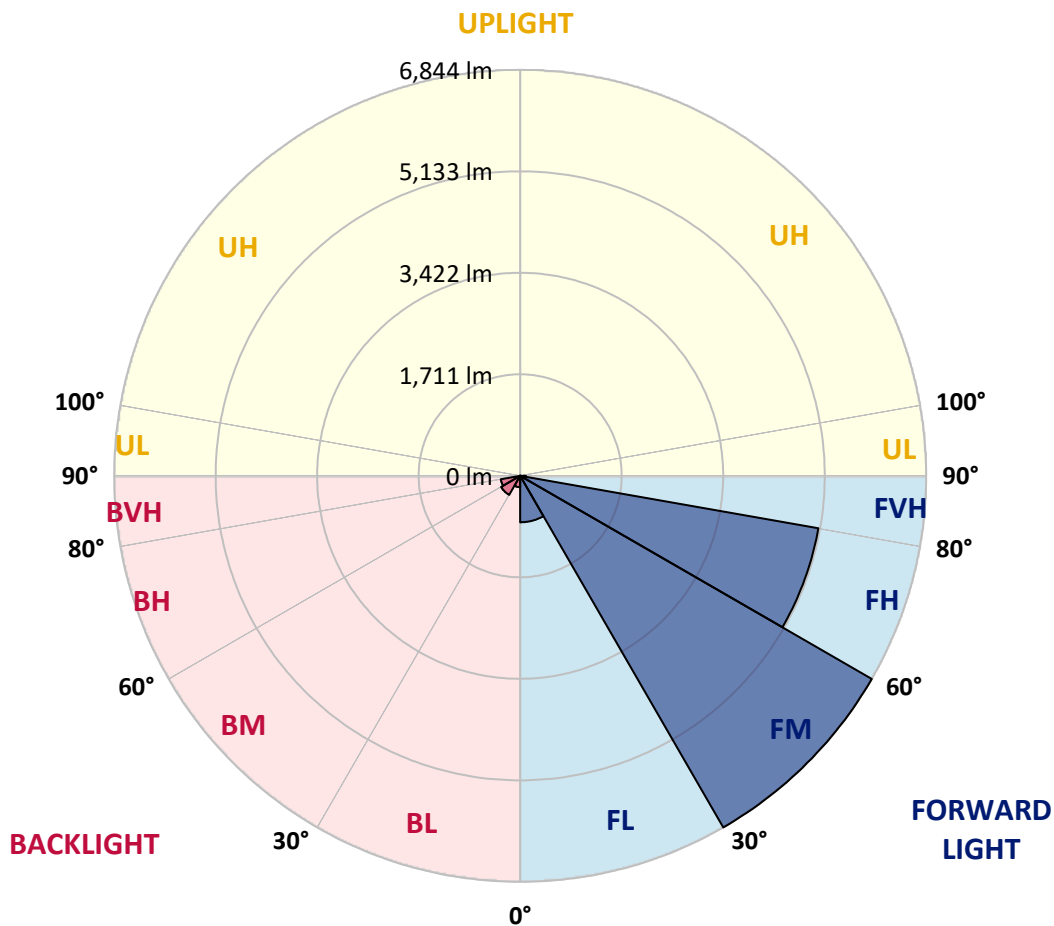
CATALOG NUMBER: MSA-SA3C-760-U-T2-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	783.9	5.7			
FM (30°-60°)	6843.7	49.8			
FH (60°-80°)	5103.3	37.2			G3/7500
FVH (80°-90°)	97.9	0.7			G1/100
BL (0°-30°)	191.8	1.4	B1/500		
BM (30°-60°)	371.2	2.7	B1/1000		
BH (60°-80°)	332.6	2.4	B1/500		G1/500
BVH (80°-90°)	6.7	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 II Medium





REPORT NUMBER: P368021
 CATALOG NUMBER: MSA-SA3C-760-U-T2-HSS

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	79°	85°
0°	529.1	529.1	529.1	529.1	529.1	529.1	529.1	529.1	529.1	529.1	529.1
2.5°	714.5	688.8	647.2	670.6	669.1	681.2	658.5	633.5	593.4	633.5	636.6
5°	1028.7	981.0	950.7	944.6	911.3	880.3	873.5	847.8	828.1	792.5	824.3
7.5°	1281.5	1259.5	1205.8	1199.7	1118.0	1072.6	1086.9	1075.6	1000.7	963.6	994.6
10°	1389.0	1351.1	1358.7	1351.1	1316.3	1329.2	1299.6	1265.6	1205.8	1144.5	1067.3
12.5°	1430.6	1424.5	1487.4	1479.8	1561.5	1659.9	1594.1	1537.3	1398.8	1383.7	1278.4
15°	1519.9	1557.8	1548.7	1580.5	1632.7	1800.0	1798.5	1812.1	1665.2	1586.5	1434.4
17.5°	1599.4	1627.4	1582.0	1618.3	1760.6	1862.0	1997.5	1944.5	1961.2	1881.0	1645.6
20°	1565.3	1597.1	1551.7	1529.7	1780.3	1972.5	2153.5	2114.9	2214.8	2164.8	1840.1
22.5°	1778.0	1718.2	1603.9	1532.8	1719.7	1970.3	2208.7	2369.9	2352.5	2229.9	2021.0
25°	2040.7	2004.3	1867.3	1741.7	1758.3	1956.7	2382.8	2619.7	2671.2	2619.0	2192.8
27.5°	2394.9	2386.6	2106.5	2052.0	1890.0	1896.9	2410.1	2934.6	2817.3	2735.5	2393.4
30°	2857.4	2791.5	2459.3	2388.1	2148.9	2031.6	2576.6	3206.3	3120.0	3008.8	2581.9
32.5°	3354.7	3364.5	2940.7	2706.0	2513.8	2374.5	2510.7	3333.5	3494.7	3404.7	2817.3
35°	3919.4	3963.3	3444.8	3169.2	2795.3	2590.2	2793.8	3724.1	4013.2	3776.3	3132.9
37.5°	4789.1	4787.6	4182.0	3633.2	3361.5	3139.0	3265.4	4079.1	4650.6	4317.5	3699.1
40°	5554.3	5387.8	4824.6	4194.1	3770.2	3709.7	3618.1	4565.0	5331.0	5130.4	4202.5
42.5°	6125.8	6008.5	5328.0	4837.5	4312.2	4119.9	4087.4	5277.3	6335.5	6054.6	4920.8
45°	6809.3	6424.8	5923.7	5481.7	4946.5	4890.5	4814.0	6000.2	7504.2	6871.4	5545.2
47.5°	7421.7	7059.8	6586.0	6018.3	5403.7	5865.4	5571.7	6635.2	8354.2	7760.0	6234.0
50°	7937.1	7552.6	7022.0	6589.8	6326.4	6639.8	6150.0	7158.2	9272.3	8790.9	6878.2
52.5°	8199.8	7764.5	7354.3	7087.1	7248.3	7177.9	6934.2	7791.8	10055.0	9694.7	7448.9
55°	7984.1	7558.7	7386.8	7519.3	8009.0	7805.4	7825.1	8773.5	10793.8	10297.2	7945.5
57.5°	7027.3	6639.0	6715.4	7078.0	8016.6	8549.5	8840.9	9727.3	11386.4	11048.1	8711.5
60°	5315.9	5003.3	5286.4	5929.8	7262.7	8401.1	9561.5	10681.0	12233.4	12127.5	9871.1
62.5°	3246.5	3076.9	3478.1	4280.4	5787.5	7673.7	9981.6	11952.6	13139.5	13252.3	11101.1
65°	1656.2	1579.7	1914.3	2619.7	3910.3	6303.7	9678.1	12742.8	14075.8	14492.1	12273.6
67.5°	1043.0	993.8	1172.5	1597.9	2307.1	4111.6	8473.8	13433.9	14737.3	15066.6	12664.9
70°	722.9	691.8	846.2	1096.8	1455.6	2214.8	6291.6	12789.0	14212.8	14227.9	11718.0
72.5°	458.7	434.5	585.1	812.2	1074.1	1143.7	3606.8	10035.3	12166.1	12026.0	9489.6
75°	297.5	285.4	371.7	594.9	825.0	705.5	1782.6	6771.5	8723.6	8504.1	6302.9
77.5°	213.5	205.9	249.0	397.4	587.4	493.5	799.3	4035.9	5001.8	4521.9	3059.5
80°	128.7	127.9	180.1	249.0	417.8	348.2	369.4	1832.5	1939.2	1581.2	934.8
82.5°	64.3	66.6	100.7	160.5	268.7	227.8	168.8	610.1	520.8	383.8	189.2
85°	15.1	18.9	53.0	110.5	134.7	90.8	80.2	159.7	143.1	108.2	55.3
87.5°	0.0	0.0	16.7	26.5	36.3	15.1	27.2	30.3	38.6	30.3	11.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P368021
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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	529.1	529.1	529.1	529.1	529.1	529.1	529.1	529.1	529.1	529.1	529.1
2.5°	637.3	628.2	573.0	558.6	557.1	541.2	545.0	529.8	530.6	564.7	564.7
5°	812.2	759.2	706.2	659.3	627.5	582.1	565.4	558.6	552.6	566.2	574.5
7.5°	953.7	875.8	780.4	678.2	583.6	518.5	509.4	492.8	486.7	500.3	510.9
10°	1016.6	919.7	788.7	639.6	551.0	498.1	454.2	430.7	426.1	425.4	429.2
12.5°	1149.8	1029.4	797.8	625.2	529.1	470.8	420.9	381.5	345.2	348.9	345.2
15°	1256.5	1114.2	797.8	590.4	476.1	417.8	330.0	310.3	305.0	313.4	306.6
17.5°	1417.7	1198.2	757.7	528.3	430.7	324.7	291.4	289.9	300.5	312.6	305.0
20°	1514.6	1209.6	690.3	457.2	353.5	281.6	269.5	257.4	272.5	282.3	278.5
22.5°	1615.3	1210.3	622.9	419.3	284.6	256.6	236.9	227.1	229.3	238.4	239.9
25°	1658.4	1180.8	560.1	369.4	258.1	229.3	208.9	198.3	194.5	199.1	197.6
27.5°	1775.7	1124.0	492.0	314.9	245.2	203.6	184.7	171.8	160.5	168.0	169.6
30°	1792.4	1105.9	454.9	280.1	228.6	180.1	163.5	149.9	141.5	152.1	152.1
32.5°	1845.4	1006.0	436.0	265.7	211.2	166.5	143.8	134.0	132.5	139.3	140.0
35°	1927.1	962.1	408.0	254.3	195.3	150.6	129.4	124.9	123.4	128.7	128.7
37.5°	2204.2	907.6	376.9	244.5	181.7	142.3	125.6	118.1	118.8	123.4	126.4
40°	2388.1	914.4	330.8	232.4	165.8	134.7	118.1	112.8	112.0	114.3	116.6
42.5°	2729.5	919.7	310.3	219.5	153.7	125.6	110.5	106.7	103.7	106.0	108.2
45°	3111.0	947.7	299.7	208.9	146.8	120.4	103.7	101.4	94.6	96.1	99.2
47.5°	3478.8	1049.9	286.9	193.8	140.8	117.3	96.9	91.6	87.0	86.3	89.3
50°	3896.7	1149.0	272.5	177.1	134.7	112.8	90.1	81.7	78.7	78.7	81.0
52.5°	4270.6	1243.6	258.9	165.8	130.2	104.5	84.0	75.7	73.4	73.4	76.4
55°	4664.2	1342.8	246.8	155.2	124.1	96.1	78.7	71.2	70.4	68.9	71.2
57.5°	5359.0	1559.3	231.6	146.1	115.8	89.3	74.2	66.6	65.1	62.8	65.1
60°	6371.0	1891.6	211.9	137.0	106.0	84.8	70.4	61.3	59.0	55.3	56.0
62.5°	7360.3	2160.3	189.2	125.6	96.9	80.2	64.3	55.3	51.5	46.9	47.7
65°	8208.1	2266.2	165.0	112.0	87.8	69.6	56.0	48.4	43.1	37.1	36.3
67.5°	8308.0	2001.3	141.5	99.2	78.7	59.0	47.7	43.1	34.8	29.5	28.0
70°	7476.9	1491.1	118.1	87.8	68.1	50.0	40.9	37.8	32.5	28.0	25.7
72.5°	5954.0	1100.6	99.2	78.0	59.8	42.4	34.8	35.6	32.5	27.2	24.2
75°	3937.5	629.8	81.0	65.1	50.0	34.1	31.8	31.8	31.0	25.7	22.7
77.5°	1894.6	271.7	62.1	51.5	40.1	25.7	28.8	28.8	29.5	23.5	18.9
80°	537.4	81.7	38.6	34.8	29.5	17.4	22.7	22.0	19.7	13.6	8.3
82.5°	96.1	31.8	17.4	18.2	16.7	6.8	12.9	12.1	9.8	5.3	0.8
85°	26.5	12.1	9.8	10.6	8.3	2.3	5.3	6.8	5.3	3.0	0.0
87.5°	6.8	5.3	6.8	7.6	6.1	0.8	2.3	0.8	2.3	0.8	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)