

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: P596623

Luminaire Tested: **MSA-SA2C-827-U-T3-HSS**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596623
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-11)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA2C-827-U-T3-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) 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: 6697 lumens
Efficiency: N/A
Efficacy: 59.3 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G2

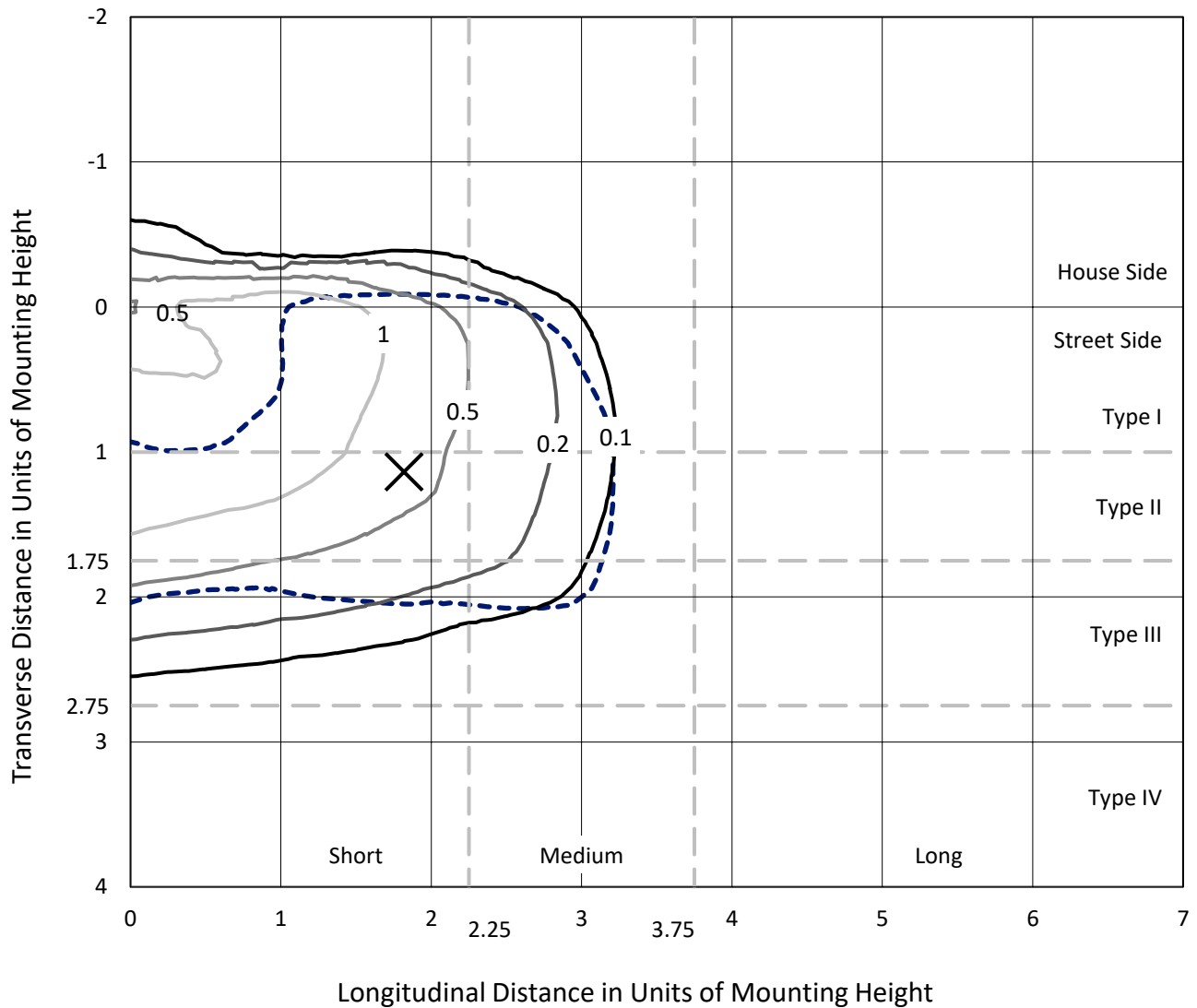
Input Watts (W): 113
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

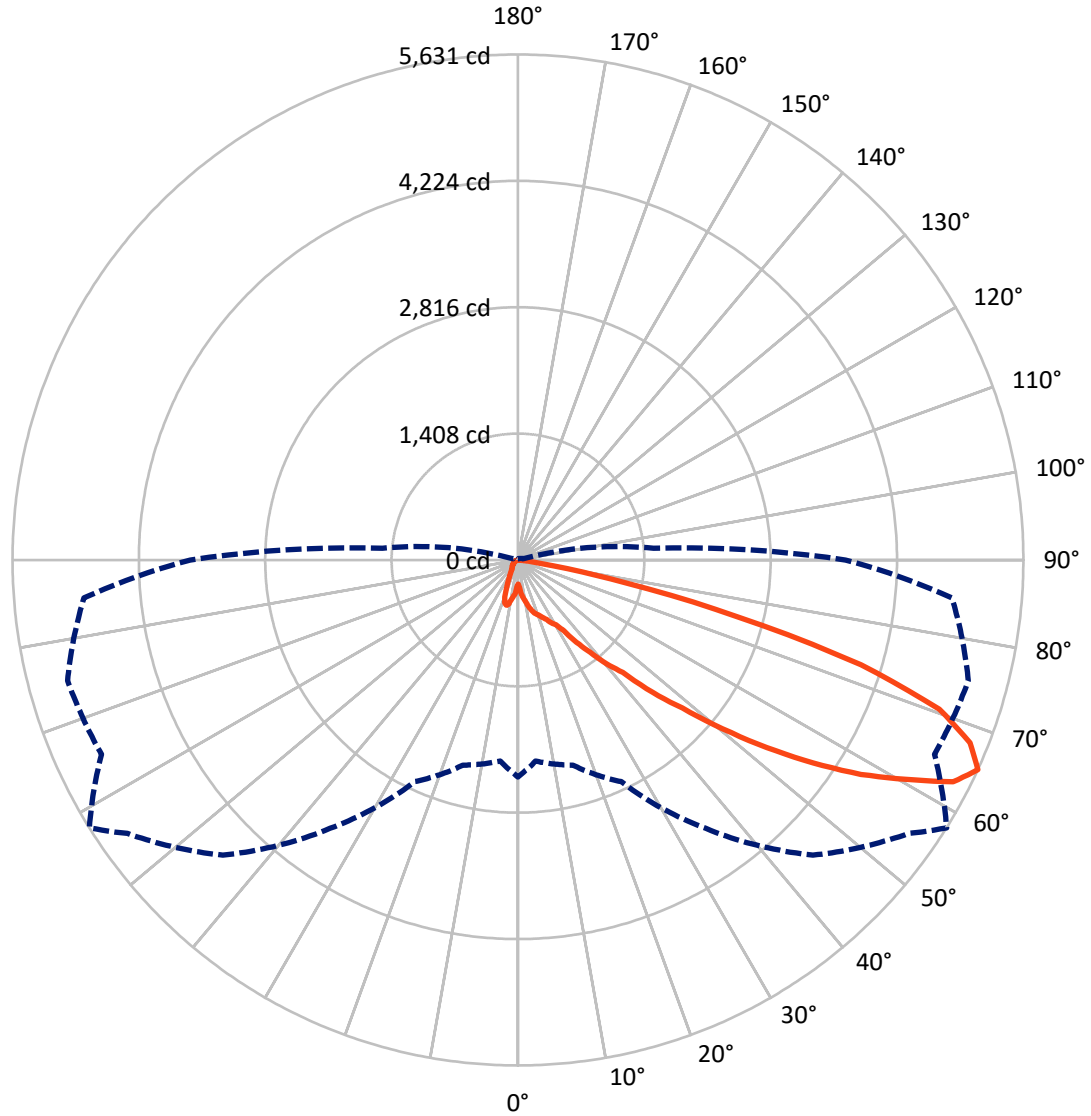
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.7 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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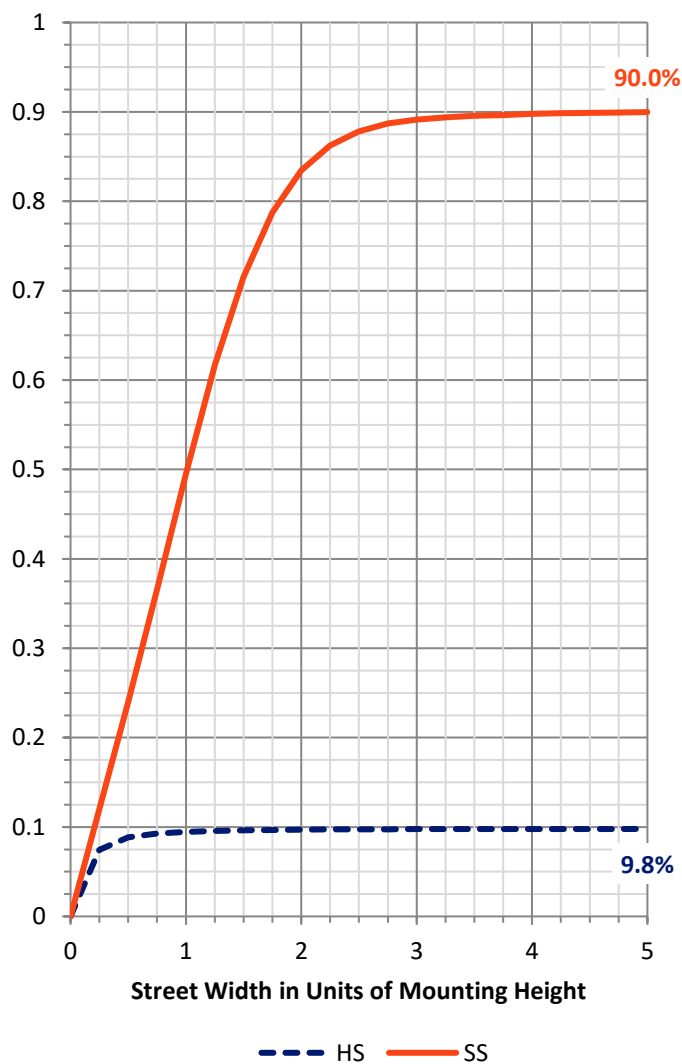
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	660.8	0.0	660.8
	% Fixture	9.9	0.0	9.9
Street Side	Lumens	6036.2	0.0	6036.2
	% Fixture	90.1	0.0	90.1
Total	Lumens	6697.0	0.0	6697.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	37.7	0.6
10°-20°	137.5	2.1
20°-30°	266.1	4.0
30°-40°	530.9	7.9
40°-50°	1085.3	16.2
50°-60°	1925.1	28.7
60°-70°	2029.5	30.3
70°-80°	658.0	9.8
80°-90°	26.9	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°	6697.0	100.0
0°-180°	6697.0	100.0

Coefficient of Utilization



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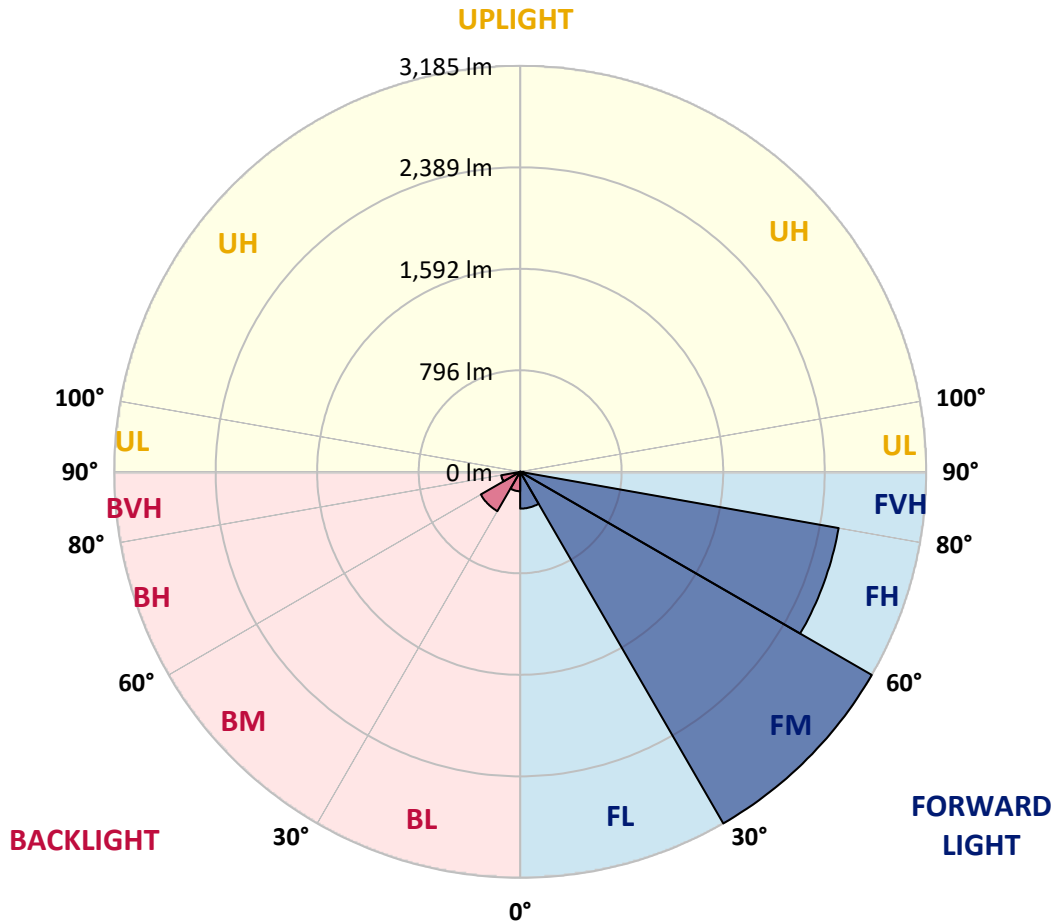
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	288.9	4.3			
FM (30°-60°)	3184.8	47.6			
FH (60°-80°)	2536.7	37.9			G2/5000
FVH (80°-90°)	25.8	0.4			G1/100
BL (0°-30°)	152.3	2.3	B1/500		
BM (30°-60°)	356.5	5.3	B1/1000		
BH (60°-80°)	150.8	2.3	B1/500		G1/500
BVH (80°-90°)	1.1	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-G2

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	268.1	268.1	268.1	268.1	268.1	268.1	268.1	268.1	268.1	268.1	268.1
2.5°	327.3	317.5	302.0	304.7	307.7	313.7	308.8	304.3	299.4	293.0	317.5
5°	395.2	378.9	377.4	374.0	371.4	371.0	377.1	375.2	377.8	389.9	402.3
7.5°	420.0	413.3	400.4	405.7	397.4	391.0	417.8	426.5	443.0	448.7	481.1
10°	417.4	407.6	412.9	415.5	421.2	444.6	461.5	471.0	485.3	516.2	509.8
12.5°	429.5	438.1	443.8	444.2	473.2	516.2	528.3	536.2	561.8	573.9	605.6
15°	469.8	484.1	475.1	478.9	488.3	540.7	569.0	586.3	622.5	661.7	669.7
17.5°	527.5	536.6	517.7	504.1	530.1	558.8	610.1	628.2	651.2	742.8	759.8
20°	600.3	615.7	575.0	521.1	555.4	589.3	645.2	653.8	678.3	797.9	824.6
22.5°	770.3	747.3	685.1	601.0	590.9	605.9	659.1	693.0	734.5	828.8	891.0
25°	938.1	930.2	838.6	744.7	676.8	642.9	713.4	732.3	800.1	902.3	936.6
27.5°	1124.8	1140.6	987.5	930.6	797.5	686.6	747.3	794.5	874.8	929.1	1011.7
30°	1371.0	1345.7	1166.3	1109.3	957.4	806.9	835.2	838.2	956.2	1017.3	1095.7
32.5°	1564.1	1580.3	1354.8	1267.3	1145.9	992.1	901.2	940.4	1024.9	1161.0	1235.3
35°	1772.9	1771.4	1551.6	1434.0	1275.2	1143.3	1096.9	1125.5	1231.5	1385.7	1405.3
37.5°	2085.2	2058.4	1799.0	1626.6	1491.7	1378.9	1343.5	1305.4	1414.7	1561.8	1635.3
40°	2379.6	2287.3	2047.4	1843.1	1670.4	1624.4	1496.2	1519.6	1552.0	1746.2	1949.4
42.5°	2677.1	2619.8	2299.3	2128.1	1915.9	1806.5	1722.8	1711.9	1866.1	2096.1	2306.1
45°	3069.7	2894.3	2637.9	2487.5	2241.6	2131.9	2064.4	2104.8	2243.5	2579.5	2719.4
47.5°	3399.2	3237.8	3017.6	2789.1	2531.2	2654.5	2527.8	2464.1	2654.5	3001.8	3187.7
50°	3682.4	3502.5	3279.7	3110.4	3068.5	3186.9	2930.5	2953.9	3077.6	3485.6	3590.4
52.5°	3888.3	3699.0	3504.4	3422.6	3594.2	3653.7	3525.2	3473.5	3585.9	3898.1	3949.0
55°	4043.2	3849.4	3697.5	3810.2	4142.0	4122.4	4167.7	3991.2	4098.7	4328.3	4304.2
57.5°	4052.7	3823.0	3734.0	3915.4	4370.9	4674.4	4806.8	4506.6	4567.7	4664.6	4610.3
60°	3756.3	3527.8	3520.6	3778.2	4437.3	4817.3	5106.9	4960.6	4878.8	4950.8	4847.9
62.5°	3165.8	3005.9	3080.6	3365.3	4190.3	4738.5	5266.8	5442.9	5124.3	5140.5	4994.2
65°	2417.3	2249.6	2366.4	2725.0	3650.3	4650.3	5312.1	5631.4	5119.8	5194.4	4853.9
67.5°	1601.0	1503.7	1636.1	2031.2	2902.2	4105.1	5288.7	5433.5	4957.2	4983.6	4333.2
70°	826.5	802.8	909.9	1221.7	1951.3	3153.7	5059.0	4979.9	4627.3	4293.2	3342.3
72.5°	264.7	265.8	368.8	558.1	1052.0	1920.0	3888.6	3997.2	3702.8	3140.6	2040.7
75°	117.3	115.4	154.2	234.2	438.5	860.8	2415.8	2533.1	2305.4	1727.7	857.8
77.5°	84.5	81.8	98.8	136.9	217.2	291.8	1132.7	1222.4	1045.2	598.8	196.4
80°	59.6	59.2	71.6	96.2	135.7	129.7	357.8	401.2	321.3	145.2	57.7
82.5°	33.6	34.7	49.8	67.9	82.6	64.9	100.7	110.9	108.2	77.3	25.3
85°	16.2	18.1	32.4	49.0	43.4	25.3	35.8	38.8	45.2	44.9	12.8
87.5°	0.0	0.0	13.2	22.2	11.7	3.8	10.9	12.4	12.1	14.3	3.0
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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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	268.1	268.1	268.1	268.1	268.1	268.1	268.1	268.1	268.1	268.1	268.1
2.5°	322.4	320.1	291.5	293.7	300.1	297.5	299.8	294.5	288.5	313.0	312.6
5°	407.6	390.6	381.6	373.3	374.8	357.8	367.6	372.2	371.4	385.4	389.1
7.5°	482.3	459.6	441.5	424.2	397.8	374.0	388.8	398.2	404.6	428.7	438.1
10°	517.3	498.9	491.7	457.8	438.9	424.2	406.5	393.7	398.9	392.5	398.9
12.5°	594.3	581.8	554.3	520.0	497.3	467.2	401.2	346.1	312.2	312.6	310.3
15°	664.4	663.6	622.5	565.6	500.0	414.0	311.1	241.7	209.6	200.6	197.6
17.5°	756.0	744.7	669.7	585.6	467.6	320.5	211.9	165.5	162.5	167.8	165.5
20°	814.5	797.9	693.0	556.5	385.4	216.8	159.9	146.7	155.7	163.3	161.4
22.5°	872.9	848.0	710.8	521.1	274.1	158.7	144.4	142.2	147.8	157.2	158.7
25°	904.9	900.0	745.5	454.7	187.8	139.1	139.1	138.4	140.3	147.1	145.9
27.5°	998.1	931.7	719.4	354.8	145.2	127.8	129.7	129.0	122.2	129.0	129.3
30°	1056.2	1025.6	721.3	252.6	127.8	113.1	118.0	112.0	101.8	107.5	106.3
32.5°	1173.0	1096.9	715.7	170.4	116.5	107.8	100.3	91.6	84.1	86.3	84.5
35°	1309.2	1251.1	639.1	136.9	108.6	95.4	83.3	74.7	66.7	68.6	68.2
37.5°	1579.9	1395.5	575.8	123.3	103.3	87.5	73.5	61.5	57.3	58.4	59.6
40°	1830.6	1636.5	457.8	117.3	94.3	78.1	60.7	52.0	49.4	50.1	51.3
42.5°	2205.4	1828.0	345.8	111.2	85.2	66.0	50.5	44.9	42.2	43.7	44.5
45°	2568.2	1990.9	258.3	106.0	77.7	56.9	42.6	38.8	35.8	37.0	38.5
47.5°	2930.5	2171.9	192.7	97.7	69.4	49.0	36.6	33.9	32.1	32.4	34.3
50°	3254.8	2256.3	151.6	87.5	62.6	42.6	33.2	30.5	29.8	30.2	31.7
52.5°	3493.1	2257.1	127.8	78.4	56.2	37.7	31.3	28.3	27.9	28.7	30.2
55°	3708.4	2196.8	110.9	70.5	50.5	34.3	29.8	27.1	27.1	27.9	29.4
57.5°	3851.3	2085.9	96.2	62.2	45.6	32.4	28.7	26.0	25.6	25.3	26.4
60°	3921.1	1934.7	81.4	54.7	41.1	31.3	27.9	23.0	22.6	21.9	22.6
62.5°	3877.0	1745.4	68.2	47.1	36.6	29.8	24.5	20.0	19.2	17.7	18.9
65°	3651.5	1515.4	57.7	40.3	31.7	25.3	20.7	17.0	15.1	13.2	12.8
67.5°	3190.3	1231.1	48.3	34.7	27.1	20.7	17.0	15.1	11.7	10.2	9.8
70°	2391.0	840.5	40.0	29.8	22.6	17.7	14.3	13.6	10.9	9.8	9.0
72.5°	1402.7	453.6	33.6	26.0	19.2	14.7	11.7	12.4	10.9	9.0	8.3
75°	560.3	150.8	26.8	20.7	15.5	10.6	9.8	10.2	9.8	8.3	6.8
77.5°	127.8	47.5	20.7	16.2	12.1	6.8	7.9	8.7	8.7	6.8	4.9
80°	40.0	18.9	12.1	10.2	8.7	3.8	5.7	6.0	4.1	1.9	0.0
82.5°	12.8	5.3	4.1	4.1	3.8	0.8	1.1	0.8	0.0	0.0	0.0
85°	4.9	3.4	2.6	2.6	1.5	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	1.9	1.5	1.1	1.5	0.8	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)