

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: P596997

Luminaire Tested: **MSA-SA2D-835-U-T3-HSS**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596997
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-SA2D-835-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: 8211 lumens
Efficiency: N/A
Efficacy: 63.7 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G2

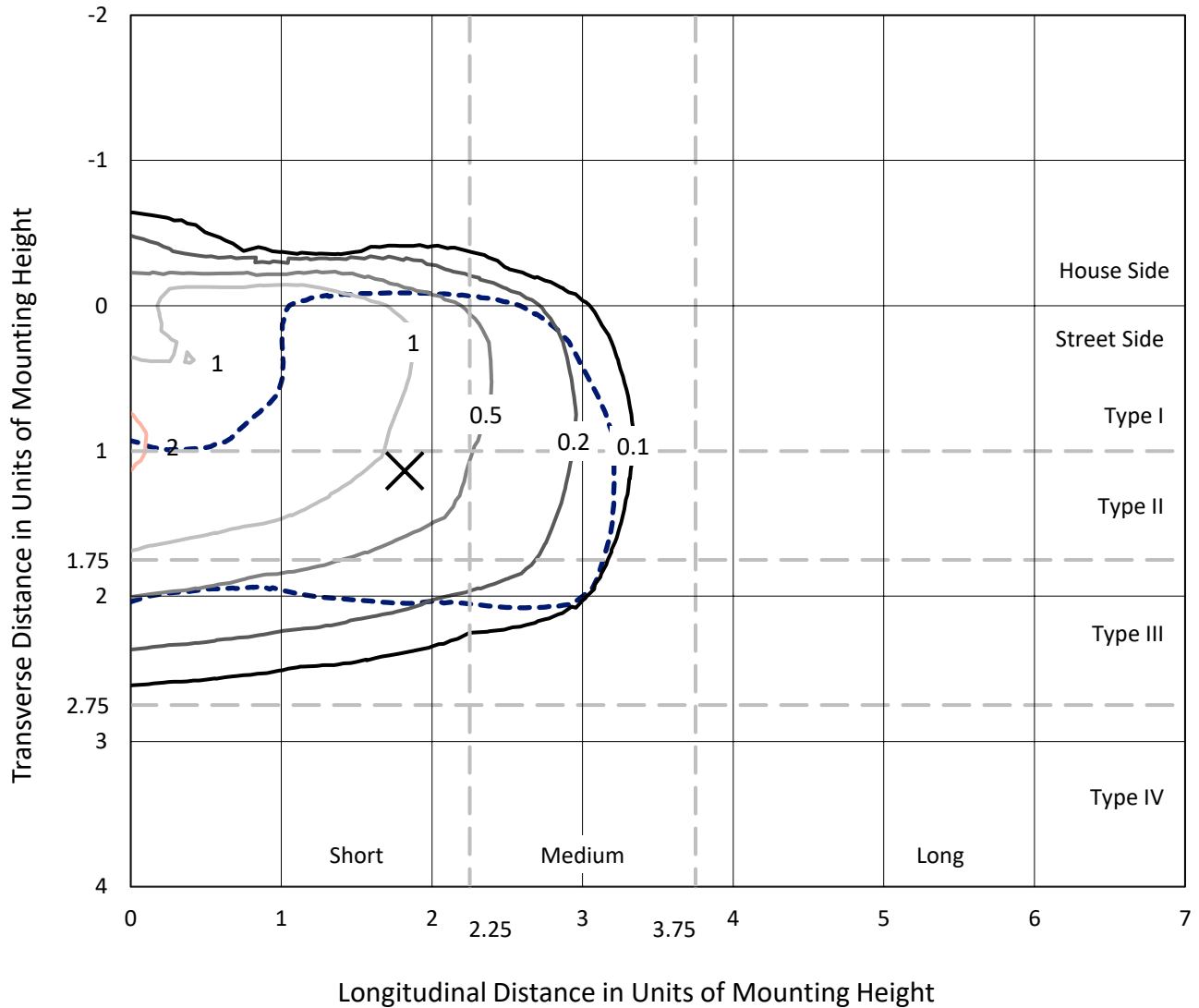
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

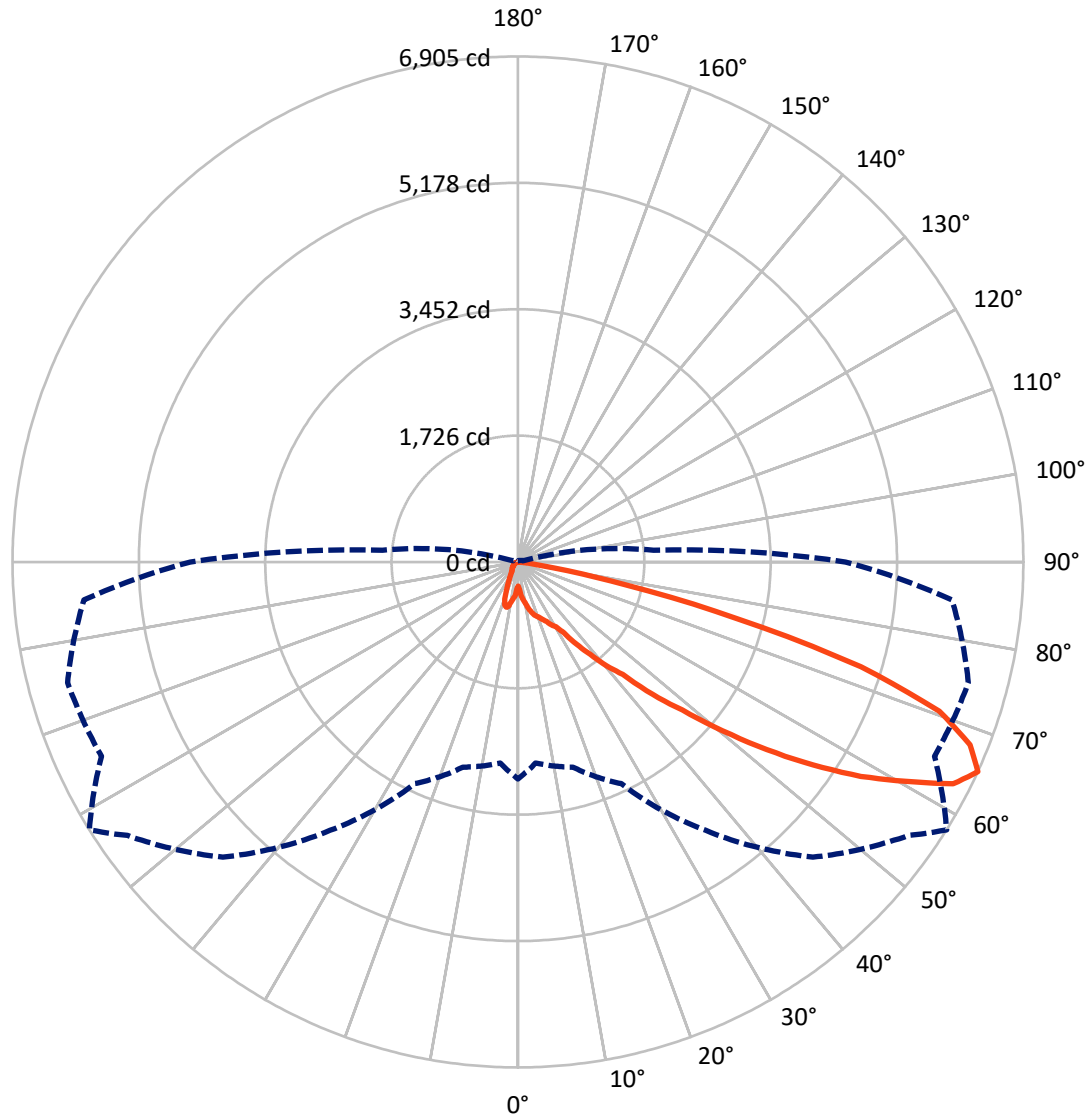
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.1 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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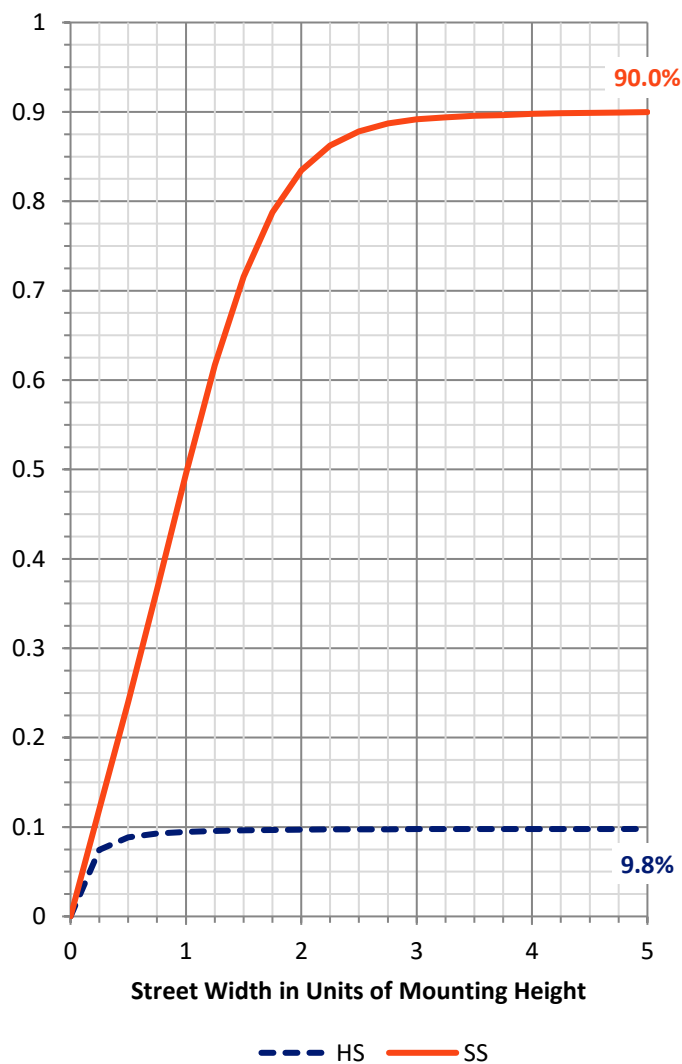
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	810.2	0.0	810.2
	% Fixture	9.9	0.0	9.9
Street Side	Lumens	7400.8	0.0	7400.8
	% Fixture	90.1	0.0	90.1
Total	Lumens	8211.0	0.0	8211.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	46.2	0.6
10°-20°	168.5	2.1
20°-30°	326.3	4.0
30°-40°	650.9	7.9
40°-50°	1330.7	16.2
50°-60°	2360.3	28.7
60°-70°	2488.4	30.3
70°-80°	806.7	9.8
80°-90°	33.0	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°	8211.0	100.0
0°-180°	8211.0	100.0

Coefficient of Utilization



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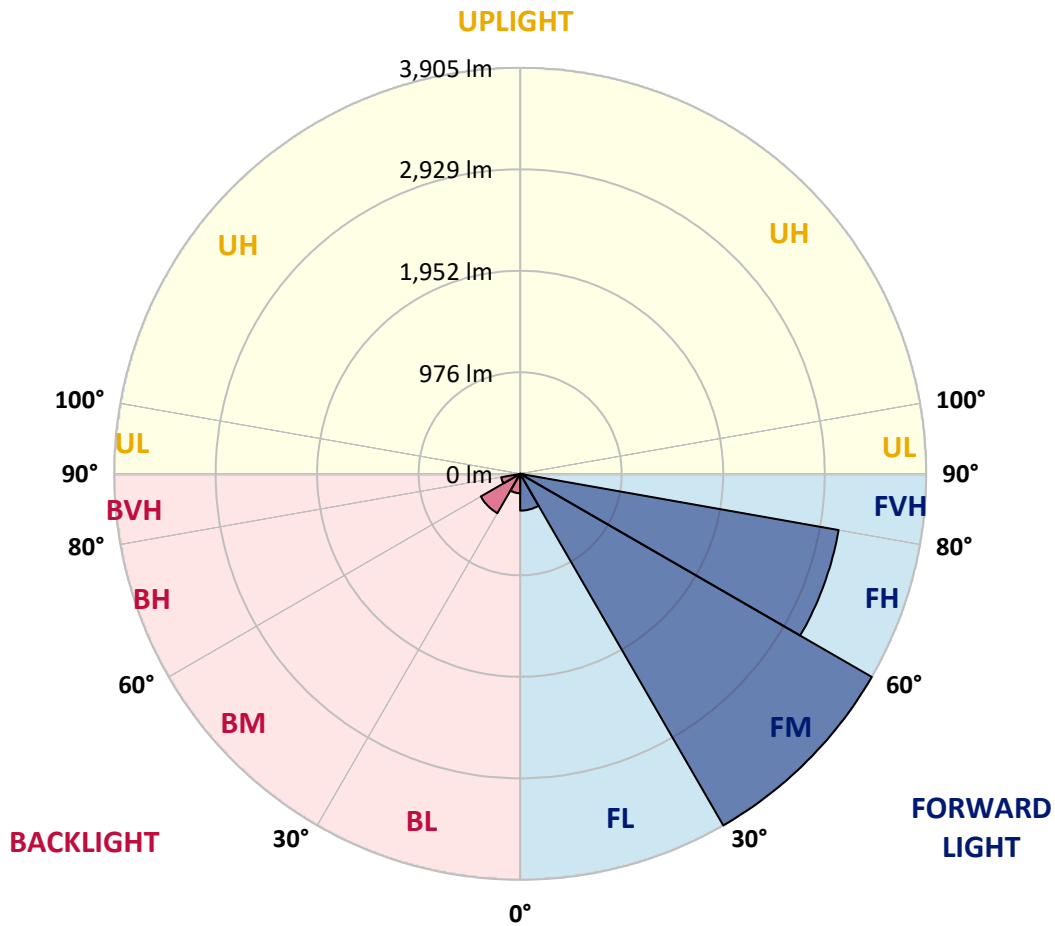
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	354.2	4.3			
FM (30°-60°)	3904.8	47.6			
FH (60°-80°)	3110.2	37.9			G2/5000
FVH (80°-90°)	31.6	0.4			G1/100
BL (0°-30°)	186.8	2.3	B1/500		
BM (30°-60°)	437.1	5.3	B1/1000		
BH (60°-80°)	184.9	2.3	B1/500		G1/500
BVH (80°-90°)	1.4	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-G2

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	328.7	328.7	328.7	328.7	328.7	328.7	328.7	328.7	328.7	328.7	328.7
2.5°	401.3	389.3	370.3	373.5	377.2	384.6	378.6	373.1	367.1	359.2	389.3
5°	484.5	464.6	462.8	458.6	455.4	454.9	462.3	460.0	463.2	478.0	493.3
7.5°	515.0	506.7	491.0	497.4	487.3	479.4	512.2	522.9	543.2	550.1	589.9
10°	511.8	499.8	506.2	509.5	516.4	545.1	565.9	577.4	595.0	632.9	625.0
12.5°	526.6	537.2	544.1	544.6	580.2	632.9	647.7	657.4	688.8	703.6	742.5
15°	576.0	593.6	582.5	587.1	598.7	662.9	697.6	718.9	763.3	811.3	821.1
17.5°	646.8	657.9	634.7	618.1	650.0	685.1	748.0	770.2	798.4	910.7	931.5
20°	736.0	754.9	705.0	638.9	681.0	722.6	791.0	801.6	831.7	978.2	1011.1
22.5°	944.5	916.3	840.0	736.9	724.4	742.9	808.1	849.7	900.6	1016.1	1092.4
25°	1150.2	1140.5	1028.2	913.1	829.8	788.2	874.7	897.8	981.0	1106.3	1148.4
27.5°	1379.1	1398.5	1210.8	1141.0	977.8	841.9	916.3	974.1	1072.5	1139.1	1240.4
30°	1680.9	1650.0	1429.9	1360.1	1173.8	989.3	1024.0	1027.7	1172.4	1247.3	1343.5
32.5°	1917.6	1937.5	1661.1	1553.8	1404.9	1216.3	1104.9	1153.0	1256.5	1423.4	1514.5
35°	2173.8	2171.9	1902.4	1758.1	1563.5	1401.7	1344.8	1380.0	1509.9	1699.0	1723.0
37.5°	2556.5	2523.7	2205.7	1994.4	1828.9	1690.7	1647.2	1600.5	1734.6	1914.9	2005.0
40°	2917.6	2804.3	2510.3	2259.7	2048.0	1991.6	1834.4	1863.1	1902.8	2140.9	2390.1
42.5°	3282.4	3212.1	2819.1	2609.3	2349.0	2214.9	2112.3	2098.9	2287.9	2570.0	2827.5
45°	3763.6	3548.7	3234.3	3049.8	2748.4	2613.9	2531.1	2580.6	2750.7	3162.6	3334.1
47.5°	4167.7	3969.8	3699.8	3419.7	3103.5	3254.6	3099.3	3021.2	3254.6	3680.4	3908.3
50°	4514.9	4294.4	4021.1	3813.6	3762.2	3907.4	3593.0	3621.7	3773.3	4273.5	4402.1
52.5°	4767.3	4535.2	4296.7	4196.3	4406.7	4479.7	4322.1	4258.8	4396.5	4779.3	4841.7
55°	4957.3	4719.7	4533.4	4671.6	5078.4	5054.4	5109.9	4893.5	5025.3	5306.8	5277.2
57.5°	4968.9	4687.3	4578.2	4800.6	5359.0	5731.2	5893.5	5525.5	5600.4	5719.2	5652.6
60°	4605.5	4325.3	4316.5	4632.3	5440.4	5906.4	6261.5	6082.1	5981.8	6070.1	5943.9
62.5°	3881.5	3685.5	3777.0	4126.1	5137.6	5809.8	6457.5	6673.4	6282.7	6302.6	6123.2
65°	2963.8	2758.1	2901.4	3341.1	4475.6	5701.6	6513.0	6904.5	6277.2	6368.7	5951.3
67.5°	1962.9	1843.7	2005.9	2490.4	3558.4	5033.1	6484.3	6661.8	6077.9	6110.3	5312.8
70°	1013.4	984.2	1115.5	1497.9	2392.4	3866.7	6202.7	6105.7	5673.4	5263.8	4097.9
72.5°	324.5	325.9	452.1	684.2	1289.8	2354.1	4767.8	4900.9	4539.8	3850.5	2502.0
75°	143.8	141.5	189.1	287.1	537.7	1055.4	2962.0	3105.8	2826.5	2118.3	1051.7
77.5°	103.6	100.3	121.1	167.8	266.3	357.8	1388.8	1498.8	1281.5	734.1	240.9
80°	73.0	72.6	87.8	117.9	166.4	159.0	438.7	491.9	393.9	178.0	70.7
82.5°	41.1	42.5	61.0	83.2	101.2	79.5	123.4	135.9	132.7	94.8	31.0
85°	19.9	22.2	39.8	60.1	53.2	31.0	43.9	47.6	55.5	55.0	15.7
87.5°	0.0	0.0	16.2	27.3	14.3	4.6	13.4	15.3	14.8	17.6	3.7
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°	328.7	328.7	328.7	328.7	328.7	328.7	328.7	328.7	328.7	328.7	328.7
2.5°	395.3	392.5	357.4	360.1	368.0	364.8	367.5	361.1	353.7	383.7	383.3
5°	499.8	478.9	467.9	457.7	459.5	438.7	450.7	456.3	455.4	472.5	477.1
7.5°	591.3	563.6	541.4	520.1	487.7	458.6	476.6	488.2	496.1	525.6	537.2
10°	634.3	611.6	602.8	561.2	538.1	520.1	498.4	482.6	489.1	481.3	489.1
12.5°	728.6	713.3	679.6	637.5	609.8	572.8	491.9	424.4	382.8	383.3	380.5
15°	814.6	813.7	763.3	693.5	613.0	507.6	381.4	296.3	257.0	245.9	242.2
17.5°	926.9	913.1	821.1	718.0	573.3	393.0	259.8	203.0	199.3	205.7	203.0
20°	998.6	978.2	849.7	682.4	472.5	265.8	196.0	179.8	190.9	200.2	197.9
22.5°	1070.2	1039.7	871.4	638.9	336.1	194.6	177.1	174.3	181.2	192.8	194.6
25°	1109.5	1103.5	914.0	557.5	230.2	170.6	170.6	169.7	172.0	180.3	178.9
27.5°	1223.7	1142.4	882.1	435.0	178.0	156.7	159.0	158.1	149.8	158.1	158.6
30°	1294.9	1257.5	884.4	309.7	156.7	138.7	144.7	137.3	124.8	131.8	130.4
32.5°	1438.2	1344.8	877.5	209.0	142.9	132.2	123.0	112.3	103.1	105.9	103.6
35°	1605.1	1533.9	783.6	167.8	133.1	117.0	102.2	91.5	81.8	84.1	83.7
37.5°	1937.1	1711.0	705.9	151.2	126.7	107.3	90.1	75.4	70.3	71.7	73.0
40°	2244.5	2006.4	561.2	143.8	115.6	95.7	74.4	63.8	60.6	61.5	62.9
42.5°	2704.0	2241.3	423.9	136.4	104.5	80.9	61.9	55.0	51.8	53.6	54.6
45°	3148.8	2441.0	316.7	129.9	95.2	69.8	52.2	47.6	43.9	45.3	47.2
47.5°	3593.0	2662.9	236.2	119.7	85.1	60.1	44.8	41.6	39.3	39.8	42.1
50°	3990.6	2766.4	185.8	107.3	76.7	52.2	40.7	37.4	36.5	37.0	38.8
52.5°	4282.8	2767.4	156.7	96.2	68.9	46.2	38.4	34.7	34.2	35.1	37.0
55°	4546.8	2693.4	135.9	86.5	61.9	42.1	36.5	33.3	33.3	34.2	36.1
57.5°	4722.0	2557.5	117.9	76.3	55.9	39.8	35.1	31.9	31.4	31.0	32.4
60°	4807.5	2372.1	99.9	67.0	50.4	38.4	34.2	28.2	27.7	26.8	27.7
62.5°	4753.4	2140.0	83.7	57.8	44.8	36.5	30.0	24.5	23.6	21.7	23.1
65°	4477.0	1858.0	70.7	49.5	38.8	31.0	25.4	20.8	18.5	16.2	15.7
67.5°	3911.6	1509.4	59.2	42.5	33.3	25.4	20.8	18.5	14.3	12.5	12.0
70°	2931.5	1030.5	49.0	36.5	27.7	21.7	17.6	16.6	13.4	12.0	11.1
72.5°	1719.8	556.2	41.1	31.9	23.6	18.0	14.3	15.3	13.4	11.1	10.2
75°	687.0	184.9	32.8	25.4	19.0	12.9	12.0	12.5	12.0	10.2	8.3
77.5°	156.7	58.3	25.4	19.9	14.8	8.3	9.7	10.6	10.6	8.3	6.0
80°	49.0	23.1	14.8	12.5	10.6	4.6	6.9	7.4	5.1	2.3	0.0
82.5°	15.7	6.5	5.1	5.1	4.6	0.9	1.4	0.9	0.0	0.0	0.0
85°	6.0	4.2	3.2	3.2	1.8	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	2.3	1.8	1.4	1.8	0.9	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)