

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: P596579

Luminaire Tested: **MSA-SA2A-827-U-T3-HSS**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596579
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-SA2A-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: 4315 lumens
Efficiency: N/A
Efficacy: 65.4 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G1

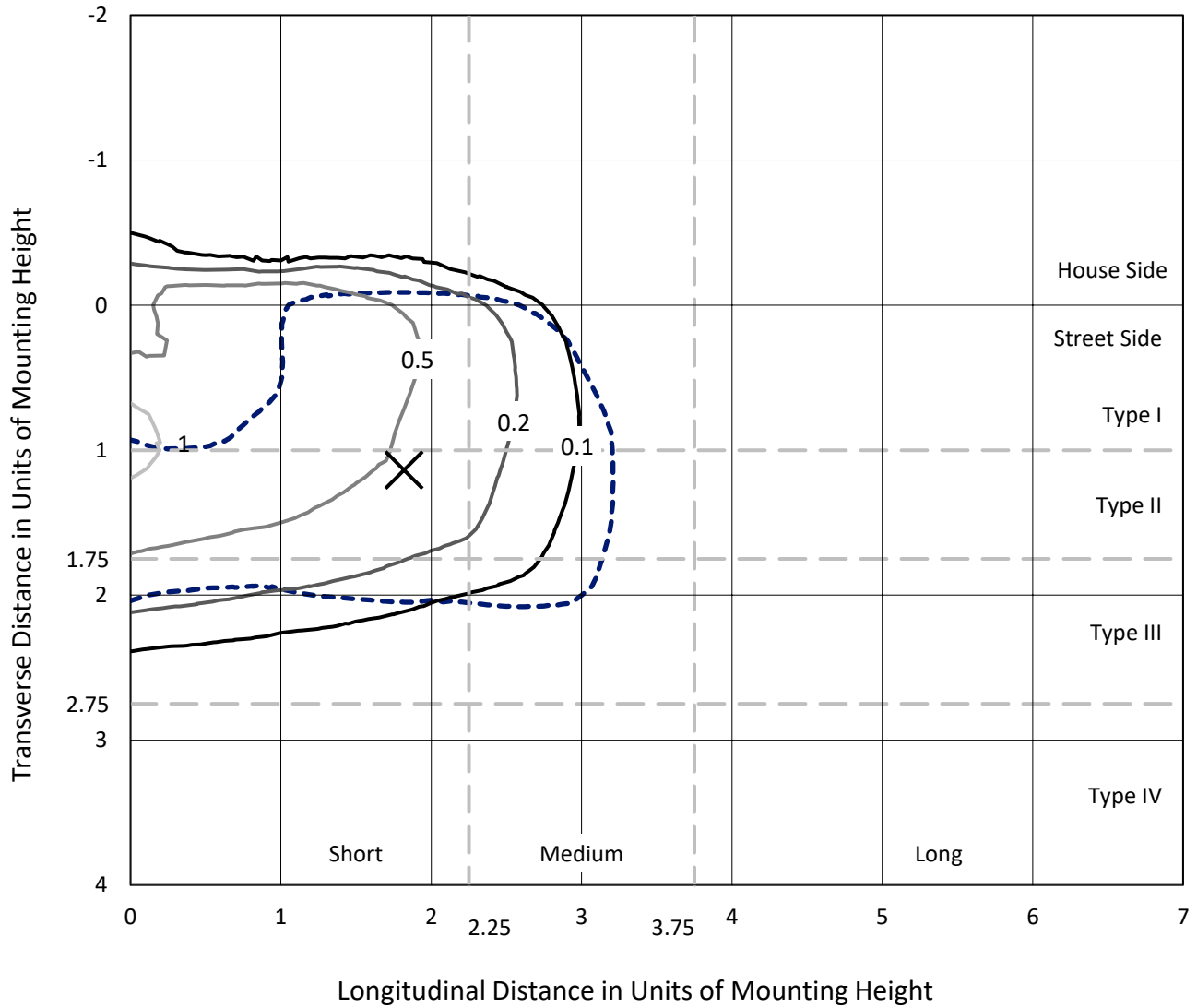
Input Watts (W): 66
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

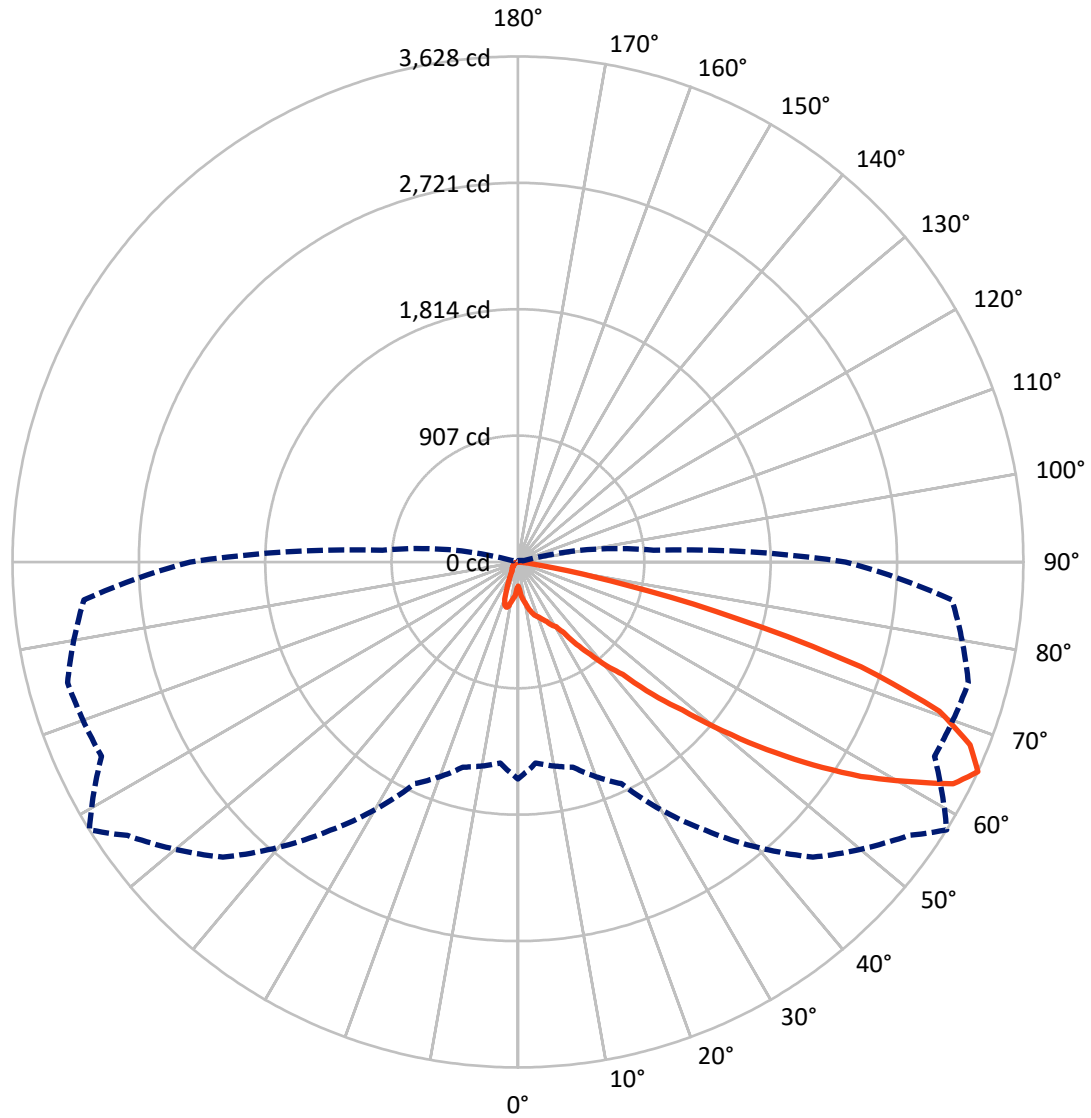
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.1 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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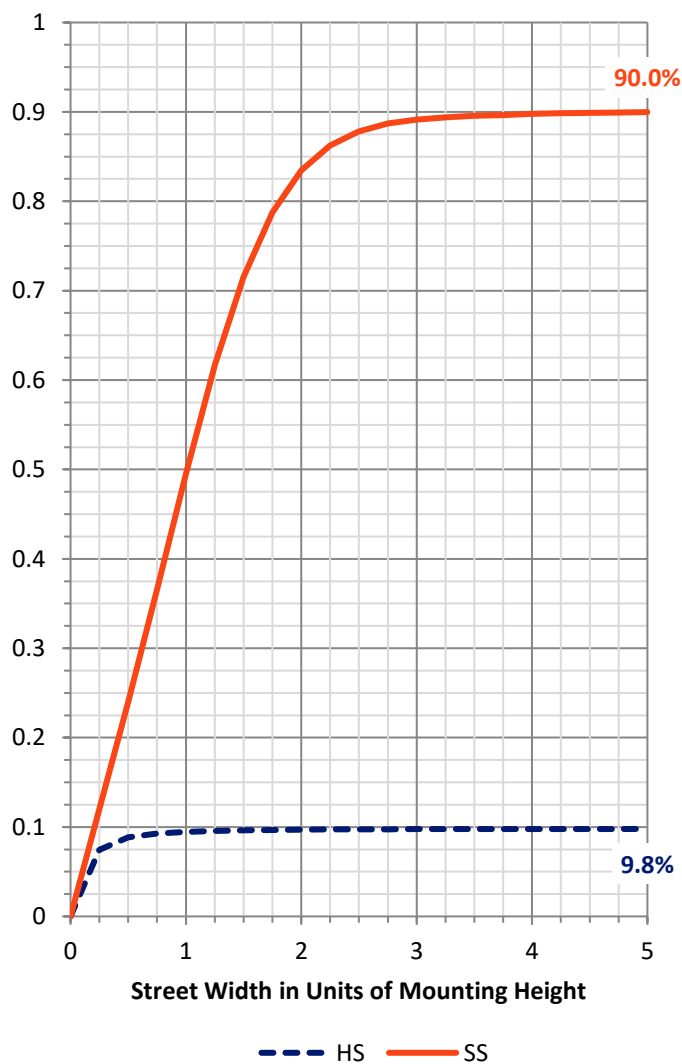
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	425.8	0.0	425.8
	% Fixture	9.9	0.0	9.9
Street Side	Lumens	3889.2	0.0	3889.2
	% Fixture	90.1	0.0	90.1
Total	Lumens	4315.0	0.0	4315.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	24.3	0.6
10°-20°	88.6	2.1
20°-30°	171.4	4.0
30°-40°	342.1	7.9
40°-50°	699.3	16.2
50°-60°	1240.4	28.7
60°-70°	1307.7	30.3
70°-80°	424.0	9.8
80°-90°	17.3	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°	4315.0	100.0
0°-180°	4315.0	100.0

Coefficient of Utilization



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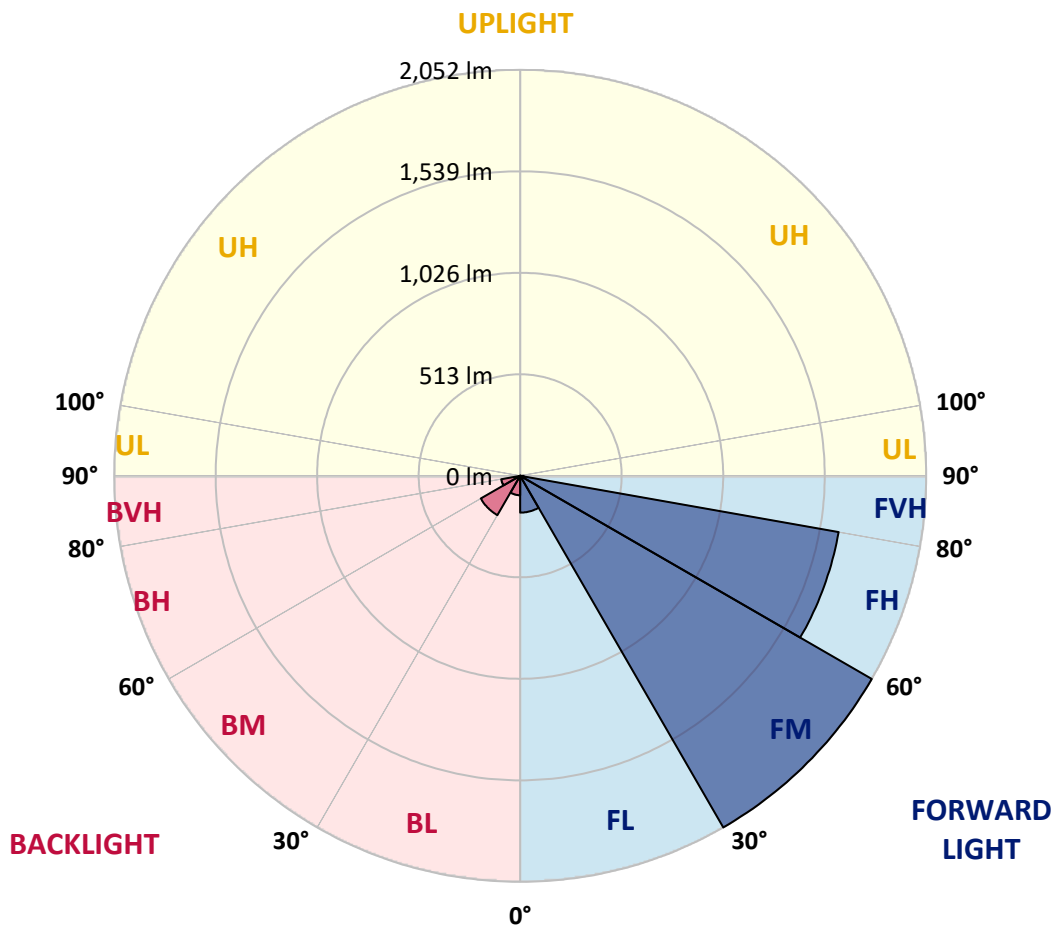
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	186.2	4.3			
FM (30°-60°)	2052.0	47.6			
FH (60°-80°)	1634.5	37.9			G1/1800
FVH (80°-90°)	16.6	0.4			G1/100
BL (0°-30°)	98.1	2.3	B0/110		
BM (30°-60°)	229.7	5.3	B1/1000		
BH (60°-80°)	97.2	2.3	B0/110		G0/110
BVH (80°-90°)	0.7	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-G1

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	172.7	172.7	172.7	172.7	172.7	172.7	172.7	172.7	172.7	172.7	172.7
2.5°	210.9	204.6	194.6	196.3	198.2	202.1	199.0	196.1	192.9	188.8	204.6
5°	254.6	244.2	243.2	241.0	239.3	239.1	242.9	241.7	243.4	251.2	259.2
7.5°	270.6	266.3	258.0	261.4	256.1	251.9	269.2	274.8	285.5	289.1	310.0
10°	268.9	262.6	266.0	267.7	271.4	286.4	297.4	303.4	312.7	332.6	328.5
12.5°	276.7	282.3	285.9	286.2	304.9	332.6	340.4	345.5	362.0	369.8	390.2
15°	302.7	311.9	306.1	308.5	314.6	348.4	366.6	377.8	401.1	426.4	431.5
17.5°	339.9	345.7	333.6	324.8	341.6	360.0	393.1	404.8	419.6	478.6	489.5
20°	386.8	396.7	370.5	335.8	357.9	379.7	415.7	421.3	437.1	514.1	531.3
22.5°	496.3	481.5	441.4	387.3	380.7	390.4	424.7	446.5	473.3	534.0	574.1
25°	604.5	599.4	540.3	479.8	436.1	414.2	459.7	471.8	515.5	581.4	603.5
27.5°	724.7	734.9	636.3	599.6	513.8	442.4	481.5	511.9	563.6	598.6	651.8
30°	883.4	867.1	751.4	714.8	616.8	519.9	538.1	540.1	616.1	655.5	706.0
32.5°	1007.7	1018.2	872.9	816.5	738.3	639.2	580.6	605.9	660.3	748.0	795.9
35°	1142.3	1141.4	999.7	923.9	821.7	736.6	706.7	725.2	793.5	892.8	905.5
37.5°	1343.5	1326.3	1159.1	1048.1	961.1	888.5	865.6	841.1	911.5	1006.3	1053.7
40°	1533.2	1473.7	1319.2	1187.5	1076.3	1046.6	964.0	979.1	1000.0	1125.1	1256.0
42.5°	1724.9	1688.0	1481.5	1371.2	1234.4	1164.0	1110.0	1103.0	1202.4	1350.5	1485.9
45°	1977.8	1864.9	1699.7	1602.7	1444.3	1373.6	1330.1	1356.1	1445.5	1662.0	1752.1
47.5°	2190.2	2086.2	1944.3	1797.1	1630.9	1710.4	1628.7	1587.7	1710.4	1934.1	2053.9
50°	2372.6	2256.7	2113.2	2004.1	1977.1	2053.4	1888.2	1903.3	1982.9	2245.8	2313.4
52.5°	2505.3	2383.3	2258.0	2205.2	2315.8	2354.2	2271.3	2238.0	2310.4	2511.6	2544.4
55°	2605.1	2480.3	2382.3	2455.0	2668.8	2656.2	2685.3	2571.6	2640.8	2788.8	2773.3
57.5°	2611.2	2463.3	2405.9	2522.8	2816.3	3011.8	3097.1	2903.7	2943.1	3005.5	2970.5
60°	2420.2	2273.0	2268.4	2434.3	2859.0	3103.9	3290.5	3196.2	3143.5	3189.9	3123.6
62.5°	2039.8	1936.8	1984.9	2168.3	2699.9	3053.1	3393.5	3507.0	3301.7	3312.1	3217.8
65°	1557.5	1449.4	1524.7	1755.8	2352.0	2996.3	3422.7	3628.4	3298.7	3346.9	3127.5
67.5°	1031.6	968.9	1054.2	1308.8	1870.0	2645.0	3407.6	3500.9	3194.0	3211.0	2792.0
70°	532.5	517.2	586.2	787.2	1257.3	2032.0	3259.6	3208.6	2981.5	2766.2	2153.5
72.5°	170.5	171.3	237.6	359.6	677.8	1237.1	2505.5	2575.5	2385.8	2023.5	1314.8
75°	75.6	74.3	99.4	150.9	282.5	554.7	1556.6	1632.1	1485.4	1113.2	552.7
77.5°	54.4	52.7	63.7	88.2	139.9	188.0	729.8	787.6	673.5	385.8	126.6
80°	38.4	38.1	46.2	62.0	87.5	83.6	230.6	258.5	207.0	93.5	37.2
82.5°	21.6	22.4	32.1	43.7	53.2	41.8	64.9	71.4	69.7	49.8	16.3
85°	10.4	11.7	20.9	31.6	27.9	16.3	23.1	25.0	29.2	28.9	8.3
87.5°	0.0	0.0	8.5	14.3	7.5	2.4	7.0	8.0	7.8	9.2	1.9
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°	172.7	172.7	172.7	172.7	172.7	172.7	172.7	172.7	172.7	172.7	172.7
2.5°	207.7	206.3	187.8	189.3	193.4	191.7	193.1	189.7	185.9	201.6	201.4
5°	262.6	251.7	245.9	240.5	241.5	230.6	236.9	239.8	239.3	248.3	250.7
7.5°	310.7	296.2	284.5	273.3	256.3	241.0	250.5	256.6	260.7	276.2	282.3
10°	333.3	321.4	316.8	294.9	282.8	273.3	261.9	253.6	257.0	252.9	257.0
12.5°	382.9	374.9	357.1	335.0	320.4	301.0	258.5	223.0	201.2	201.4	199.9
15°	428.1	427.6	401.1	364.4	322.1	266.8	200.4	155.7	135.1	129.2	127.3
17.5°	487.1	479.8	431.5	377.3	301.3	206.5	136.5	106.7	104.7	108.1	106.7
20°	524.8	514.1	446.5	358.6	248.3	139.7	103.0	94.5	100.3	105.2	104.0
22.5°	562.4	546.4	458.0	335.8	176.6	102.3	93.0	91.6	95.2	101.3	102.3
25°	583.1	579.9	480.3	293.0	121.0	89.6	89.6	89.2	90.4	94.7	94.0
27.5°	643.1	600.3	463.5	228.6	93.5	82.4	83.6	83.1	78.7	83.1	83.3
30°	680.5	660.8	464.8	162.8	82.4	72.9	76.0	72.2	65.6	69.2	68.5
32.5°	755.8	706.7	461.1	109.8	75.1	69.5	64.6	59.0	54.2	55.6	54.4
35°	843.5	806.1	411.8	88.2	70.0	61.5	53.7	48.1	43.0	44.2	44.0
37.5°	1018.0	899.2	371.0	79.4	66.6	56.4	47.4	39.6	36.9	37.7	38.4
40°	1179.5	1054.4	294.9	75.6	60.7	50.3	39.1	33.5	31.8	32.3	33.0
42.5°	1421.0	1177.8	222.8	71.7	54.9	42.5	32.6	28.9	27.2	28.2	28.7
45°	1654.7	1282.8	166.4	68.3	50.0	36.7	27.5	25.0	23.1	23.8	24.8
47.5°	1888.2	1399.4	124.1	62.9	44.7	31.6	23.6	21.9	20.7	20.9	22.1
50°	2097.1	1453.8	97.7	56.4	40.3	27.5	21.4	19.7	19.2	19.4	20.4
52.5°	2250.7	1454.3	82.4	50.5	36.2	24.3	20.2	18.2	18.0	18.5	19.4
55°	2389.4	1415.4	71.4	45.4	32.6	22.1	19.2	17.5	17.5	18.0	18.9
57.5°	2481.5	1344.0	62.0	40.1	29.4	20.9	18.5	16.8	16.5	16.3	17.0
60°	2526.4	1246.6	52.5	35.2	26.5	20.2	18.0	14.8	14.6	14.1	14.6
62.5°	2498.0	1124.6	44.0	30.4	23.6	19.2	15.8	12.9	12.4	11.4	12.1
65°	2352.7	976.4	37.2	26.0	20.4	16.3	13.4	10.9	9.7	8.5	8.3
67.5°	2055.6	793.2	31.1	22.4	17.5	13.4	10.9	9.7	7.5	6.6	6.3
70°	1540.5	541.5	25.8	19.2	14.6	11.4	9.2	8.7	7.0	6.3	5.8
72.5°	903.8	292.3	21.6	16.8	12.4	9.5	7.5	8.0	7.0	5.8	5.3
75°	361.0	97.2	17.2	13.4	10.0	6.8	6.3	6.6	6.3	5.3	4.4
77.5°	82.4	30.6	13.4	10.4	7.8	4.4	5.1	5.6	5.6	4.4	3.2
80°	25.8	12.1	7.8	6.6	5.6	2.4	3.6	3.9	2.7	1.2	0.0
82.5°	8.3	3.4	2.7	2.7	2.4	0.5	0.7	0.5	0.0	0.0	0.0
85°	3.2	2.2	1.7	1.7	1.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	1.2	1.0	0.7	1.0	0.5	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)