

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: P596665

Luminaire Tested: **MSA-SA3A-827-U-T2-HSS**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596665
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-9)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA3A-827-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: 6504 lumens
Efficiency: N/A
Efficacy: 67.8 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B1 - U0 - G2

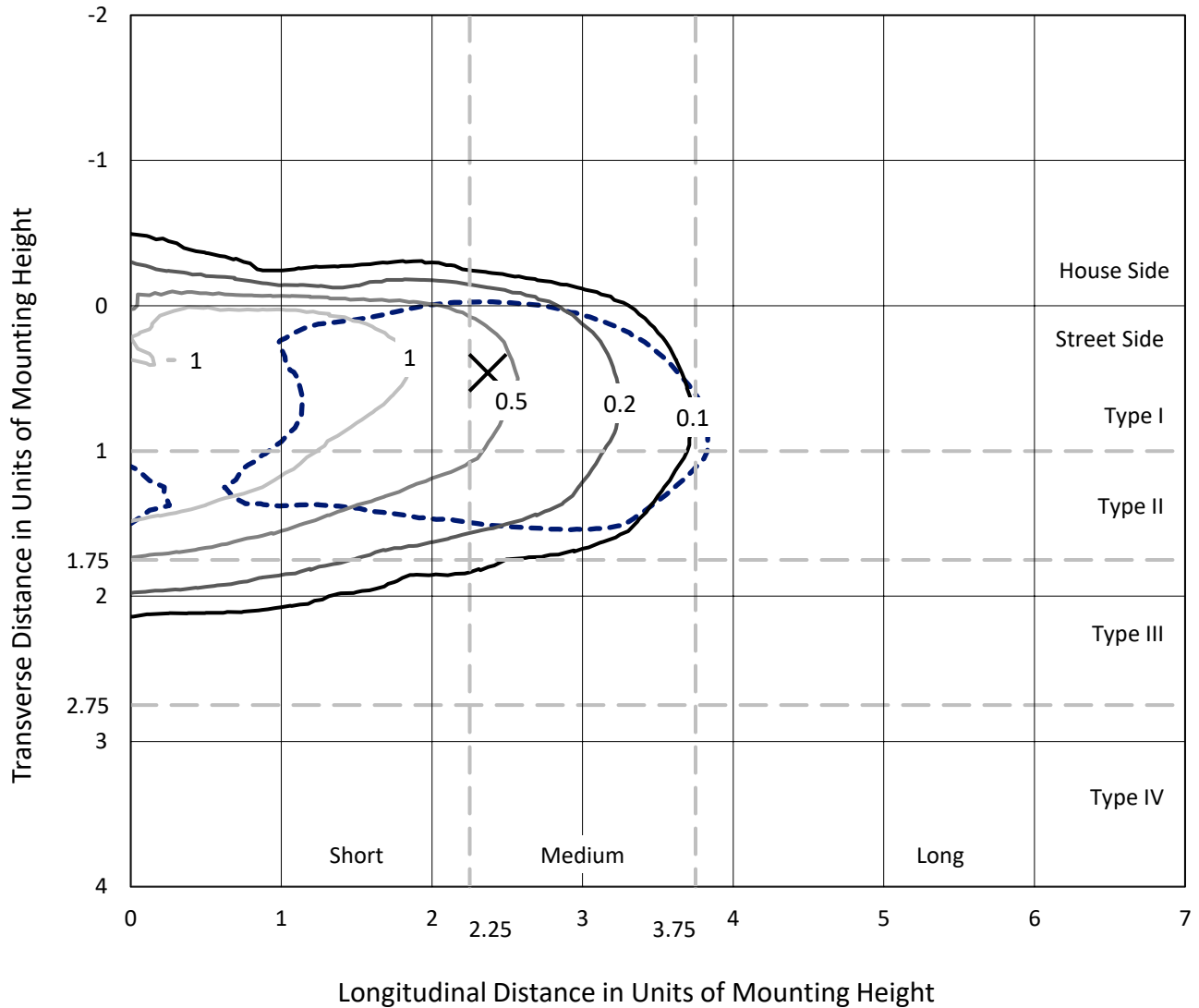
Input Watts (W): 96
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

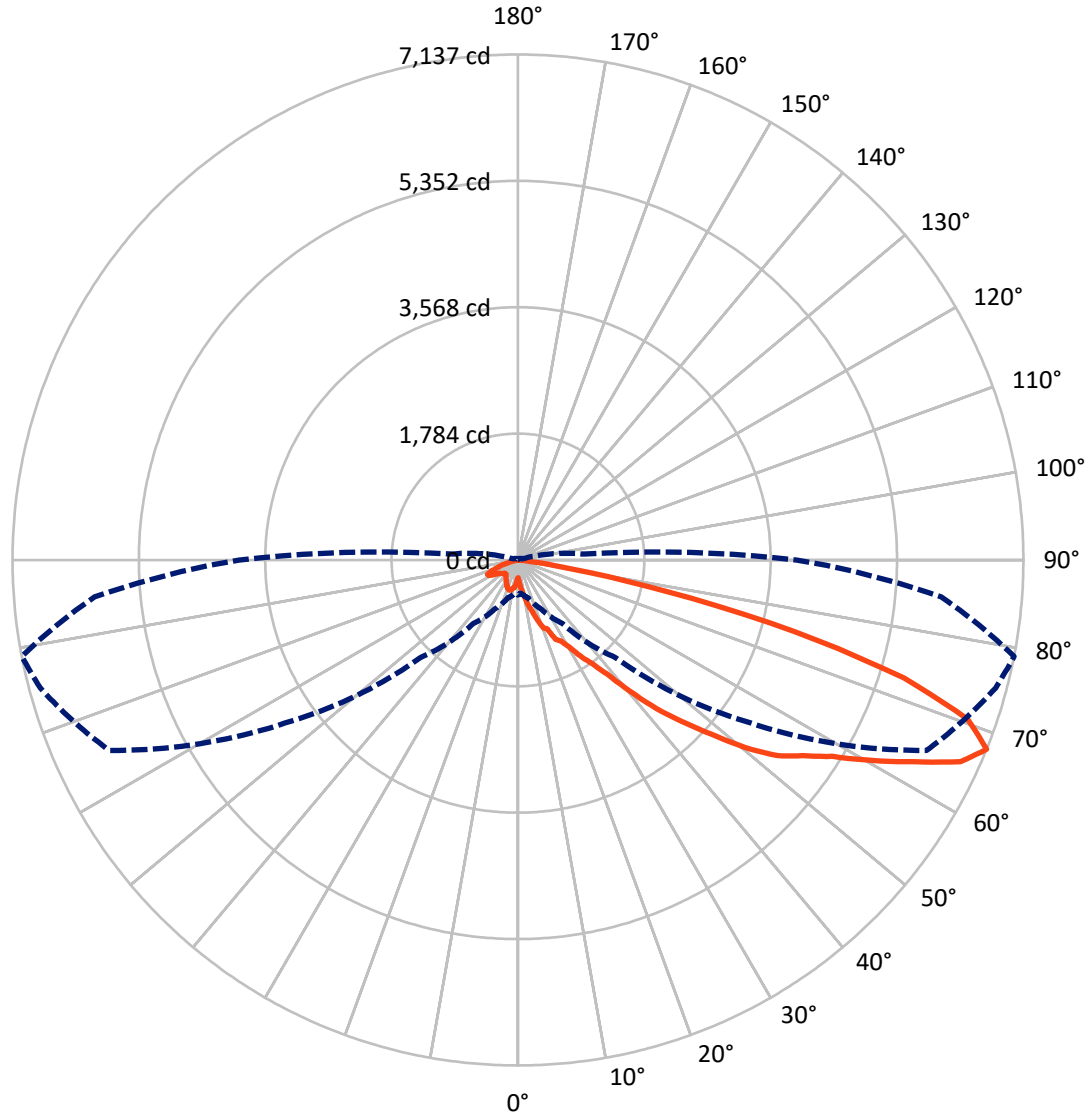
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2 fc
 Type II - Medium - N/A

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Luminous Intensity Polar Plot



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

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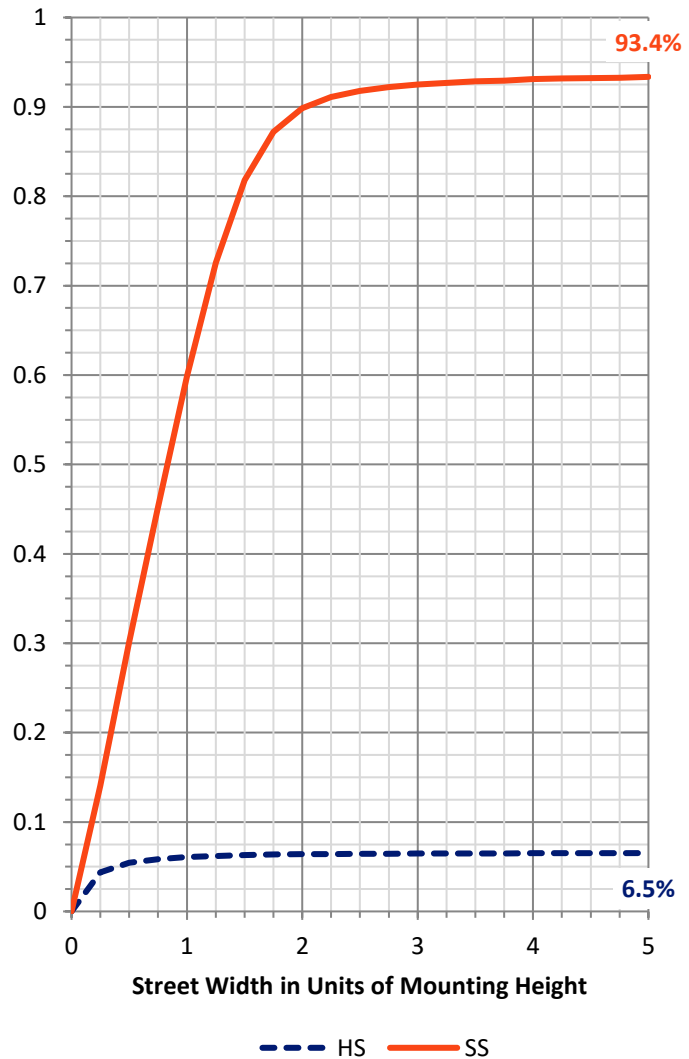
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	427.4	0.0	427.4
	% Fixture	6.6	0.0	6.6
Street Side	Lumens	6076.6	0.0	6076.6
	% Fixture	93.4	0.0	93.4
Total	Lumens	6504.0	0.0	6504.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	36.4	0.6
10°-20°	145.3	2.2
20°-30°	280.4	4.3
30°-40°	550.8	8.5
40°-50°	1103.3	17.0
50°-60°	1763.5	27.1
60°-70°	1774.4	27.3
70°-80°	800.5	12.3
80°-90°	49.5	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°	6504.0	100.0
0°-180°	6504.0	100.0

Coefficient of Utilization



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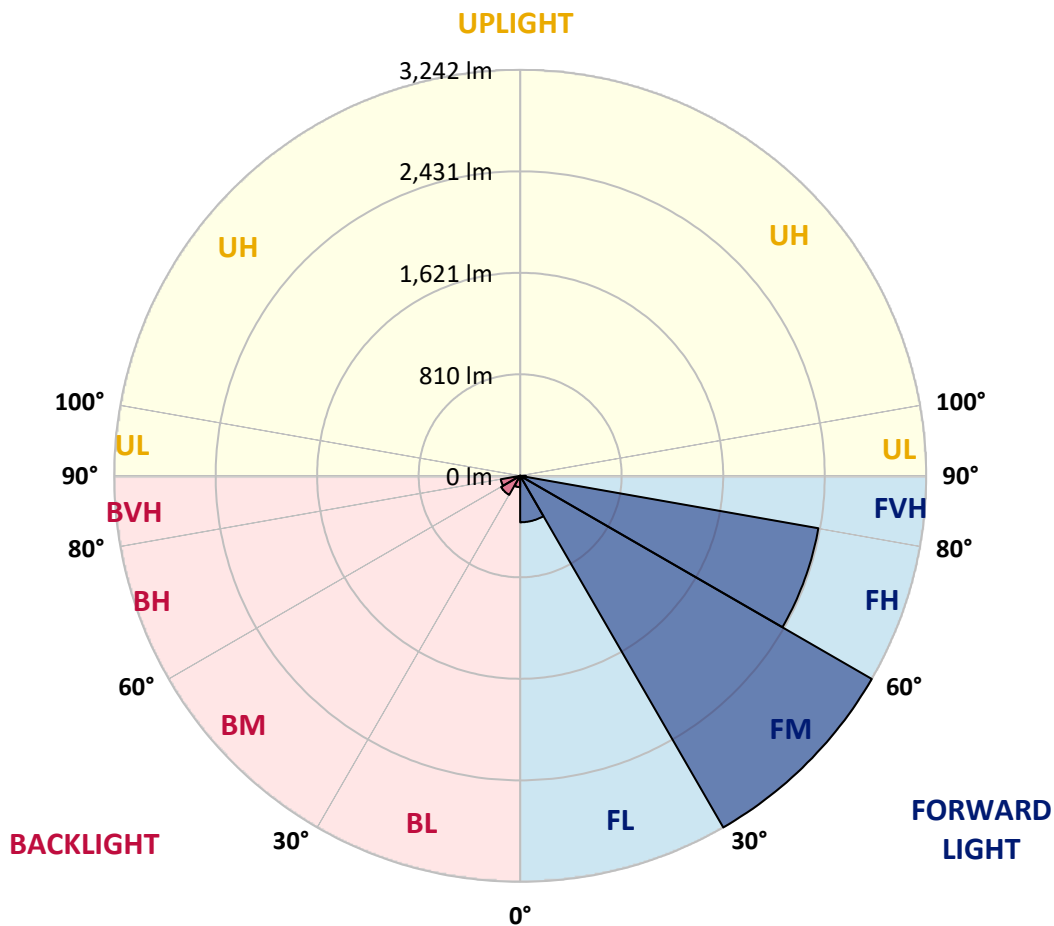
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	371.3	5.7			
FM (30°-60°)	3241.7	49.8			
FH (60°-80°)	2417.3	37.2			G2/5000
FVH (80°-90°)	46.4	0.7			G1/100
BL (0°-30°)	90.8	1.4	B0/110		
BM (30°-60°)	175.8	2.7	B0/220		
BH (60°-80°)	157.5	2.4	B1/500		G1/500
BVH (80°-90°)	3.2	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 II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	79°	85°
0°	250.6	250.6	250.6	250.6	250.6	250.6	250.6	250.6	250.6	250.6	250.6
2.5°	338.5	326.3	306.5	317.7	316.9	322.7	311.9	300.1	281.1	300.1	301.5
5°	487.2	464.7	450.3	447.5	431.7	417.0	413.7	401.6	392.2	375.4	390.4
7.5°	607.0	596.6	571.1	568.3	529.6	508.0	514.9	509.5	474.0	456.4	471.1
10°	657.9	640.0	643.6	640.0	623.5	629.6	615.6	599.5	571.1	542.1	505.5
12.5°	677.6	674.8	704.5	700.9	739.7	786.3	755.1	728.2	662.6	655.4	605.6
15°	719.9	737.9	733.6	748.6	773.4	852.6	851.9	858.3	788.8	751.5	679.4
17.5°	757.6	770.9	749.3	766.5	834.0	882.0	946.2	921.1	929.0	891.0	779.5
20°	741.5	756.5	735.0	724.6	843.3	934.3	1020.0	1001.7	1049.1	1025.4	871.6
22.5°	842.2	813.9	759.7	726.0	814.6	933.3	1046.2	1122.6	1114.3	1056.2	957.3
25°	966.6	949.4	884.5	825.0	832.9	926.8	1128.7	1240.9	1265.3	1240.5	1038.7
27.5°	1134.4	1130.5	997.8	972.0	895.3	898.5	1141.6	1390.0	1334.5	1295.7	1133.7
30°	1353.5	1322.3	1164.9	1131.2	1017.9	962.3	1220.5	1518.8	1477.9	1425.2	1223.0
32.5°	1589.0	1593.7	1392.9	1281.8	1190.7	1124.7	1189.3	1579.0	1655.4	1612.7	1334.5
35°	1856.5	1877.3	1631.7	1501.2	1324.1	1226.9	1323.4	1764.0	1901.0	1788.7	1484.0
37.5°	2268.5	2267.7	1980.9	1721.0	1592.3	1486.8	1546.7	1932.1	2202.8	2045.1	1752.2
40°	2630.9	2552.1	2285.3	1986.6	1785.9	1757.2	1713.8	2162.3	2525.2	2430.2	1990.6
42.5°	2901.6	2846.1	2523.7	2291.4	2042.6	1951.5	1936.1	2499.7	3000.9	2867.9	2330.8
45°	3225.4	3043.2	2805.9	2596.5	2343.0	2316.5	2280.3	2842.1	3554.5	3254.8	2626.6
47.5°	3515.4	3344.1	3119.6	2850.7	2559.6	2778.3	2639.2	3142.9	3957.2	3675.7	2952.9
50°	3759.6	3577.5	3326.1	3121.4	2996.6	3145.1	2913.1	3390.7	4392.1	4164.0	3258.0
52.5°	3884.0	3677.9	3483.5	3357.0	3433.3	3400.0	3284.5	3690.8	4762.8	4592.1	3528.3
55°	3781.8	3580.3	3498.9	3561.7	3793.7	3697.2	3706.5	4155.8	5112.7	4877.5	3763.5
57.5°	3328.6	3144.7	3180.9	3352.7	3797.2	4049.7	4187.7	4607.5	5393.4	5233.2	4126.4
60°	2518.0	2369.9	2504.0	2808.8	3440.1	3979.4	4529.0	5059.3	5794.6	5744.4	4675.7
62.5°	1537.8	1457.4	1647.5	2027.5	2741.4	3634.8	4728.0	5661.6	6223.8	6277.2	5258.3
65°	784.5	748.3	906.7	1240.9	1852.2	2985.9	4584.2	6035.9	6667.3	6864.5	5813.6
67.5°	494.1	470.8	555.4	756.9	1092.8	1947.6	4013.8	6363.3	6980.7	7136.6	5999.0
70°	342.4	327.7	400.8	519.5	689.5	1049.1	2980.1	6057.8	6732.2	6739.4	5550.5
72.5°	217.3	205.8	277.1	384.7	508.8	541.7	1708.4	4753.5	5762.7	5696.4	4495.0
75°	140.9	135.2	176.0	281.8	390.8	334.2	844.4	3207.5	4132.1	4028.1	2985.5
77.5°	101.1	97.5	118.0	188.2	278.2	233.8	378.6	1911.7	2369.2	2141.9	1449.2
80°	61.0	60.6	85.3	118.0	197.9	164.9	175.0	868.0	918.6	749.0	442.8
82.5°	30.5	31.6	47.7	76.0	127.3	107.9	80.0	289.0	246.7	181.8	89.6
85°	7.2	9.0	25.1	52.3	63.8	43.0	38.0	75.7	67.8	51.3	26.2
87.5°	0.0	0.0	7.9	12.5	17.2	7.2	12.9	14.3	18.3	14.3	5.4
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°	250.6	250.6	250.6	250.6	250.6	250.6	250.6	250.6	250.6	250.6	250.6
2.5°	301.9	297.6	271.4	264.6	263.9	256.4	258.1	251.0	251.3	267.5	267.5
5°	384.7	359.6	334.5	312.3	297.2	275.7	267.8	264.6	261.7	268.2	272.1
7.5°	451.8	414.8	369.6	321.2	276.4	245.6	241.3	233.4	230.5	237.0	242.0
10°	481.5	435.6	373.6	303.0	261.0	235.9	215.1	204.0	201.9	201.5	203.3
12.5°	544.6	487.6	377.9	296.2	250.6	223.0	199.3	180.7	163.5	165.3	163.5
15°	595.2	527.8	377.9	279.7	225.5	197.9	156.3	147.0	144.5	148.4	145.2
17.5°	671.5	567.6	358.9	250.3	204.0	153.8	138.0	137.3	142.3	148.1	144.5
20°	717.4	572.9	327.0	216.6	167.4	133.4	127.6	121.9	129.1	133.7	131.9
22.5°	765.1	573.3	295.1	198.6	134.8	121.5	112.2	107.6	108.6	112.9	113.7
25°	785.6	559.3	265.3	175.0	122.3	108.6	99.0	93.9	92.1	94.3	93.6
27.5°	841.1	532.4	233.0	149.2	116.2	96.4	87.5	81.4	76.0	79.6	80.3
30°	849.0	523.8	215.5	132.7	108.3	85.3	77.4	71.0	67.0	72.1	72.1
32.5°	874.1	476.5	206.5	125.8	100.0	78.9	68.1	63.5	62.7	66.0	66.3
35°	912.8	455.7	193.3	120.5	92.5	71.3	61.3	59.2	58.4	61.0	61.0
37.5°	1044.1	429.9	178.6	115.8	86.0	67.4	59.5	55.9	56.3	58.4	59.9
40°	1131.2	433.1	156.7	110.1	78.5	63.8	55.9	53.4	53.1	54.1	55.2
42.5°	1292.9	435.6	147.0	104.0	72.8	59.5	52.3	50.6	49.1	50.2	51.3
45°	1473.6	448.9	142.0	99.0	69.6	57.0	49.1	48.0	44.8	45.5	47.0
47.5°	1647.8	497.3	135.9	91.8	66.7	55.6	45.9	43.4	41.2	40.9	42.3
50°	1845.7	544.3	129.1	83.9	63.8	53.4	42.7	38.7	37.3	37.3	38.4
52.5°	2022.9	589.1	122.6	78.5	61.7	49.5	39.8	35.9	34.8	34.8	36.2
55°	2209.3	636.0	116.9	73.5	58.8	45.5	37.3	33.7	33.3	32.6	33.7
57.5°	2538.4	738.6	109.7	69.2	54.9	42.3	35.1	31.6	30.8	29.8	30.8
60°	3017.8	896.0	100.4	64.9	50.2	40.2	33.3	29.0	28.0	26.2	26.5
62.5°	3486.4	1023.3	89.6	59.5	45.9	38.0	30.5	26.2	24.4	22.2	22.6
65°	3888.0	1073.5	78.2	53.1	41.6	33.0	26.5	22.9	20.4	17.6	17.2
67.5°	3935.3	948.0	67.0	47.0	37.3	28.0	22.6	20.4	16.5	14.0	13.3
70°	3541.6	706.3	55.9	41.6	32.3	23.7	19.4	17.9	15.4	13.3	12.2
72.5°	2820.2	521.3	47.0	36.9	28.3	20.1	16.5	16.9	15.4	12.9	11.5
75°	1865.1	298.3	38.4	30.8	23.7	16.1	15.1	15.1	14.7	12.2	10.8
77.5°	897.4	128.7	29.4	24.4	19.0	12.2	13.6	13.6	14.0	11.1	9.0
80°	254.6	38.7	18.3	16.5	14.0	8.2	10.8	10.4	9.3	6.5	3.9
82.5°	45.5	15.1	8.2	8.6	7.9	3.2	6.1	5.7	4.7	2.5	0.4
85°	12.5	5.7	4.7	5.0	3.9	1.1	2.5	3.2	2.5	1.4	0.0
87.5°	3.2	2.5	3.2	3.6	2.9	0.4	1.1	0.4	1.1	0.4	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)