

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: P596999

Luminaire Tested: **MSA-SA2D-835-U-T4FT-HSS**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596999
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-13)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA2D-835-U-T4FT-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV FORWARD THROW OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8326 lumens
Efficiency: N/A
Efficacy: 64.5 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

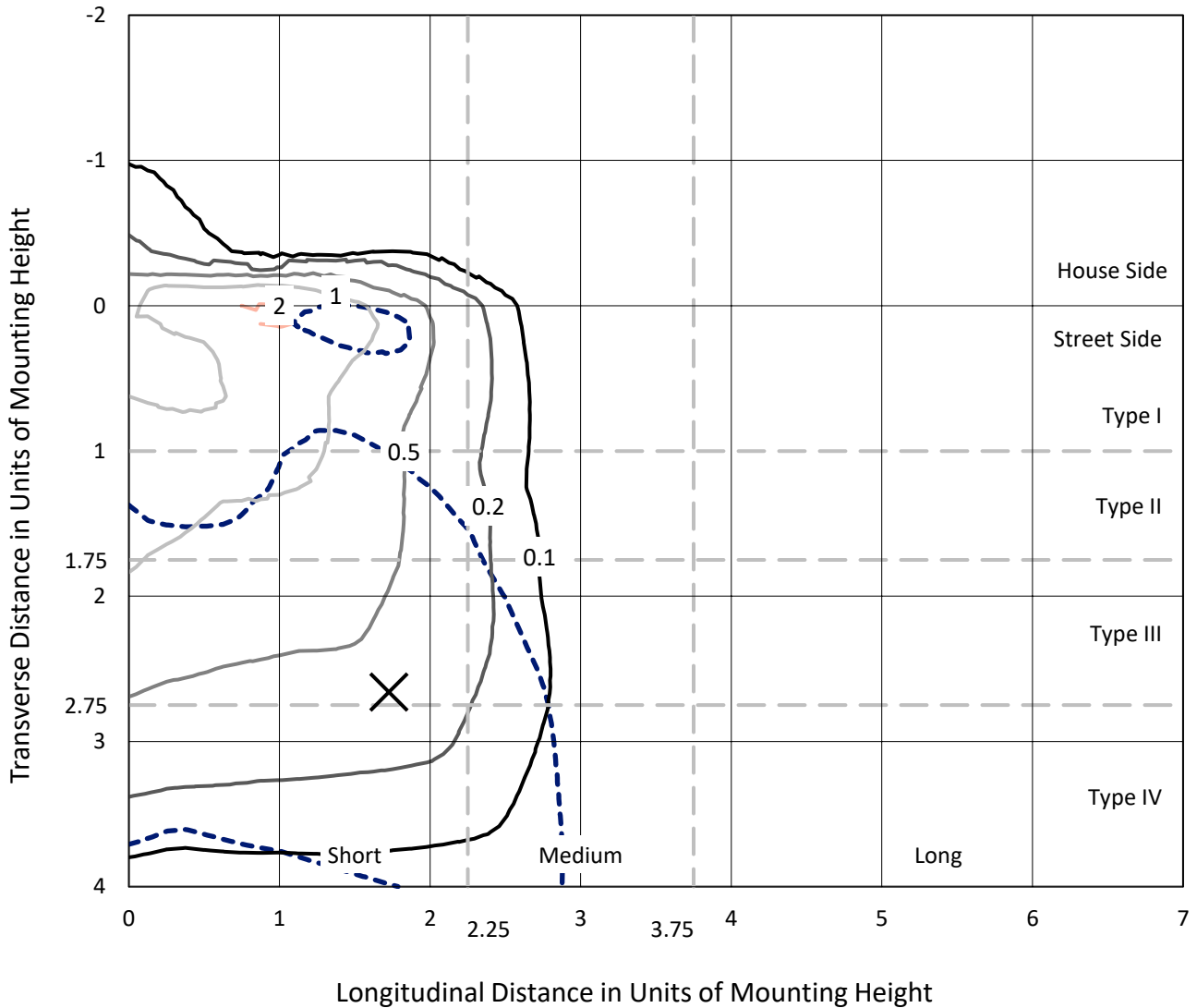
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

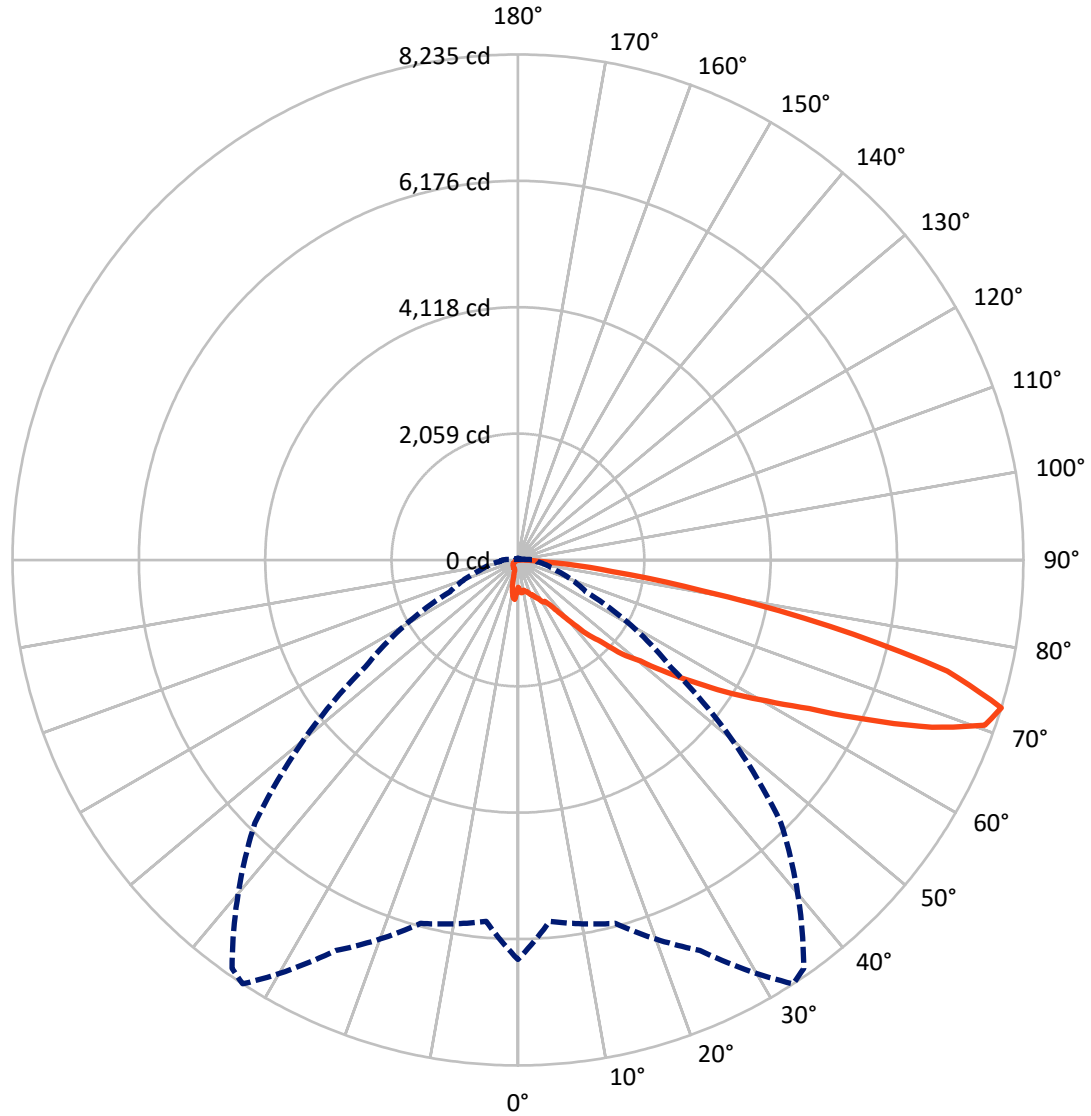
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.1 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 33-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical

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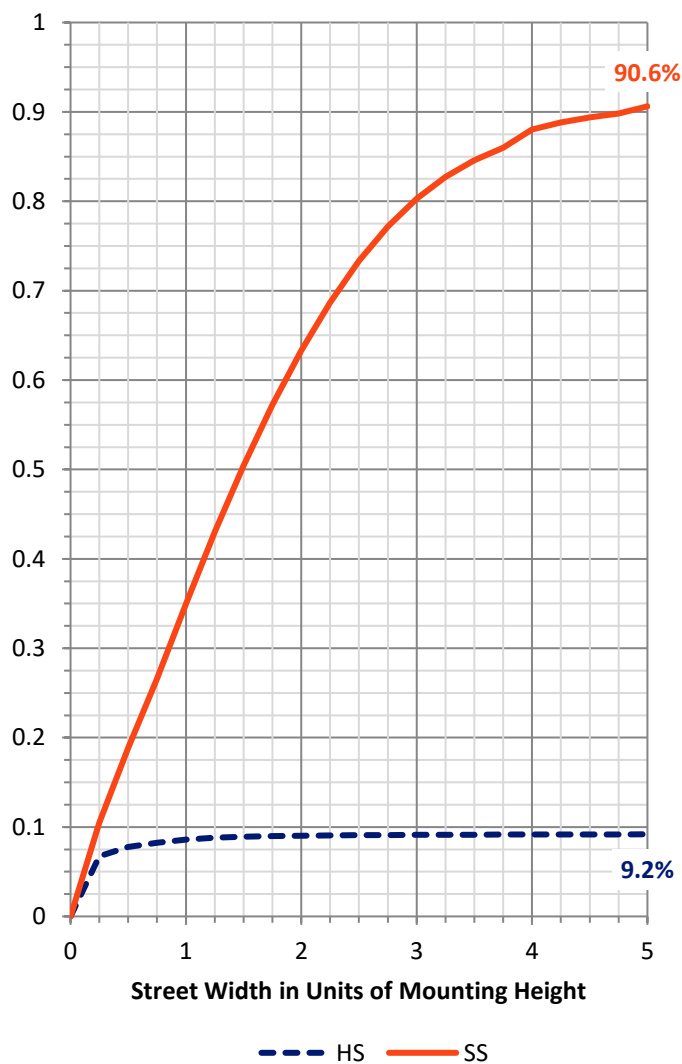
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	769.9	0.0	769.9
	% Fixture	9.2	0.0	9.2
Street Side	Lumens	7556.1	0.0	7556.1
	% Fixture	90.8	0.0	90.8
Total	Lumens	8326.0	0.0	8326.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	57.3	0.7
10°-20°	170.8	2.1
20°-30°	289.7	3.5
30°-40°	530.1	6.4
40°-50°	1118.8	13.4
50°-60°	1871.9	22.5
60°-70°	2505.6	30.1
70°-80°	1636.7	19.7
80°-90°	145.1	1.7
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°	8326.0	100.0
0°-180°	8326.0	100.0

Coefficient of Utilization



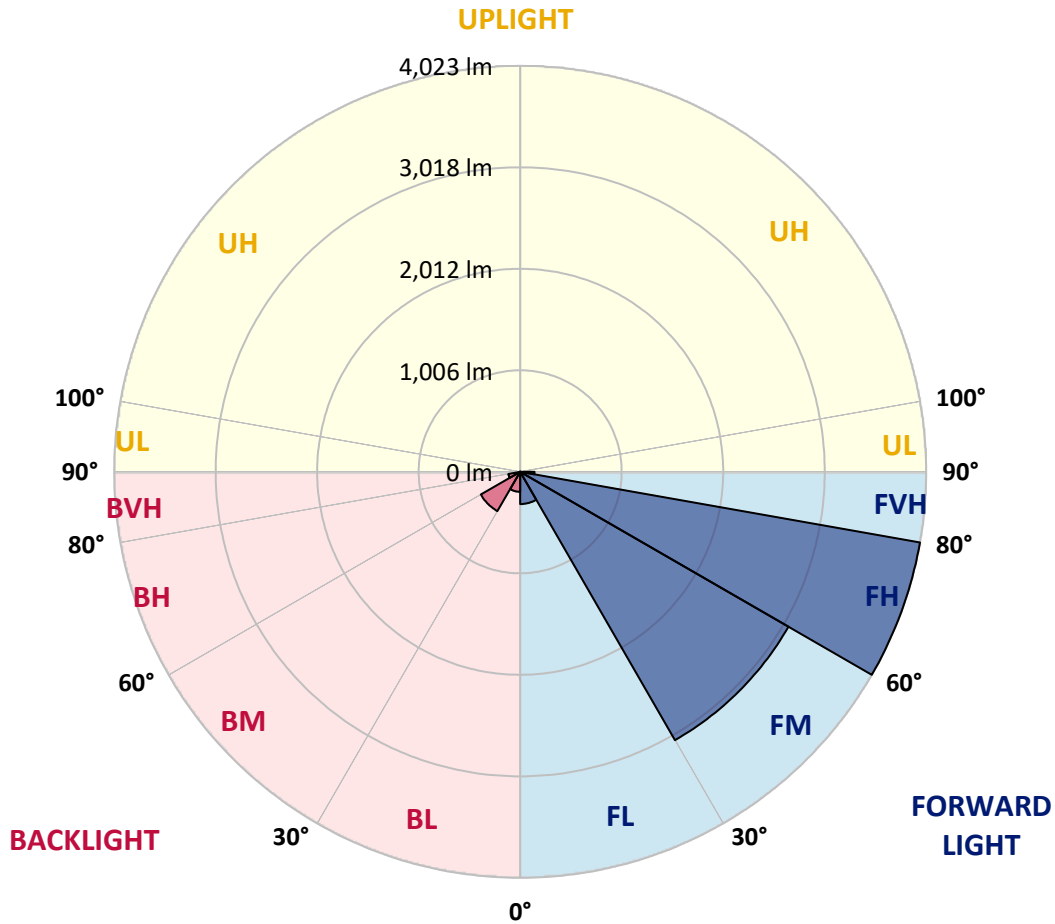
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	319.6	3.8			
FM (30°-60°)	3070.8	36.9			
FH (60°-80°)	4023.5	48.3			G2/5000
FVH (80°-90°)	142.3	1.7			G2/225
BL (0°-30°)	198.2	2.4	B1/500		
BM (30°-60°)	450.1	5.4	B1/1000		
BH (60°-80°)	118.8	1.4	B1/500		G1/500
BVH (80°-90°)	2.8	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 IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	33°	35°	45°	55°	65°	75°	85°
0°	442.8	442.8	442.8	442.8	442.8	442.8	442.8	442.8	442.8	442.8	442.8
2.5°	527.9	507.6	478.0	479.8	484.9	489.1	500.2	495.5	486.8	486.3	527.9
5°	559.3	536.7	534.8	537.6	536.2	543.6	534.4	564.4	589.8	620.4	669.4
7.5°	544.1	533.4	520.0	533.9	533.4	529.8	535.8	596.8	658.3	697.1	778.0
10°	500.2	488.1	498.3	502.9	499.7	515.9	556.1	606.0	679.5	760.9	800.2
12.5°	487.7	495.1	498.8	498.8	529.8	538.1	599.6	646.7	734.1	798.3	912.5
15°	536.2	550.6	525.1	519.6	529.3	533.9	602.3	659.2	771.1	888.5	984.2
17.5°	613.4	612.5	573.2	551.5	566.7	577.8	615.7	682.3	747.9	959.2	1097.9
20°	666.6	667.5	596.8	551.5	601.9	608.3	650.4	703.6	755.3	994.8	1172.3
22.5°	735.0	710.5	632.4	588.5	622.7	628.7	674.9	717.0	793.2	990.6	1267.5
25°	790.9	775.2	676.8	646.2	676.8	668.4	710.5	773.8	833.9	1056.7	1323.5
27.5°	877.8	851.0	708.2	713.7	711.9	717.9	727.6	824.7	905.6	1060.0	1452.9
30°	958.7	943.0	778.4	778.4	796.5	784.9	791.9	909.3	974.9	1134.9	1598.5
32.5°	1042.4	1043.3	861.2	817.3	802.9	850.6	897.2	950.4	1058.6	1263.4	1821.3
35°	1263.8	1245.3	1019.7	910.2	898.6	895.9	970.7	1114.5	1207.0	1430.7	2121.3
37.5°	1709.9	1645.7	1360.9	1121.0	1077.5	1062.7	1147.8	1295.3	1387.2	1676.6	2617.3
40°	2167.5	2049.7	1733.5	1463.1	1322.1	1258.3	1357.2	1482.5	1646.1	1948.4	3076.4
42.5°	2569.2	2423.6	2014.1	1831.9	1648.4	1620.7	1527.8	1731.6	2015.9	2344.1	3526.1
45°	2960.8	2674.2	2263.7	2119.5	1896.7	1912.4	1880.9	2057.5	2400.1	2777.7	3925.1
47.5°	3230.3	2972.8	2569.7	2382.5	2293.3	2201.3	2450.9	2634.4	2742.1	3053.2	4269.9
50°	3520.6	3259.9	2832.7	2701.9	2584.5	2677.4	3001.5	3026.0	3017.2	3310.3	4504.7
52.5°	3895.5	3588.1	3134.6	2986.7	3053.2	3145.7	3519.7	3524.3	3261.7	3526.6	4673.9
55°	4242.2	3901.5	3536.8	3397.2	3536.3	3614.4	4029.1	3877.0	3404.1	3673.6	4757.1
57.5°	4730.8	4336.5	4071.6	3825.7	4107.7	4032.8	4477.0	4251.0	3564.0	3771.1	4726.6
60°	5348.4	4884.3	4618.9	4358.7	4661.0	4711.8	4914.3	4437.7	3626.0	3803.0	4543.1
62.5°	5976.6	5509.7	5160.7	4984.1	5327.1	5494.4	5319.2	4530.6	3551.6	3740.6	4127.5
65°	6756.0	6158.2	5750.5	5647.0	6282.6	6528.5	5798.1	4553.3	3407.8	3397.2	3318.6
67.5°	7289.9	6707.9	6333.9	6507.3	7275.1	7294.9	6228.0	4560.2	2923.8	2659.9	2178.2
70°	7416.5	6793.4	6626.1	7136.4	8066.9	7816.8	6366.7	4208.9	2168.5	1578.6	995.7
72.5°	6510.5	5910.5	6128.2	7017.6	8235.2	8120.5	6060.2	3036.6	1220.8	631.4	305.6
75°	3993.5	3630.6	4597.2	5949.8	7228.8	7154.9	4728.0	1568.9	491.8	252.4	114.2
77.5°	1736.7	1612.8	2399.1	3947.7	5194.4	5128.3	2770.3	577.8	254.2	177.5	57.8
80°	574.6	557.5	908.8	1869.4	3042.6	2984.4	1167.2	240.4	181.2	142.4	32.4
82.5°	136.4	135.4	317.1	860.3	1550.0	1501.4	358.3	132.7	131.3	112.3	17.1
85°	34.2	35.1	87.8	351.8	629.6	555.2	93.4	66.1	92.5	76.3	8.8
87.5°	0.0	0.0	22.7	50.4	95.2	59.6	10.2	17.6	25.9	27.3	4.6
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°	442.8	442.8	442.8	442.8	442.8	442.8	442.8	442.8	442.8	442.8	442.8
2.5°	537.1	532.1	490.5	500.6	516.3	515.0	525.1	517.3	510.3	544.5	541.3
5°	683.2	655.5	642.5	660.6	650.9	628.2	647.2	643.9	638.4	649.9	658.7
7.5°	792.8	767.4	755.8	717.9	662.9	619.4	626.4	610.2	594.9	613.0	631.4
10°	828.8	815.0	813.6	739.6	687.8	625.0	550.6	486.3	469.2	446.5	456.7
12.5°	926.8	935.2	882.9	796.5	696.6	576.0	443.8	352.7	315.7	291.7	293.1
15°	1007.3	1036.4	960.6	805.3	613.0	439.1	295.4	213.6	190.5	184.4	182.6
17.5°	1127.0	1155.2	984.6	742.9	494.2	297.7	190.0	166.4	167.8	172.0	171.0
20°	1215.7	1211.6	963.8	632.4	364.3	195.1	159.0	155.8	163.2	175.2	172.4
22.5°	1301.3	1272.6	950.9	530.2	235.8	156.7	153.5	153.0	159.9	171.5	174.7
25°	1362.3	1366.9	929.1	415.1	171.5	145.6	148.4	152.5	159.5	172.0	170.1
27.5°	1537.0	1407.6	838.5	301.4	144.7	139.6	146.5	154.9	157.2	172.9	173.3
30°	1650.3	1561.1	779.4	202.9	133.6	129.0	142.8	153.9	156.7	177.0	178.4
32.5°	1847.7	1627.2	711.0	150.7	124.3	125.7	134.5	149.3	162.3	184.0	184.9
35°	2093.1	1839.3	587.1	135.4	121.1	118.8	123.0	140.1	161.3	184.9	189.5
37.5°	2560.5	1966.5	465.5	131.3	121.1	117.0	121.1	131.3	158.6	194.1	203.9
40°	2873.4	2225.3	335.6	130.4	118.8	115.1	116.5	126.7	150.7	188.6	202.9
42.5°	3258.9	2334.4	247.3	128.0	116.5	110.9	111.9	124.8	142.8	177.0	187.7
45°	3574.7	2413.9	194.6	127.1	110.9	109.1	110.9	123.4	135.4	152.1	161.8
47.5°	3814.6	2506.4	156.2	121.1	109.6	109.1	106.8	115.6	123.0	127.1	133.6
50°	3990.2	2485.6	129.4	111.9	104.9	107.7	103.5	104.9	106.8	104.5	111.9
52.5°	4097.9	2410.7	107.7	100.8	99.4	101.7	96.6	92.5	89.2	87.4	92.0
55°	4137.2	2260.5	91.5	86.4	89.7	90.6	86.4	79.0	73.5	70.7	74.4
57.5°	4062.8	2031.6	79.5	71.7	79.0	79.0	73.5	65.6	59.2	54.5	58.2
60°	3874.2	1778.8	70.7	59.6	67.5	68.0	61.5	53.2	48.1	43.5	45.8
62.5°	3522.9	1503.3	61.9	51.8	58.2	58.7	50.8	43.0	39.3	34.2	36.1
65°	2820.3	1149.6	52.7	45.8	50.4	49.0	42.1	36.5	31.9	27.3	28.2
67.5°	1830.6	709.6	45.8	41.6	42.5	41.1	35.6	31.9	26.8	23.1	23.6
70°	819.6	305.6	40.2	37.4	37.0	34.7	30.0	29.6	26.3	23.1	23.1
72.5°	252.9	115.1	34.7	33.7	31.9	29.1	26.3	28.2	25.9	22.2	21.7
75°	99.8	52.7	28.7	28.7	27.7	24.0	23.6	25.4	24.0	20.3	19.4
77.5°	52.2	33.3	23.6	24.5	24.0	18.5	21.3	23.1	22.2	17.1	14.3
80°	31.0	20.3	17.6	19.9	19.4	12.9	16.2	14.8	10.6	5.1	1.4
82.5°	17.1	9.2	7.9	11.6	11.6	4.6	8.3	7.4	4.2	0.0	0.0
85°	8.3	6.5	6.0	6.5	4.6	1.4	4.2	4.2	2.3	0.0	0.0
87.5°	4.2	3.7	2.8	2.3	1.8	0.0	1.4	1.8	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)