

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: P597077

Luminaire Tested: **MSA-SA3D-835-U-SL4-HSS**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P597077
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-21)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA3D-835-U-SL4-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13571 lumens
Efficiency: N/A
Efficacy: 70.7 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G3

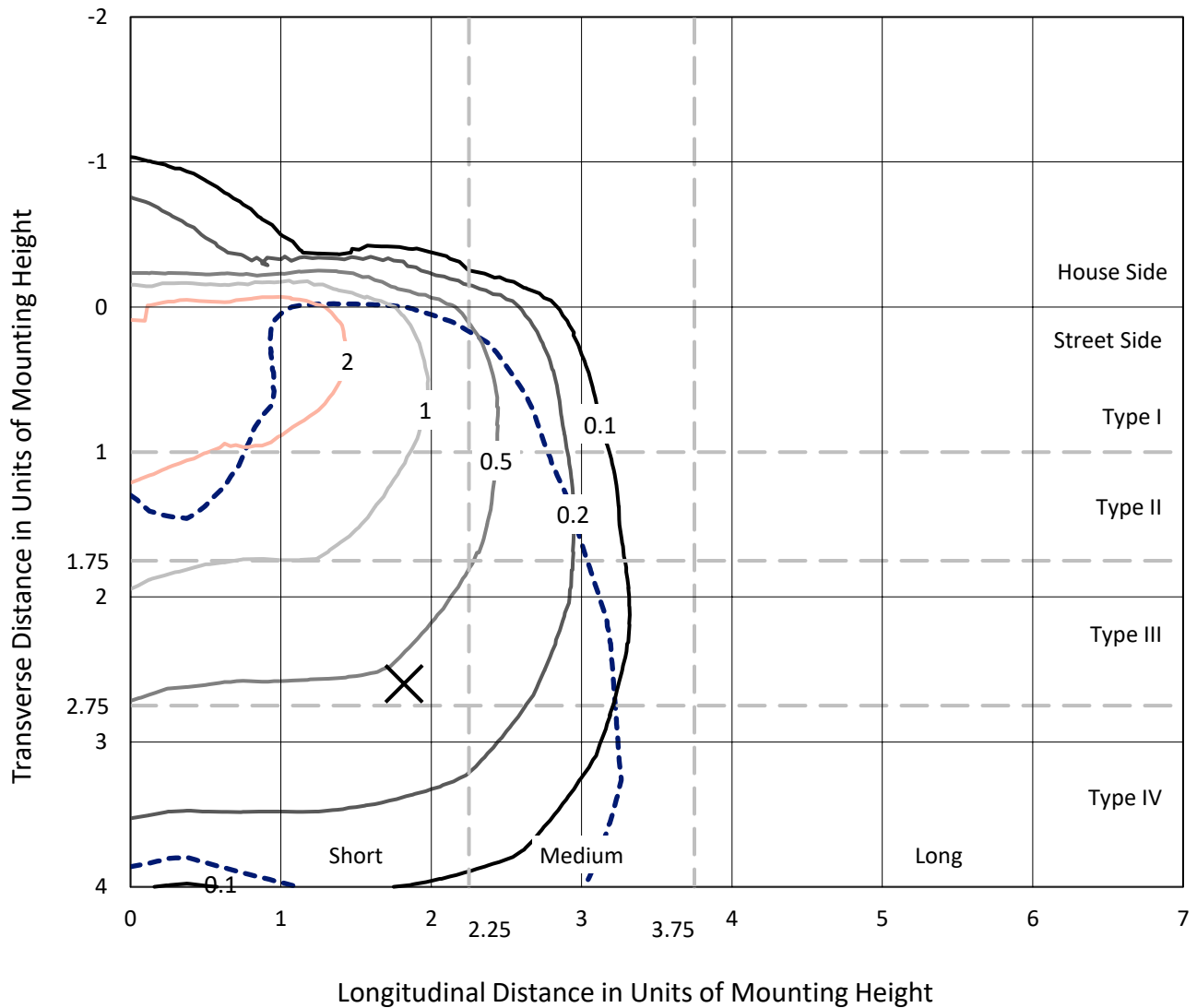
Input Watts (W): 192
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

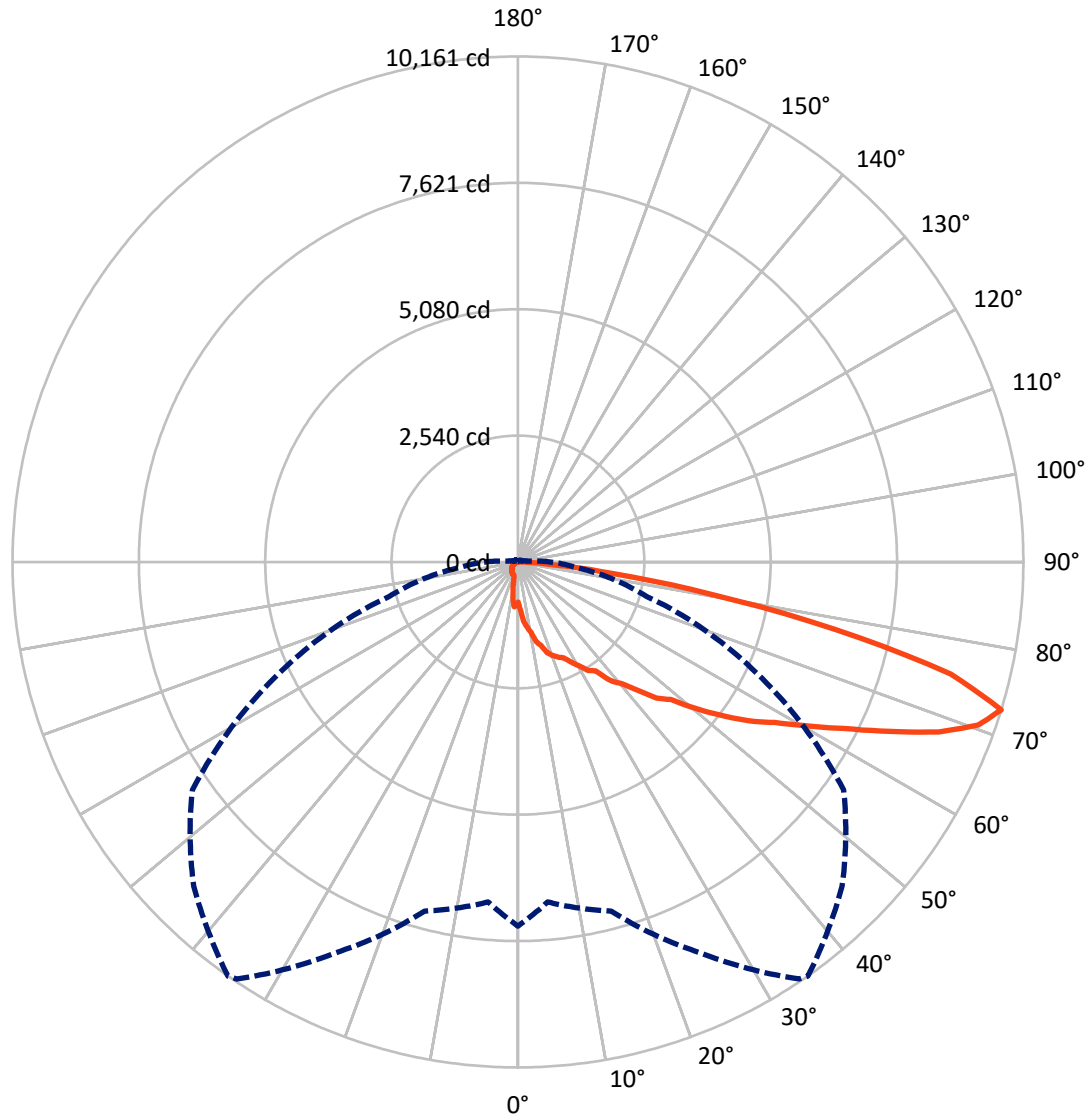
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.1 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 35-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1058.5	0.0	1058.5
	% Fixture	7.8	0.0	7.8
Street Side	Lumens	12512.5	0.0	12512.5
	% Fixture	92.2	0.0	92.2
Total	Lumens	13571.0	0.0	13571.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	103.1	0.8
10°-20°	347.3	2.6
20°-30°	632.5	4.7
30°-40°	1090.9	8.0
40°-50°	1939.3	14.3
50°-60°	2893.9	21.3
60°-70°	3697.3	27.2
70°-80°	2572.4	19.0
80°-90°	294.3	2.2
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°	13571.0	100.0
0°-180°	13571.0	100.0

Coefficient of Utilization



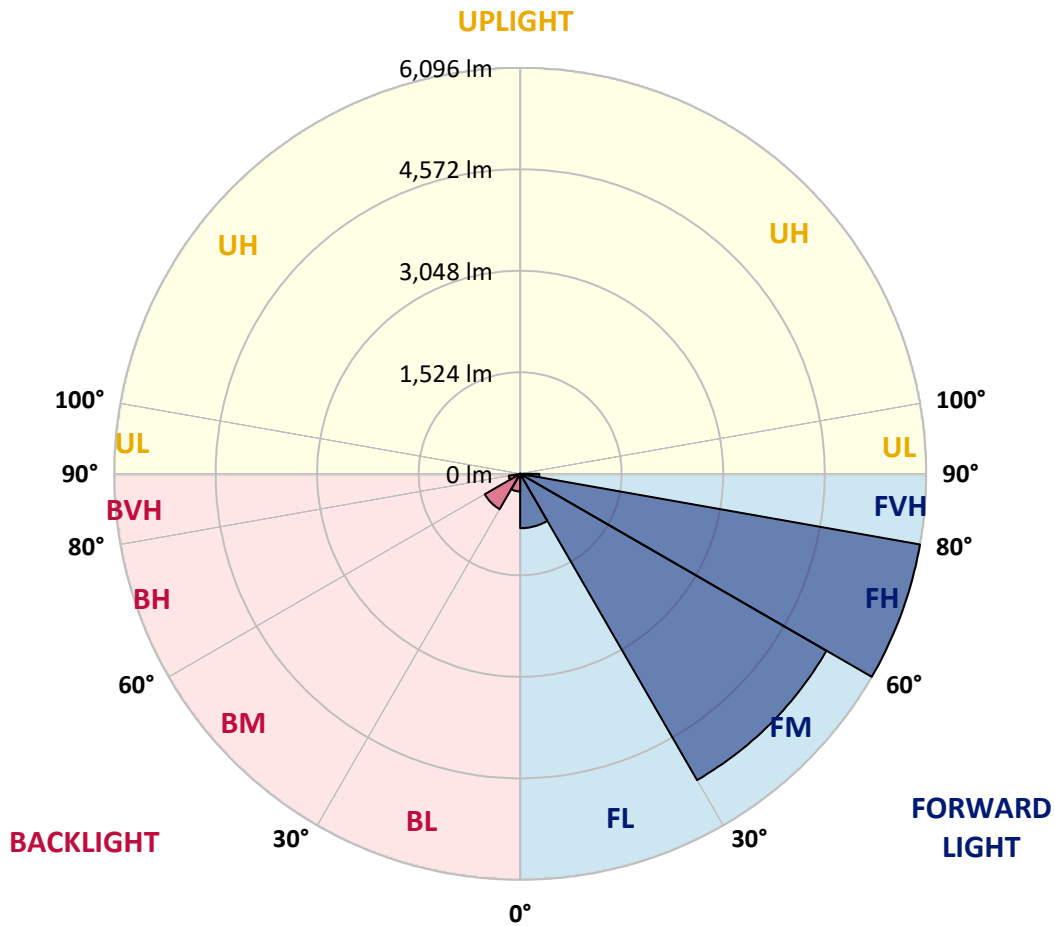
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	816.7	6.0			
FM (30°-60°)	5310.4	39.1			
FH (60°-80°)	6096.1	44.9			G3/7500
FVH (80°-90°)	289.3	2.1			G3/500
BL (0°-30°)	266.2	2.0	B1/500		
BM (30°-60°)	613.8	4.5	B1/1000		
BH (60°-80°)	173.5	1.3	B1/500		G1/500
BVH (80°-90°)	5.0	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-G3

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	34°	35°	45°	55°	65°	75°	85°
0°	808.4	808.4	808.4	808.4	808.4	808.4	808.4	808.4	808.4	808.4	808.4
2.5°	1028.8	988.5	923.0	927.8	957.1	963.3	972.2	949.0	928.5	892.3	962.6
5°	1318.0	1260.0	1223.2	1211.6	1194.6	1195.9	1154.3	1169.3	1165.2	1191.8	1223.9
7.5°	1481.1	1449.0	1402.6	1389.7	1326.9	1320.1	1268.9	1337.8	1344.6	1335.1	1387.6
10°	1545.9	1503.6	1509.1	1460.6	1429.2	1437.4	1445.6	1451.1	1459.9	1468.8	1404.7
12.5°	1584.1	1591.6	1666.0	1615.5	1646.9	1646.9	1702.1	1643.5	1645.5	1581.4	1592.3
15°	1756.0	1797.6	1764.2	1763.5	1729.4	1738.3	1802.4	1756.0	1779.9	1760.8	1687.1
17.5°	1971.6	1979.8	1916.3	1888.4	1919.1	1919.7	1892.5	1890.4	1807.2	1947.7	1858.3
20°	2040.5	2086.9	1996.8	1887.7	2015.3	2009.1	2007.1	1975.0	1836.5	2031.6	1958.0
22.5°	2228.1	2161.9	2100.5	2028.9	2078.7	2078.7	2071.2	2000.9	1947.0	2024.1	2055.5
25°	2286.8	2295.0	2215.1	2192.0	2193.3	2131.9	2126.5	2096.4	2044.6	2176.3	2113.5
27.5°	2488.7	2485.3	2293.6	2358.4	2275.9	2276.5	2125.8	2193.3	2202.2	2183.8	2254.0
30°	2687.2	2742.5	2453.2	2535.1	2448.5	2422.5	2275.2	2335.2	2350.9	2329.8	2418.4
32.5°	2940.3	3021.5	2740.5	2659.9	2527.6	2601.3	2499.6	2357.7	2435.5	2624.5	2674.3
35°	3208.4	3248.0	2948.5	2836.0	2686.6	2685.9	2682.5	2694.1	2780.0	2992.9	3035.2
37.5°	3690.1	3596.6	3325.8	3067.9	3101.3	3027.0	2975.1	3029.7	3119.1	3469.7	3650.5
40°	3958.9	3891.3	3510.0	3357.2	3191.4	3218.7	3359.2	3353.1	3591.2	3958.2	4229.0
42.5°	4220.2	4156.0	3780.8	3657.3	3444.5	3518.9	3580.3	3658.0	4145.8	4738.0	4886.7
45°	4452.8	4264.5	3999.8	4004.6	3894.1	3902.9	4011.4	4083.0	4788.5	5395.6	5500.0
47.5°	4593.3	4438.5	4184.7	4179.9	4173.1	4131.5	4642.5	4708.0	5300.8	6021.9	6031.4
50°	4791.2	4597.4	4375.0	4379.1	4536.7	4624.7	5234.6	5227.8	5795.4	6544.5	6324.1
52.5°	5037.5	4800.7	4555.8	4738.0	4981.5	5124.8	5620.1	5822.0	6326.8	6872.6	6438.7
55°	5352.6	5056.6	4820.5	5053.8	5585.3	5640.5	5997.3	6423.7	6906.0	7207.6	6475.6
57.5°	5722.4	5369.0	5178.0	5553.9	6084.0	6085.3	6546.5	7065.0	7261.5	7344.0	6434.0
60°	6120.8	5708.8	5516.4	5854.8	6633.8	6689.8	7157.1	7419.1	7622.4	7412.9	6359.6
62.5°	6471.5	6016.4	5867.0	6264.8	7236.9	7369.3	7689.2	7651.7	7883.0	7499.6	6170.6
65°	6889.0	6414.9	6316.6	6904.0	8024.2	8206.3	8286.8	8064.4	7970.3	7432.7	5678.7
67.5°	7302.4	6859.0	6856.2	7612.8	9056.4	9119.1	9034.5	8646.4	7868.6	6843.3	4777.5
70°	7593.7	7117.5	7297.0	8389.2	9994.4	9818.4	9462.3	8921.3	7134.6	5244.9	3121.1
72.5°	7320.1	6861.0	7265.6	8665.5	10110.4	10160.9	9214.7	7991.4	5300.8	2682.5	1129.7
75°	5562.8	5281.7	6308.4	7687.9	8976.6	8988.2	7691.3	5636.4	2610.1	728.6	312.5
77.5°	2801.8	2712.5	3993.0	5457.7	6549.2	6530.1	5284.4	3019.5	839.8	242.2	157.6
80°	1418.3	1346.7	1699.4	2944.4	3889.3	3918.0	3017.4	1352.1	423.7	131.7	109.2
82.5°	871.2	826.8	929.9	1332.4	1887.7	1933.4	1144.8	856.2	262.7	77.8	99.6
85°	168.5	177.4	534.2	667.2	753.8	736.1	339.1	704.7	79.1	46.4	72.3
87.5°	0.0	2.7	123.5	217.6	218.3	193.7	77.1	156.2	10.9	13.0	8.9
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°	808.4	808.4	808.4	808.4	808.4	808.4	808.4	808.4	808.4	808.4	808.4
2.5°	974.2	964.0	878.7	869.1	871.2	856.9	852.1	822.1	814.6	861.0	869.1
5°	1210.2	1142.0	1062.9	1034.2	989.9	914.8	903.9	884.8	863.7	871.9	865.7
7.5°	1354.9	1264.1	1179.5	1028.8	903.9	794.8	777.0	744.3	711.5	712.2	733.4
10°	1378.1	1301.7	1185.0	1001.5	858.9	722.5	603.8	517.8	478.9	444.1	454.4
12.5°	1512.5	1441.5	1226.6	993.3	793.4	580.6	425.0	341.1	304.3	292.0	290.6
15°	1620.3	1564.3	1297.6	968.1	648.1	408.6	304.3	279.7	272.9	284.5	281.1
17.5°	1780.6	1679.6	1290.1	863.7	493.9	310.4	280.4	277.0	285.2	292.0	294.0
20°	1850.8	1705.5	1238.9	700.0	369.8	284.5	273.6	266.7	281.8	302.2	298.1
22.5°	1921.8	1749.9	1178.9	573.1	297.4	272.2	266.1	260.6	272.2	292.0	296.8
25°	1953.9	1820.8	1112.0	447.5	276.3	257.9	253.8	255.8	265.4	283.1	281.1
27.5°	2115.5	1829.0	984.4	353.4	267.4	247.6	247.6	252.4	252.4	276.3	274.2
30°	2216.5	1967.5	880.7	297.4	257.2	233.3	241.5	243.6	240.1	266.1	268.1
32.5°	2393.9	2005.7	779.8	272.9	240.8	231.3	229.9	231.3	234.0	259.2	259.9
35°	2666.8	2194.0	642.0	263.3	232.6	221.0	211.5	219.0	225.8	244.2	247.6
37.5°	3200.3	2387.1	523.3	255.8	228.5	211.5	208.1	206.7	219.0	240.1	247.0
40°	3632.1	2728.9	425.7	249.7	220.4	206.0	197.2	197.8	208.8	224.4	234.7
42.5°	4243.4	2975.8	360.9	240.1	208.8	194.4	184.2	190.3	195.1	211.5	218.3
45°	4753.7	3167.5	317.9	234.0	197.2	183.5	175.3	182.2	177.4	185.6	195.1
47.5°	5159.6	3334.7	285.8	219.0	189.7	177.4	167.1	165.1	156.9	159.0	167.8
50°	5382.7	3306.7	259.2	204.0	180.1	171.2	156.9	142.6	131.7	131.0	136.4
52.5°	5461.8	3157.3	237.4	191.0	168.5	157.6	141.2	121.4	110.5	107.1	111.9
55°	5483.6	2942.4	217.6	176.7	157.6	140.5	123.5	102.3	90.7	85.3	90.1
57.5°	5412.7	2611.5	198.5	163.0	144.6	124.2	105.7	83.9	73.0	66.2	70.3
60°	5237.4	2191.3	181.5	146.0	131.0	109.8	89.4	67.5	55.9	49.8	51.8
62.5°	4849.2	1717.8	163.0	130.3	116.7	96.2	75.0	53.2	42.3	36.8	37.5
65°	4258.4	1280.5	141.9	115.3	103.7	83.2	60.0	40.9	32.1	27.3	26.6
67.5°	3392.6	867.8	120.8	99.6	92.1	70.3	47.8	32.1	25.2	21.8	20.5
70°	1994.1	437.3	100.3	86.0	79.1	58.7	37.5	25.9	23.2	20.5	19.1
72.5°	657.7	189.0	78.5	71.0	65.5	47.1	29.3	23.9	22.5	19.8	18.4
75°	229.2	109.2	58.0	54.6	51.8	35.5	24.6	21.8	21.8	19.1	17.1
77.5°	150.1	84.6	43.0	39.6	38.9	25.9	21.1	20.5	19.1	15.7	13.0
80°	124.8	47.8	30.0	28.0	27.3	16.4	17.1	15.0	11.6	6.8	2.7
82.5°	115.3	28.7	15.7	17.1	15.7	6.1	9.6	8.2	6.1	2.7	0.0
85°	67.5	13.0	8.9	8.9	6.8	1.4	4.8	4.8	2.7	0.7	0.0
87.5°	7.5	6.1	4.8	4.8	3.4	0.0	2.0	1.4	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)