

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: P597177

Luminaire Tested: **MSA-SA4D-835-U-T4W-HSS**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P597177  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-15)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 5/27/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA4D-835-U-T4W-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 16350 lumens  
Efficiency: N/A  
Efficacy: 63.1 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G4

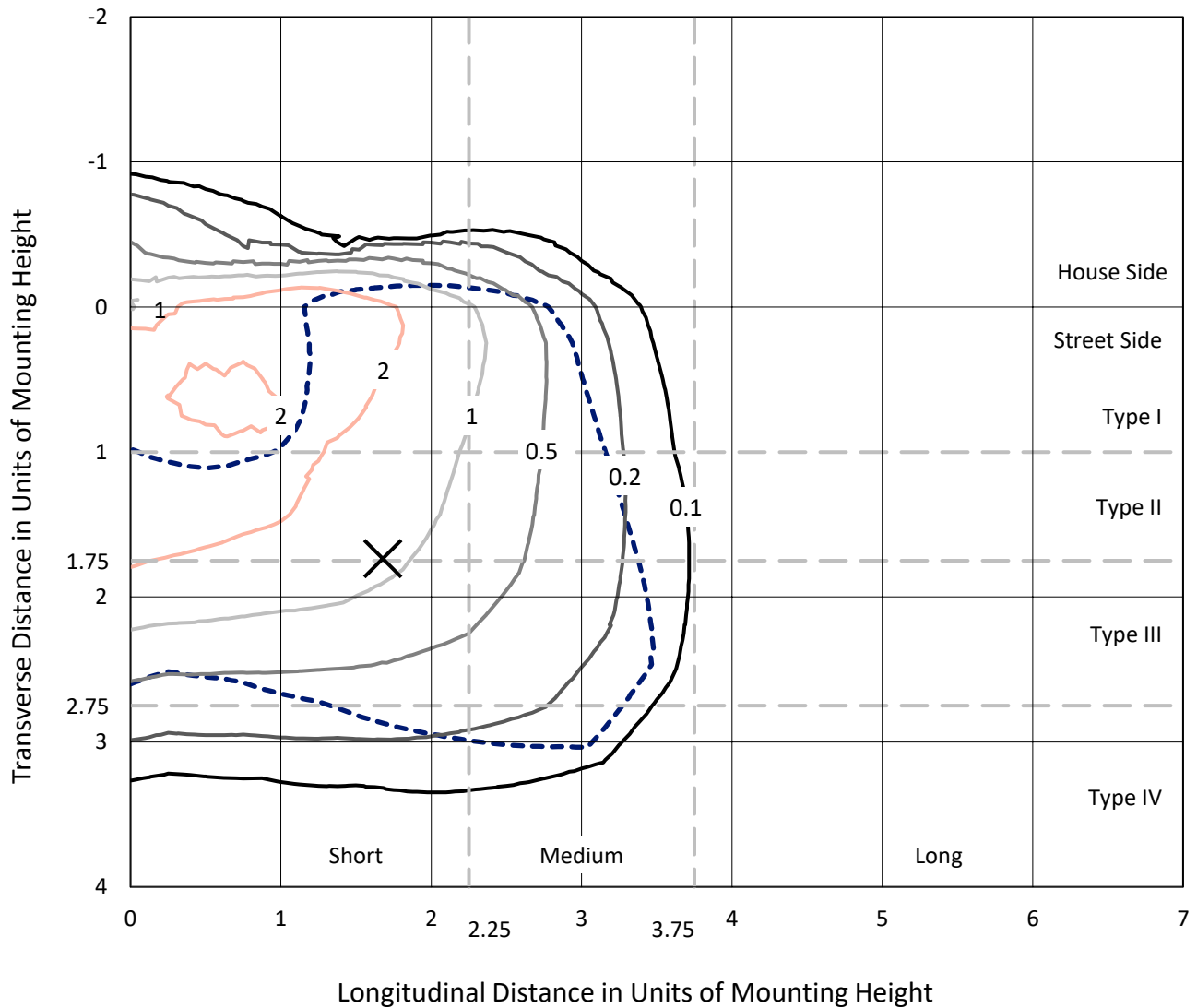
Input Watts (W): 259  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

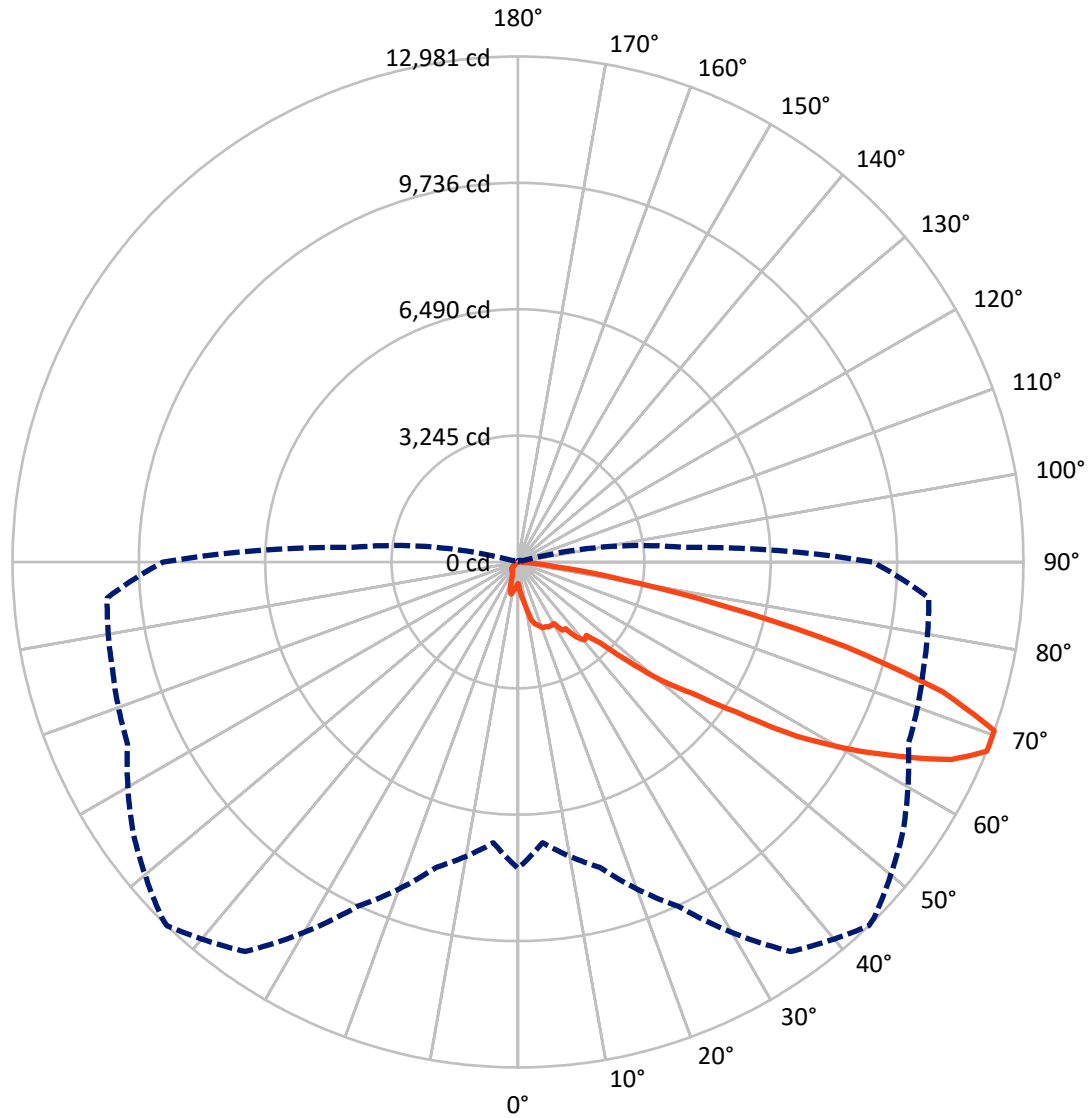
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.8 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 44-Deg Lateral    - - - Horizontal Cone Through 67.5-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1660.8	0.0	1660.8
	% Fixture	10.2	0.0	10.2
<b>Street Side</b>	Lumens	14689.2	0.0	14689.2
	% Fixture	89.8	0.0	89.8
<b>Total</b>	Lumens	16350.0	0.0	16350.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	81.6	0.5
10°-20°	341.8	2.1
20°-30°	605.5	3.7
30°-40°	984.2	6.0
40°-50°	1969.6	12.0
50°-60°	4040.6	24.7
60°-70°	5550.6	33.9
70°-80°	2608.9	16.0
80°-90°	167.1	1.0
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°	16350.0	100.0
0°-180°	16350.0	100.0

**Coefficient of Utilization**

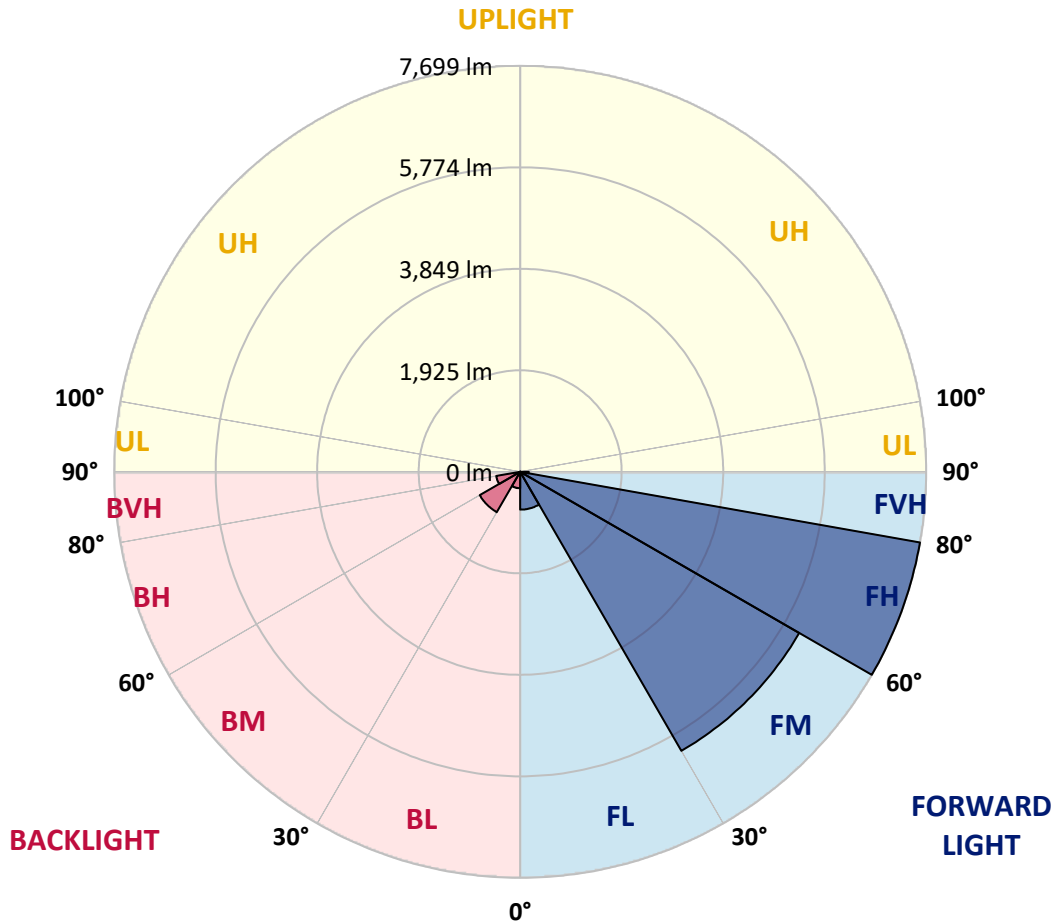


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	717.1	4.4			
FM (30°-60°)	6109.7	37.4			
FH (60°-80°)	7698.6	47.1			G4/12000
FVH (80°-90°)	163.7	1.0			G2/225
BL (0°-30°)	311.8	1.9	B1/500		
BM (30°-60°)	884.7	5.4	B1/1000		
BH (60°-80°)	460.9	2.8	B1/500		G1/500
BVH (80°-90°)	3.4	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-G4**  
 Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	550.9	550.9	550.9	550.9	550.9	550.9	550.9	550.9	550.9	550.9	550.9
2.5°	700.5	678.0	645.5	652.7	656.3	666.3	667.2	654.5	618.5	608.6	652.7
5°	981.8	926.8	916.9	896.2	854.7	832.2	826.7	849.3	820.4	811.4	823.1
7.5°	1254.1	1207.2	1155.8	1127.9	1041.3	988.1	985.4	994.4	999.8	968.3	984.5
10°	1435.3	1383.9	1373.1	1307.3	1232.5	1219.8	1214.4	1180.2	1152.2	1128.8	1050.3
12.5°	1599.4	1598.5	1618.3	1523.7	1511.9	1524.6	1520.1	1397.4	1369.5	1271.2	1248.7
15°	1817.6	1871.7	1786.0	1706.7	1605.7	1649.0	1637.3	1558.8	1539.9	1473.2	1376.7
17.5°	2043.9	2058.3	1915.0	1793.2	1767.1	1710.3	1722.0	1694.1	1598.5	1651.7	1556.1
20°	2049.3	2080.8	1927.6	1726.5	1806.8	1804.1	1805.0	1777.9	1651.7	1776.1	1688.7
22.5°	2125.0	2047.5	1905.0	1777.0	1791.4	1805.0	1819.4	1786.0	1759.0	1789.6	1805.9
25°	2094.4	2063.7	1926.7	1841.9	1828.4	1839.2	1842.8	1885.2	1868.1	1942.0	1901.4
27.5°	2173.7	2129.5	1884.3	1899.6	1851.8	1839.2	1817.6	1959.1	2009.6	1951.0	2059.2
30°	2309.8	2303.5	1957.3	1979.9	1942.9	1832.0	1889.7	2074.5	2137.6	2101.6	2233.2
32.5°	2522.6	2544.3	2171.0	2024.9	2043.9	2093.5	2071.8	2074.5	2234.1	2314.3	2418.9
35°	2824.6	2812.9	2379.3	2196.2	2097.1	2105.2	2135.8	2282.8	2489.3	2483.8	2594.7
37.5°	3417.9	3289.9	2748.0	2371.1	2400.9	2441.5	2418.9	2616.4	2636.2	2643.4	2908.5
40°	4292.4	4122.0	3329.5	2739.9	2453.2	2632.6	2621.8	2670.5	2803.0	2852.6	3239.4
42.5°	5444.6	5215.6	4352.8	3417.9	2705.6	2582.1	2648.8	2740.8	3186.2	3327.7	3751.5
45°	6717.7	6254.2	5373.4	4384.4	3338.5	2955.4	3005.9	3177.2	3794.7	4029.1	4497.1
47.5°	7542.6	7135.1	6384.1	5240.9	3998.5	3797.4	3802.0	3838.9	4509.7	4944.2	5571.7
50°	8259.3	7825.7	7128.8	6136.1	5166.0	4785.6	4699.0	4528.6	5420.3	6014.4	6710.4
52.5°	9270.9	8764.2	7873.5	7186.5	6497.7	5601.5	5570.8	5628.5	6494.1	7118.9	7878.0
55°	10183.3	9567.5	8717.4	8284.6	8015.9	6800.6	6826.7	6923.2	7872.6	8203.5	8916.6
57.5°	10586.3	9919.2	9481.9	9287.1	9143.8	8438.8	8350.4	8292.7	8959.9	9086.1	10004.8
60°	10850.5	10215.8	10017.4	10062.5	10497.1	9748.8	9668.5	9333.1	9859.6	9963.3	10980.3
62.5°	10683.7	10104.9	10147.3	10523.2	11487.9	10995.6	10763.9	10203.1	10595.3	10679.2	11680.8
65°	9633.4	9030.2	9574.8	10484.4	12243.4	12231.7	12124.4	11006.5	11002.8	11110.1	11734.9
67.5°	7869.0	7236.1	8116.9	9757.8	12211.9	12980.9	12930.4	12072.1	11061.5	10774.7	10589.9
70°	5470.8	4921.7	5920.7	8058.3	11123.7	12975.5	12894.4	12788.0	10598.0	9274.5	8210.7
72.5°	2842.7	2540.6	3471.1	5552.8	8867.0	11400.4	11668.2	11493.3	9049.1	6738.4	4835.2
75°	965.6	866.4	1431.7	2947.3	5894.5	8705.6	9019.4	8841.8	6146.1	3615.3	1912.2
77.5°	374.2	348.0	513.0	1196.4	2957.2	5304.9	5645.7	5464.5	3296.2	1324.4	449.9
80°	212.8	205.6	283.1	539.1	1303.7	2638.9	2878.7	2611.0	1188.3	446.3	117.2
82.5°	90.2	92.9	157.8	291.2	655.4	931.3	1038.6	947.6	497.7	305.6	43.3
85°	19.8	24.3	74.8	162.3	275.0	266.0	278.6	309.2	305.6	224.5	18.9
87.5°	0.0	0.0	23.4	44.2	65.8	43.3	34.3	60.4	93.8	90.2	8.1
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°	550.9	550.9	550.9	550.9	550.9	550.9	550.9	550.9	550.9	550.9	550.9
2.5°	660.9	651.8	595.0	591.4	595.0	585.1	584.2	563.5	565.3	612.2	615.8
5°	823.1	778.1	729.4	714.0	699.6	667.2	685.2	685.2	685.2	715.0	724.0
7.5°	970.1	909.7	841.2	783.5	727.6	687.0	715.0	734.8	746.5	785.3	803.3
10°	1036.8	977.3	916.0	834.0	790.7	775.4	742.9	725.8	746.5	738.4	748.3
12.5°	1179.3	1125.2	1019.7	934.9	902.5	850.2	754.6	687.9	643.7	636.5	634.7
15°	1318.1	1284.7	1143.2	1029.6	916.9	796.1	632.9	544.6	497.7	489.6	490.5
17.5°	1493.9	1446.1	1237.9	1074.7	883.5	666.3	488.7	412.9	409.3	429.2	431.0
20°	1611.1	1532.7	1285.6	1037.7	773.6	504.0	382.3	364.2	393.1	429.2	425.5
22.5°	1722.9	1638.2	1348.8	1005.3	599.5	382.3	351.6	353.4	377.8	416.5	426.4
25°	1796.8	1766.2	1426.3	929.5	457.1	330.9	336.3	349.8	370.5	407.5	407.5
27.5°	2019.5	1876.2	1417.3	782.6	351.6	308.3	321.0	338.1	348.9	393.1	397.6
30°	2154.8	2107.9	1464.2	632.9	308.3	279.5	303.8	319.2	326.4	376.9	378.7
32.5°	2320.7	2217.0	1521.0	467.0	286.7	277.7	272.3	284.0	304.7	348.9	351.6
35°	2522.6	2492.0	1439.8	366.9	279.5	259.7	248.8	255.1	268.7	298.4	304.7
37.5°	2934.6	2752.5	1391.1	314.7	279.5	253.3	241.6	225.4	227.2	247.9	259.7
40°	3281.7	3225.8	1255.0	305.6	266.9	244.3	215.5	195.6	182.1	188.4	192.9
42.5°	3919.2	3660.4	1079.2	301.1	255.1	220.9	183.0	162.3	141.5	143.4	150.6
45°	4692.7	4134.6	922.3	296.6	247.0	197.4	154.2	129.8	108.2	109.1	116.3
47.5°	5725.9	4826.1	732.1	283.1	232.6	175.8	124.4	99.2	86.6	89.3	95.6
50°	6899.8	5432.9	578.8	262.4	215.5	155.1	101.0	80.2	75.7	78.4	85.6
52.5°	7948.3	5880.1	477.8	243.4	191.1	126.2	84.7	71.2	69.4	71.2	76.6
55°	8880.5	6139.7	399.4	221.8	164.1	101.9	76.6	65.8	64.9	64.0	67.6
57.5°	9755.1	6214.6	311.9	187.5	133.4	88.4	71.2	61.3	59.5	56.8	59.5
60°	10392.5	6086.5	229.0	150.6	109.1	80.2	66.7	55.0	52.3	47.8	49.6
62.5°	10699.9	5735.8	173.1	120.8	92.9	73.0	59.5	47.8	44.2	38.8	39.7
65°	10407.8	5157.9	136.1	101.9	79.3	61.3	50.5	40.6	36.1	30.7	30.7
67.5°	9114.0	4278.9	115.4	88.4	66.7	52.3	41.5	37.0	29.8	25.2	24.3
70°	6689.7	3078.0	99.2	77.5	57.7	45.1	35.2	33.4	28.9	24.3	22.5
72.5°	3775.8	1741.8	84.7	68.5	48.7	37.9	29.8	30.7	27.9	22.5	20.7
75°	1440.7	586.9	70.3	56.8	39.7	28.9	25.2	25.2	25.2	18.9	16.2
77.5°	357.0	149.7	55.9	46.0	31.6	18.9	20.7	21.6	21.6	16.2	11.7
80°	98.3	50.5	33.4	33.4	22.5	10.8	14.4	14.4	11.7	5.4	0.0
82.5°	36.1	18.9	11.7	14.4	9.9	3.6	5.4	3.6	2.7	0.0	0.0
85°	15.3	9.9	7.2	8.1	4.5	0.0	0.9	1.8	0.0	0.0	0.0
87.5°	6.3	4.5	3.6	3.6	1.8	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)