

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: P597165

Luminaire Tested: **MSA-SA4D-835-U-SL4-HSS**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P597165
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-SA4D-835-U-SL4-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) 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: 17937 lumens
Efficiency: N/A
Efficacy: 69.3 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G4

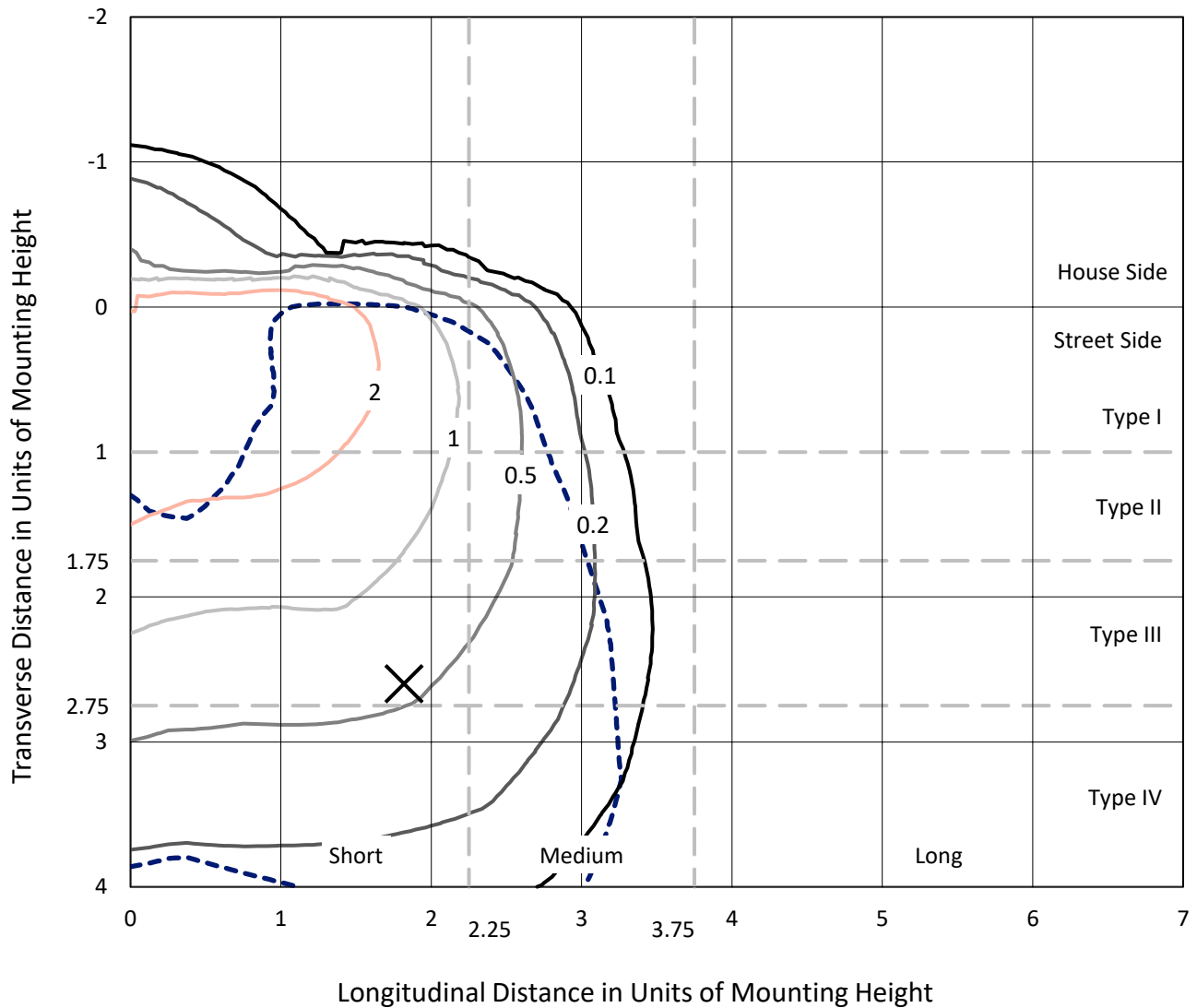
Input Watts (W): 259
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

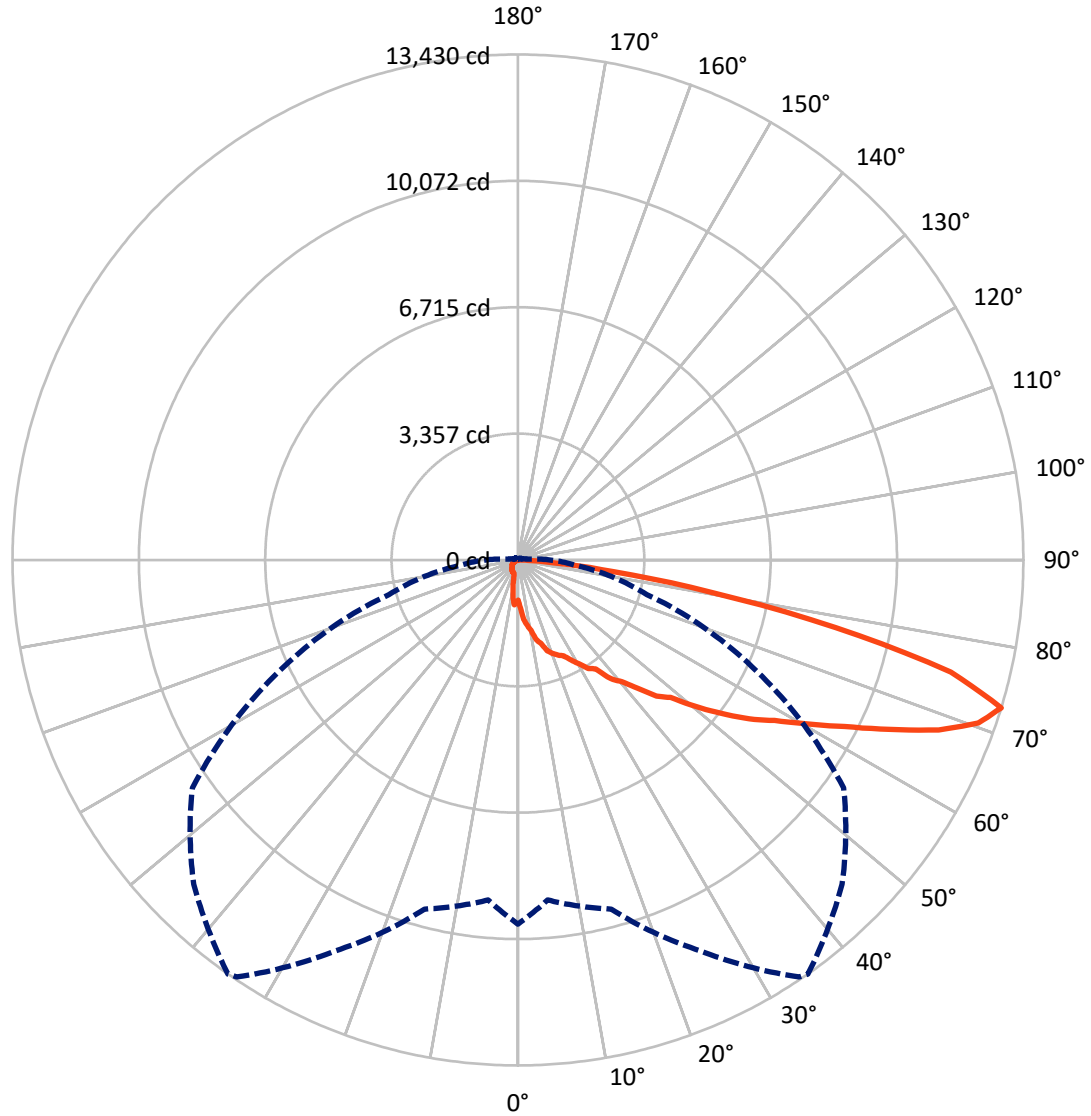
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.1 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	1399.1	0.0	1399.1
	% Fixture	7.8	0.0	7.8
Street Side	Lumens	16537.9	0.0	16537.9
	% Fixture	92.2	0.0	92.2
Total	Lumens	17937.0	0.0	17937.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	136.3	0.8
10°-20°	459.0	2.6
20°-30°	835.9	4.7
30°-40°	1441.9	8.0
40°-50°	2563.2	14.3
50°-60°	3825.0	21.3
60°-70°	4886.8	27.2
70°-80°	3399.9	19.0
80°-90°	388.9	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°	17937.0	100.0
0°-180°	17937.0	100.0

Coefficient of Utilization

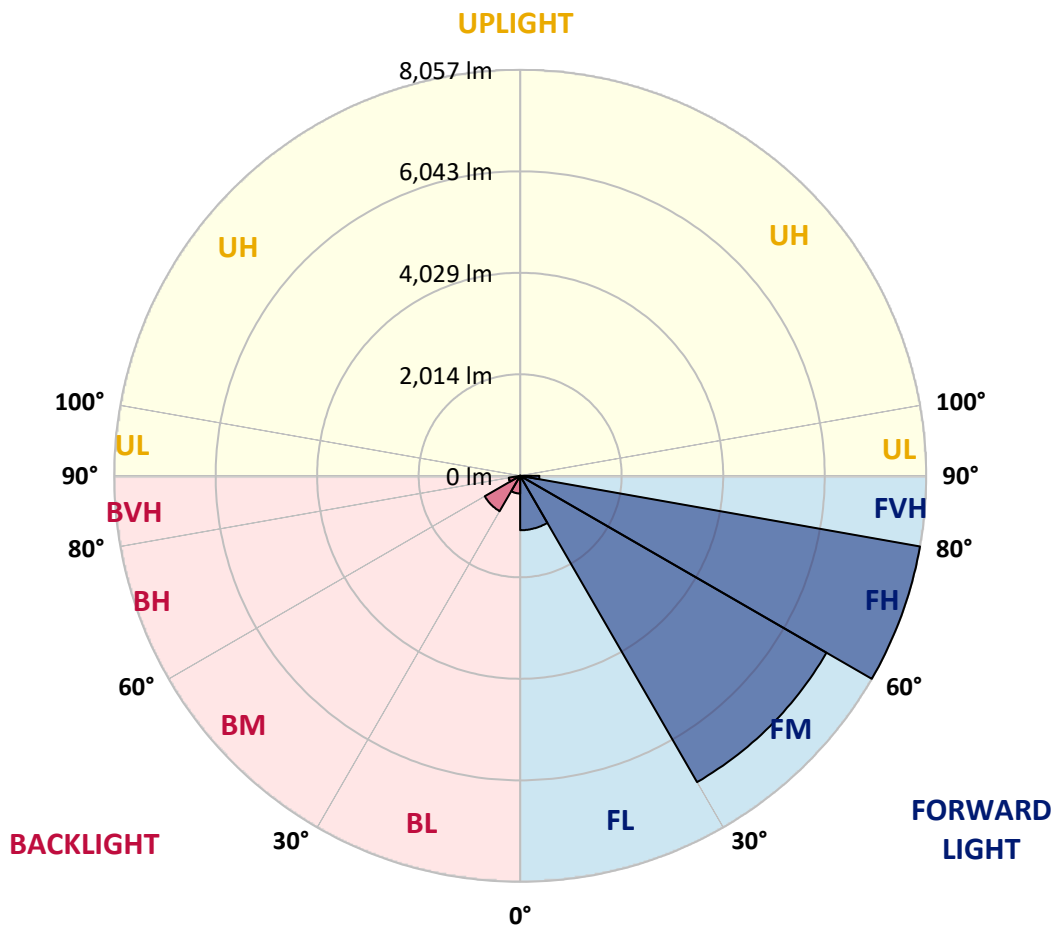


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1079.4	6.0			
FM (30°-60°)	7018.8	39.1			
FH (60°-80°)	8057.3	44.9			G4/12000
FVH (80°-90°)	382.4	2.1			G3/500
BL (0°-30°)	351.9	2.0	B1/500		
BM (30°-60°)	811.3	4.5	B1/1000		
BH (60°-80°)	229.4	1.3	B1/500		G1/500
BVH (80°-90°)	6.5	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°	34°	35°	45°	55°	65°	75°	85°
0°	1068.5	1068.5	1068.5	1068.5	1068.5	1068.5	1068.5	1068.5	1068.5	1068.5	1068.5
2.5°	1359.8	1306.6	1220.0	1226.3	1265.1	1273.2	1284.9	1254.3	1227.2	1179.4	1272.3
5°	1742.1	1665.4	1616.7	1601.4	1578.9	1580.7	1525.7	1545.5	1540.1	1575.3	1617.6
7.5°	1957.6	1915.2	1853.9	1836.7	1753.8	1744.8	1677.1	1768.2	1777.2	1764.6	1834.0
10°	2043.2	1987.3	1994.5	1930.5	1889.0	1899.9	1910.7	1917.9	1929.6	1941.3	1856.6
12.5°	2093.7	2103.6	2201.9	2135.2	2176.7	2176.7	2249.7	2172.2	2174.9	2090.1	2104.5
15°	2321.0	2376.0	2331.8	2330.9	2285.8	2297.5	2382.3	2321.0	2352.5	2327.3	2229.9
17.5°	2605.9	2616.7	2532.9	2495.9	2536.5	2537.4	2501.3	2498.6	2388.6	2574.3	2456.2
20°	2697.0	2758.3	2639.3	2495.0	2663.6	2655.5	2652.8	2610.4	2427.4	2685.2	2587.9
22.5°	2944.9	2857.5	2776.3	2681.6	2747.5	2747.5	2737.5	2644.7	2573.4	2675.3	2716.8
25°	3022.5	3033.3	2927.8	2897.1	2898.9	2817.8	2810.6	2770.9	2702.4	2876.4	2793.4
27.5°	3289.4	3284.9	3031.5	3117.1	3008.0	3008.9	2809.7	2898.9	2910.7	2886.3	2979.2
30°	3551.8	3624.8	3242.5	3350.7	3236.2	3201.9	3007.1	3086.5	3107.2	3079.3	3196.5
32.5°	3886.3	3993.6	3622.1	3515.7	3340.8	3438.2	3303.8	3116.2	3219.0	3468.8	3534.6
35°	4240.7	4293.0	3897.1	3748.3	3550.9	3550.0	3545.5	3560.8	3674.4	3955.7	4011.6
37.5°	4877.3	4753.7	4395.7	4054.9	4099.1	4000.8	3932.3	4004.4	4122.5	4586.0	4825.0
40°	5232.5	5143.2	4639.2	4437.2	4218.1	4254.2	4439.9	4431.8	4746.5	5231.6	5589.6
42.5°	5577.9	5493.1	4997.2	4834.0	4552.6	4650.9	4732.1	4834.9	5479.6	6262.2	6458.8
45°	5885.3	5636.5	5286.6	5292.9	5146.9	5158.6	5301.9	5396.6	6329.0	7131.5	7269.4
47.5°	6071.1	5866.4	5531.0	5524.7	5515.6	5460.6	6136.0	6222.6	7006.1	7959.2	7971.9
50°	6332.6	6076.5	5782.5	5788.0	5996.2	6112.6	6918.7	6909.7	7659.9	8649.9	8358.7
52.5°	6658.1	6345.2	6021.5	6262.2	6584.2	6773.5	7428.1	7695.0	8362.3	9083.6	8510.2
55°	7074.7	6683.3	6371.4	6679.7	7382.1	7455.2	7926.8	8490.3	9127.8	9526.4	8558.9
57.5°	7563.4	7096.3	6843.8	7340.7	8041.3	8043.1	8652.6	9337.9	9597.6	9706.7	8503.9
60°	8090.0	7545.4	7291.1	7738.3	8768.0	8842.0	9459.6	9805.9	10074.6	9797.8	8405.6
62.5°	8553.4	7952.0	7754.5	8280.2	9565.1	9740.1	10163.0	10113.4	10419.0	9912.3	8155.8
65°	9105.3	8478.6	8348.8	9125.1	10605.7	10846.4	10952.8	10658.9	10534.5	9823.9	7505.7
67.5°	9651.7	9065.6	9062.0	10062.0	11970.0	12052.9	11941.1	11428.0	10400.1	9044.9	6314.5
70°	10036.7	9407.3	9644.5	11088.1	13209.8	12977.1	12506.5	11791.4	9429.9	6932.2	4125.2
72.5°	9675.2	9068.3	9603.0	11453.3	13363.1	13429.8	12179.1	10562.4	7006.1	3545.5	1493.2
75°	7352.4	6980.9	8337.9	10161.2	11864.5	11879.8	10165.7	7449.8	3449.9	963.0	413.0
77.5°	3703.2	3585.1	5277.6	7213.5	8656.2	8631.0	6984.5	3990.9	1110.0	320.1	208.3
80°	1874.6	1779.9	2246.1	3891.7	5140.5	5178.4	3988.2	1787.2	560.0	174.0	144.3
82.5°	1151.5	1092.9	1229.0	1761.0	2495.0	2555.4	1513.0	1131.6	347.2	102.8	131.6
85°	222.7	234.4	706.0	881.9	996.4	972.9	448.1	931.4	104.6	61.3	95.6
87.5°	0.0	3.6	163.2	287.6	288.5	256.1	101.9	206.5	14.4	17.1	11.7
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°	1068.5	1068.5	1068.5	1068.5	1068.5	1068.5	1068.5	1068.5	1068.5	1068.5	1068.5
2.5°	1287.6	1274.1	1161.4	1148.8	1151.5	1132.5	1126.2	1086.5	1076.6	1137.9	1148.8
5°	1599.6	1509.4	1404.8	1367.0	1308.4	1209.2	1194.7	1169.5	1141.5	1152.4	1144.2
7.5°	1790.8	1670.8	1559.0	1359.8	1194.7	1050.5	1027.0	983.7	940.5	941.4	969.3
10°	1821.4	1720.4	1566.2	1323.7	1135.2	954.9	798.0	684.4	633.0	587.0	600.5
12.5°	1999.1	1905.3	1621.2	1312.9	1048.7	767.3	561.8	450.8	402.2	385.9	384.1
15°	2141.5	2067.6	1715.0	1279.5	856.6	540.1	402.2	369.7	360.7	376.0	371.5
17.5°	2353.4	2220.0	1705.1	1141.5	652.8	410.3	370.6	366.1	376.9	385.9	388.6
20°	2446.3	2254.2	1637.5	925.1	488.7	376.0	361.6	352.6	372.4	399.4	394.0
22.5°	2540.1	2312.8	1558.1	757.4	393.1	359.8	351.7	344.4	359.8	385.9	392.2
25°	2582.4	2406.6	1469.8	591.5	365.2	340.8	335.4	338.1	350.8	374.2	371.5
27.5°	2796.1	2417.4	1301.1	467.1	353.5	327.3	327.3	333.6	333.6	365.2	362.5
30°	2929.6	2600.5	1164.1	393.1	339.9	308.4	319.2	321.9	317.4	351.7	354.4
32.5°	3164.0	2651.0	1030.6	360.7	318.3	305.7	303.9	305.7	309.3	342.6	343.5
35°	3524.7	2899.8	848.5	348.1	307.5	292.1	279.5	289.4	298.5	322.8	327.3
37.5°	4229.8	3155.0	691.6	338.1	302.1	279.5	275.0	273.2	289.4	317.4	326.4
40°	4800.6	3606.8	562.7	330.0	291.2	272.3	260.6	261.5	275.9	296.7	310.2
42.5°	5608.5	3933.2	477.0	317.4	275.9	257.0	243.5	251.6	257.9	279.5	288.5
45°	6283.0	4186.6	420.2	309.3	260.6	242.6	231.7	240.8	234.4	245.3	257.9
47.5°	6819.5	4407.5	377.8	289.4	250.7	234.4	220.9	218.2	207.4	210.1	221.8
50°	7114.3	4370.5	342.6	269.6	238.0	226.3	207.4	188.5	174.0	173.1	180.3
52.5°	7218.9	4173.0	313.8	252.5	222.7	208.3	186.7	160.5	146.1	141.6	147.9
55°	7247.8	3889.0	287.6	233.5	208.3	185.7	163.2	135.3	119.9	112.7	119.0
57.5°	7154.0	3451.7	262.4	215.5	191.2	164.1	139.8	110.9	96.5	87.5	92.9
60°	6922.3	2896.2	239.8	193.0	173.1	145.2	118.1	89.3	73.9	65.8	68.5
62.5°	6409.2	2270.5	215.5	172.2	154.2	127.1	99.2	70.3	55.9	48.7	49.6
65°	5628.4	1692.5	187.6	152.4	137.1	110.0	79.3	54.1	42.4	36.1	35.2
67.5°	4484.1	1147.0	159.6	131.6	121.7	92.9	63.1	42.4	33.4	28.9	27.1
70°	2635.6	578.0	132.5	113.6	104.6	77.5	49.6	34.3	30.7	27.1	25.2
72.5°	869.2	249.8	103.7	93.8	86.6	62.2	38.8	31.6	29.8	26.1	24.3
75°	303.0	144.3	76.6	72.1	68.5	46.9	32.5	28.9	28.9	25.2	22.5
77.5°	198.4	111.8	56.8	52.3	51.4	34.3	28.0	27.1	25.2	20.7	17.1
80°	165.0	63.1	39.7	37.0	36.1	21.6	22.5	19.8	15.3	9.0	3.6
82.5°	152.4	37.9	20.7	22.5	20.7	8.1	12.6	10.8	8.1	3.6	0.0
85°	89.3	17.1	11.7	11.7	9.0	1.8	6.3	6.3	3.6	0.9	0.0
87.5°	9.9	8.1	6.3	6.3	4.5	0.0	2.7	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)