

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: P368343

Luminaire Tested: **MSA-SA4B-730-U-SL3-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368343
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-19)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA4B-730-U-SL3-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14530 lumens
Efficiency: N/A
Efficacy: 85.0 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G3

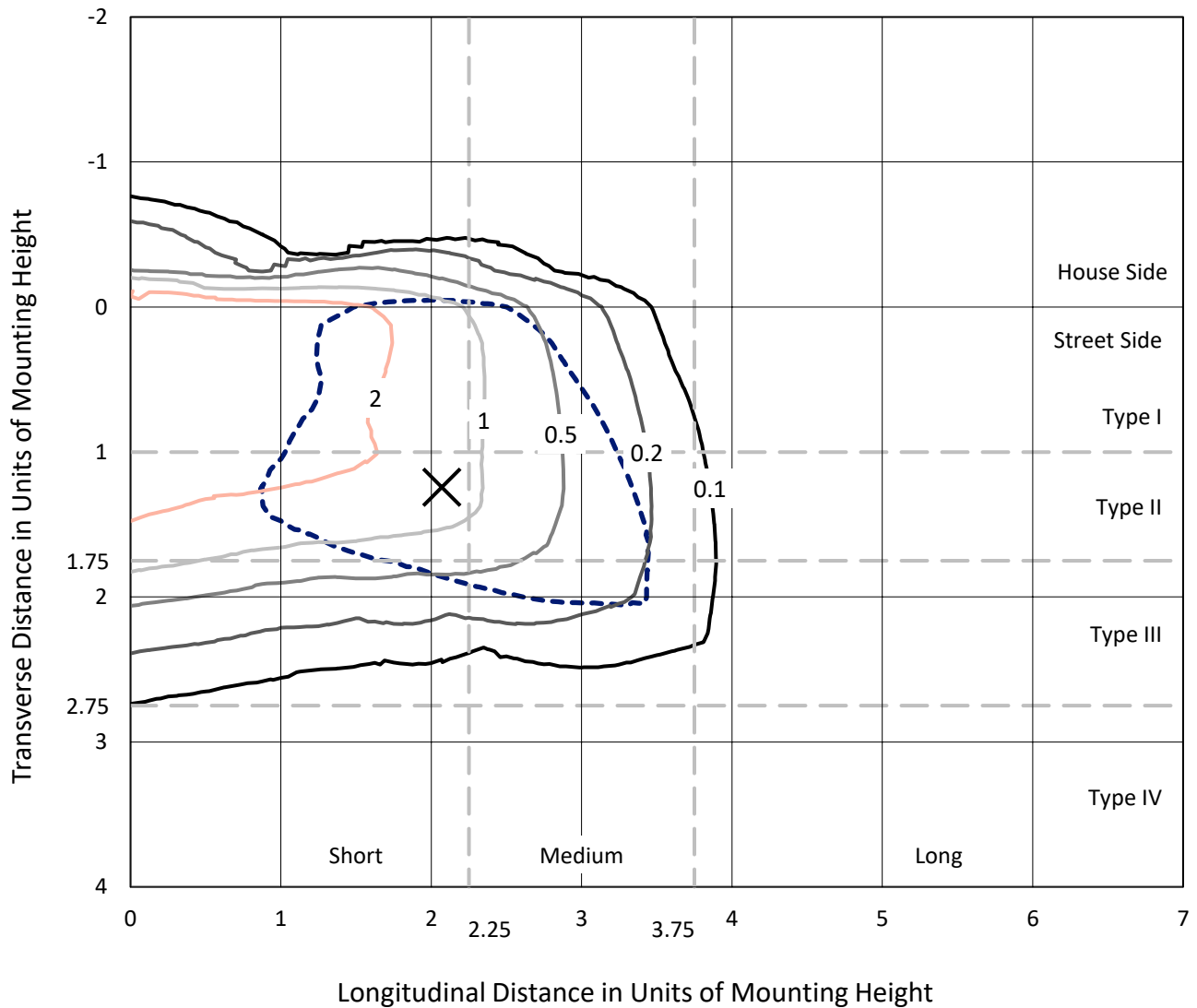
Input Watts (W): 171
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

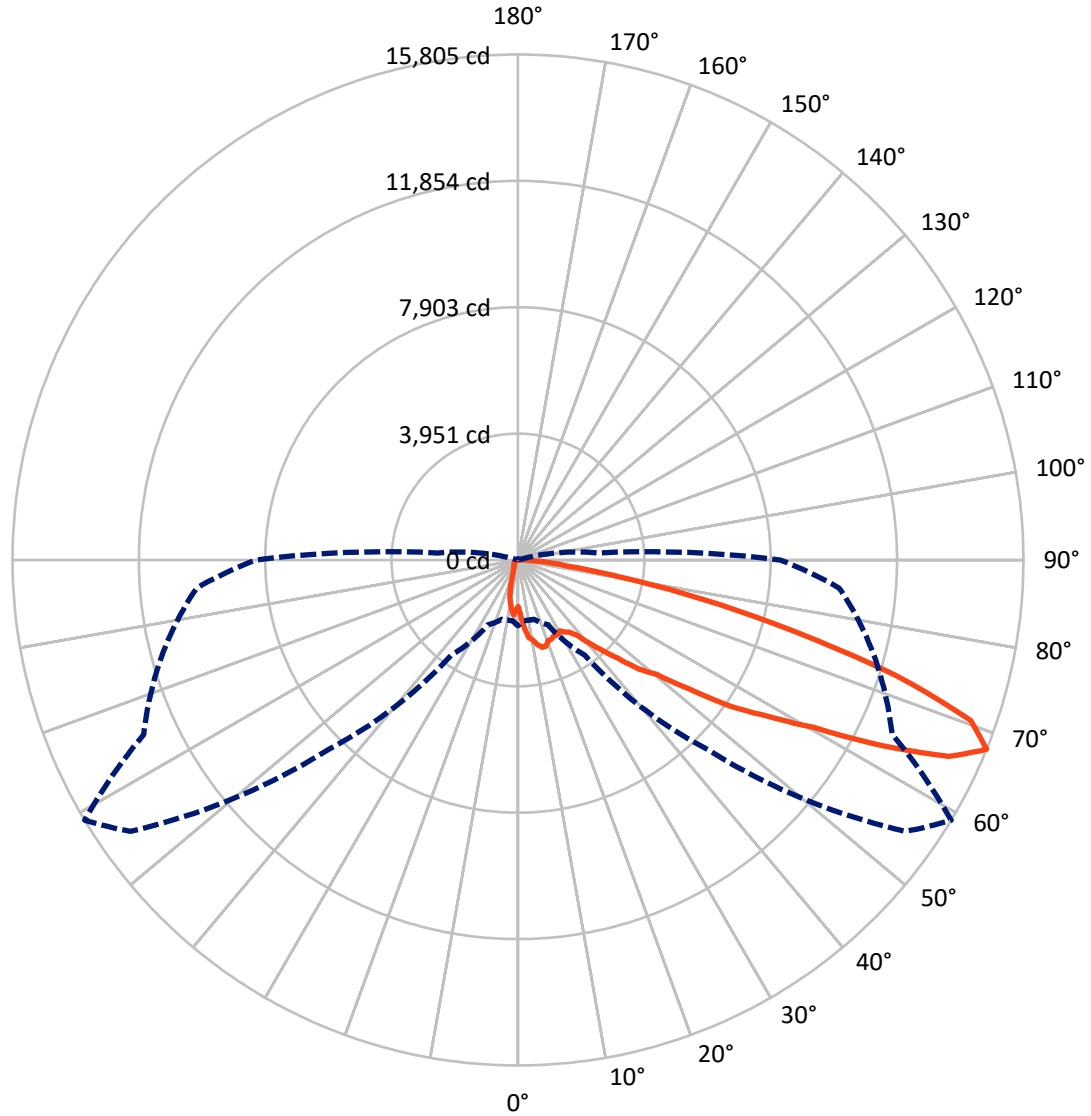
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.2 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1235.7	0.0	1235.7
	% Fixture	8.5	0.0	8.5
Street Side	Lumens	13294.3	0.0	13294.3
	% Fixture	91.5	0.0	91.5
Total	Lumens	14530.0	0.0	14530.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	176.8	1.2
10°-20°	497.7	3.4
20°-30°	740.3	5.1
30°-40°	1142.2	7.9
40°-50°	2038.4	14.0
50°-60°	3627.3	25.0
60°-70°	4224.6	29.1
70°-80°	1878.7	12.9
80°-90°	204.0	1.4
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°	14530.0	100.0
0°-180°	14530.0	100.0

Coefficient of Utilization

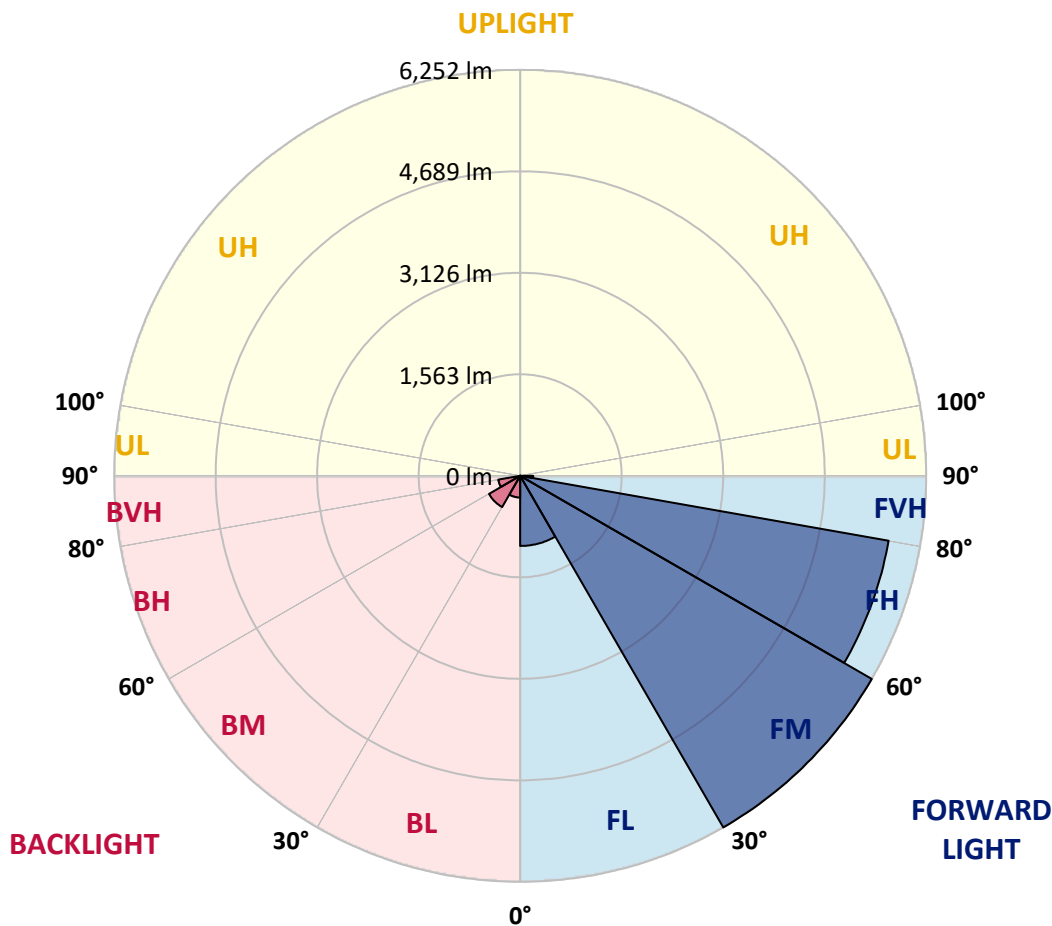


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1080.6	7.4			
FM (30°-60°)	6252.3	43.0			
FH (60°-80°)	5761.0	39.6			G3/7500
FVH (80°-90°)	200.4	1.4			G2/225
BL (0°-30°)	334.2	2.3	B1/500		
BM (30°-60°)	555.6	3.8	B1/1000		
BH (60°-80°)	342.3	2.4	B1/500		G1/500
BVH (80°-90°)	3.6	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 III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	1453.8	1453.8	1453.8	1453.8	1453.8	1453.8	1453.8	1453.8	1453.8	1453.8	1453.8
2.5°	1895.2	1823.8	1722.3	1752.5	1779.7	1805.4	1762.8	1738.5	1726.7	1622.3	1753.2
5°	2327.1	2238.0	2191.7	2179.9	2150.5	2085.0	2193.9	2145.3	2161.5	2182.1	2224.8
7.5°	2458.8	2418.3	2351.3	2376.4	2264.5	2255.0	2405.8	2447.7	2502.9	2465.4	2516.9
10°	2391.1	2321.2	2352.8	2344.0	2339.6	2438.2	2544.1	2546.3	2628.7	2668.4	2494.1
12.5°	2257.2	2265.3	2378.6	2369.7	2516.9	2714.1	2738.3	2712.6	2847.2	2778.1	2751.6
15°	2346.2	2412.4	2349.9	2371.2	2423.4	2669.9	2756.0	2835.4	2962.7	3003.9	2825.1
17.5°	2453.6	2460.2	2346.2	2319.7	2451.4	2566.2	2769.2	2834.7	2847.2	3208.5	2990.7
20°	2395.5	2452.1	2316.0	2149.0	2353.6	2509.5	2715.5	2694.9	2778.8	3268.8	3028.2
22.5°	2550.0	2469.1	2294.7	2168.9	2238.0	2380.0	2554.4	2689.0	2814.8	3124.6	3076.8
25°	2564.7	2535.3	2380.0	2268.2	2256.4	2292.5	2535.3	2622.1	2819.3	3254.1	3035.6
27.5°	2730.2	2696.4	2378.6	2389.6	2279.2	2168.2	2442.6	2646.4	2899.5	3175.3	3123.1
30°	2943.6	2946.5	2536.7	2571.3	2413.9	2235.1	2518.4	2574.3	2953.9	3301.2	3187.9
32.5°	3159.9	3248.9	2849.4	2666.2	2616.9	2488.9	2424.2	2682.4	2894.3	3516.0	3349.7
35°	3488.8	3549.1	3106.9	2942.9	2749.4	2603.7	2680.2	2772.9	3108.4	3800.7	3562.3
37.5°	4045.7	3936.8	3569.0	3283.5	3237.1	3022.3	3060.6	2977.4	3326.9	4136.2	3983.2
40°	4359.1	4260.5	3878.0	3738.9	3443.1	3476.3	3355.6	3404.2	3644.0	4485.7	4366.5
42.5°	4685.8	4591.6	4256.1	4157.5	3875.7	3738.9	3684.5	3858.8	4130.3	5067.6	4916.0
45°	5013.9	4774.8	4632.8	4682.1	4555.5	4284.8	4221.5	4376.8	4661.5	5782.7	5495.8
47.5°	5290.5	5088.9	4982.3	4959.5	4910.2	5286.1	5028.6	5097.0	5222.8	6415.4	6218.3
50°	5789.3	5590.7	5423.7	5377.3	5617.2	6150.6	5753.3	5620.9	5872.5	7179.8	7055.5
52.5°	6509.6	6256.5	5990.9	5991.7	6444.1	6736.9	6925.3	6692.8	6739.9	8020.8	7965.6
55°	7088.6	6767.1	6547.1	6720.8	7395.4	7559.5	8278.3	8074.5	8013.4	8800.6	8732.9
57.5°	7168.1	6782.6	6678.1	6982.7	7906.0	8953.7	9726.9	9217.8	9124.3	9453.2	9587.8
60°	6426.5	6017.4	6096.1	6586.1	8072.3	9803.4	11057.1	10641.4	10047.7	10217.6	10310.3
62.5°	4793.2	4466.5	4687.2	5336.1	7431.5	10372.8	12596.9	12789.7	11118.9	10791.5	10771.6
65°	3109.9	2905.3	3050.3	3582.2	5623.8	10308.1	13972.7	14808.5	11962.7	11259.4	10916.5
67.5°	2057.1	1901.8	1922.4	2237.3	3636.6	8383.5	14795.2	15805.4	12911.8	11525.0	10085.9
70°	1533.2	1411.1	1418.5	1589.1	2158.6	5528.9	13648.3	15018.9	13258.3	10604.6	8140.7
72.5°	1105.8	1024.1	1092.5	1282.4	1720.1	2923.7	10172.7	12368.8	11561.0	8364.3	5484.8
75°	765.9	712.2	824.0	1072.7	1570.0	1815.0	6722.2	8903.6	8103.2	5247.9	2479.4
77.5°	424.5	408.3	569.4	874.0	1425.1	1487.6	4117.8	5850.4	4494.5	1881.2	590.0
80°	185.4	179.5	275.9	656.3	1197.7	1344.2	2318.2	3243.8	1767.9	335.5	190.6
82.5°	79.5	76.5	117.7	395.1	870.4	1124.2	1429.5	1561.2	608.4	103.7	108.2
85°	14.0	15.5	47.1	208.2	529.7	570.9	1035.2	924.1	306.1	49.3	77.3
87.5°	0.0	0.0	7.4	40.5	99.3	163.3	448.8	323.7	58.1	16.2	13.2
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°	1453.8	1453.8	1453.8	1453.8	1453.8	1453.8	1453.8	1453.8	1453.8	1453.8	1453.8
2.5°	1771.6	1730.4	1573.7	1553.8	1532.5	1500.9	1489.1	1421.4	1412.6	1499.4	1499.4
5°	2204.9	2057.8	1908.4	1790.7	1685.5	1539.9	1498.7	1456.0	1421.4	1412.6	1439.8
7.5°	2433.7	2254.2	2019.5	1720.1	1477.3	1266.2	1177.9	1116.1	1046.9	1067.5	1078.6
10°	2421.2	2230.7	1931.3	1546.5	1277.2	1044.0	819.6	688.6	615.8	579.7	575.3
12.5°	2544.1	2364.6	1871.7	1408.2	1064.6	742.3	515.7	422.3	368.6	369.3	364.9
15°	2615.5	2419.8	1802.5	1233.1	749.7	477.5	357.6	337.0	329.6	337.7	333.3
17.5°	2741.3	2477.9	1645.8	971.9	515.7	360.5	328.9	320.8	330.3	347.3	342.8
20°	2731.7	2377.1	1422.9	685.0	381.1	324.5	311.2	298.7	318.6	336.2	333.3
22.5°	2722.9	2278.5	1213.2	505.4	318.6	295.8	284.7	279.6	289.9	310.5	314.9
25°	2644.9	2230.0	1000.6	379.6	288.4	268.5	263.4	259.0	262.7	279.6	278.8
27.5°	2740.5	2107.1	772.5	318.6	267.1	243.5	239.1	231.8	224.4	239.1	241.3
30°	2720.7	2124.0	605.5	280.3	245.7	214.1	215.6	200.1	186.9	200.1	200.1
32.5°	2792.8	2000.4	484.8	254.6	224.4	201.6	183.2	167.0	157.4	165.5	167.0
35°	2898.0	2005.6	379.6	238.4	206.0	179.5	157.4	141.3	132.4	136.1	138.3
37.5°	3250.4	1970.2	317.1	225.9	199.4	166.3	143.5	122.1	116.2	120.7	122.9
40°	3479.9	2064.4	279.6	219.2	182.5	153.0	122.9	107.4	102.3	104.5	108.2
42.5°	3912.5	2116.7	261.2	211.9	167.0	131.0	105.2	96.4	89.0	92.0	94.9
45°	4375.3	2205.7	247.2	203.8	155.2	114.8	92.7	85.3	75.8	76.5	79.5
47.5°	4944.0	2417.6	231.0	189.8	139.1	104.5	82.4	71.4	62.5	61.8	65.5
50°	5707.7	2700.8	216.3	172.2	128.8	95.6	72.1	58.1	50.8	48.6	51.5
52.5°	6522.9	3067.2	200.9	159.7	116.2	83.9	61.8	47.1	40.5	39.0	41.2
55°	7330.7	3418.9	186.1	151.6	103.0	72.1	52.2	39.0	33.1	31.6	33.1
57.5°	8251.0	3799.2	167.0	135.4	90.5	62.5	43.4	32.4	27.2	25.8	26.5
60°	8944.1	3933.1	150.8	117.7	78.7	55.2	36.8	25.8	22.1	20.6	21.3
62.5°	9273.0	3714.6	135.4	102.3	69.2	47.8	30.9	21.3	18.4	16.9	16.9
65°	9187.6	3230.5	119.9	87.6	59.6	39.7	24.3	18.4	16.2	14.0	13.2
67.5°	8201.8	2527.9	102.3	73.6	50.0	32.4	20.6	17.7	14.7	13.2	11.0
70°	6504.5	1830.5	83.1	61.1	41.9	26.5	16.2	16.2	14.0	13.2	10.3
72.5°	4263.5	1152.1	67.7	49.3	34.6	20.6	12.5	14.7	13.2	13.2	9.6
75°	1847.4	412.0	54.4	39.7	28.7	14.0	11.0	13.2	14.0	13.2	11.0
77.5°	432.6	128.0	42.7	31.6	23.5	9.6	11.0	13.2	14.0	12.5	9.6
80°	162.6	54.4	28.0	20.6	18.4	5.9	9.6	8.1	7.4	5.2	1.5
82.5°	98.6	22.8	14.7	10.3	8.8	1.5	4.4	2.9	1.5	1.5	0.0
85°	69.9	11.0	8.1	7.4	4.4	0.0	0.7	0.0	0.0	0.7	0.0
87.5°	9.6	2.9	3.7	3.7	2.9	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)