

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: P596789

Luminaire Tested: **MSA-SA4C-827-U-SL3-HSS**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596789
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-19)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA4C-827-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: 14525 lumens
Efficiency: N/A
Efficacy: 64.6 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G3

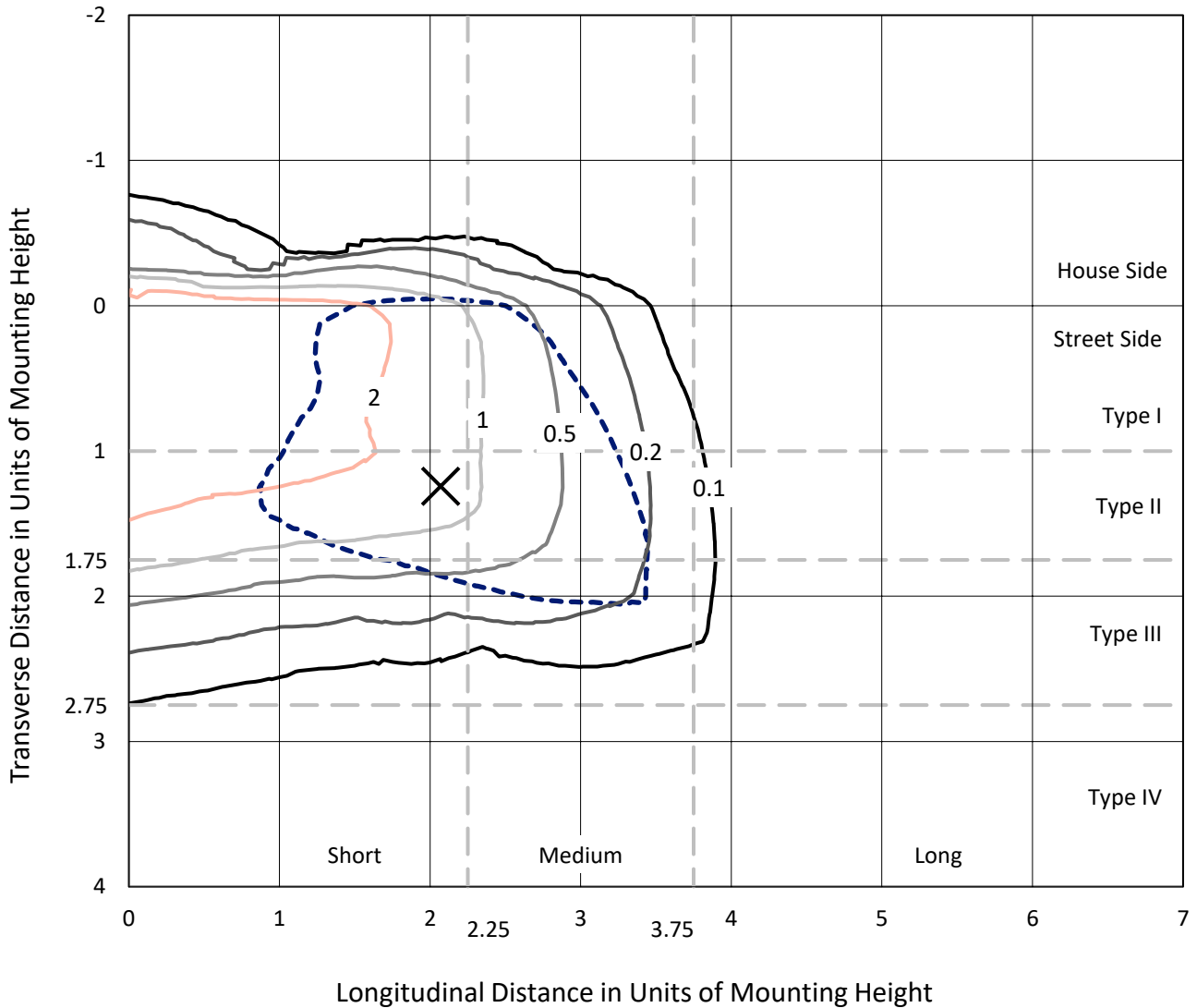
Input Watts (W): 225
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

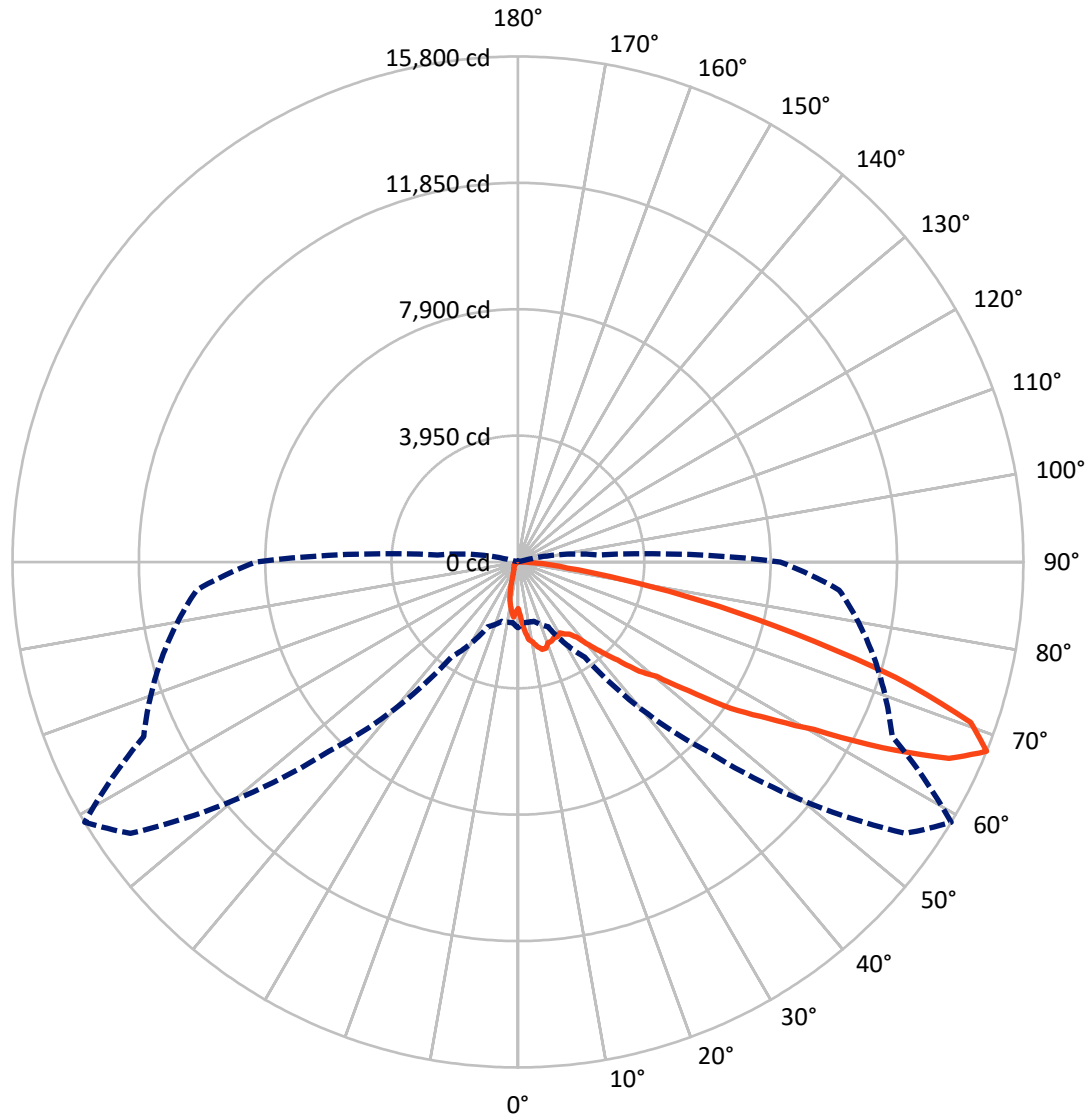
× Max cd
 - - - 1/2 Max cd



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

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CATALOG NUMBER: MSA-SA4C-827-U-SL3-HSS

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	1235.3	0.0	1235.3
	% Fixture	8.5	0.0	8.5
Street Side	Lumens	13289.8	0.0	13289.8
	% Fixture	91.5	0.0	91.5
Total	Lumens	14525.0	0.0	14525.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	176.7	1.2
10°-20°	497.6	3.4
20°-30°	740.1	5.1
30°-40°	1141.8	7.9
40°-50°	2037.7	14.0
50°-60°	3626.1	25.0
60°-70°	4223.1	29.1
70°-80°	1878.1	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°	14525.0	100.0
0°-180°	14525.0	100.0

Coefficient of Utilization

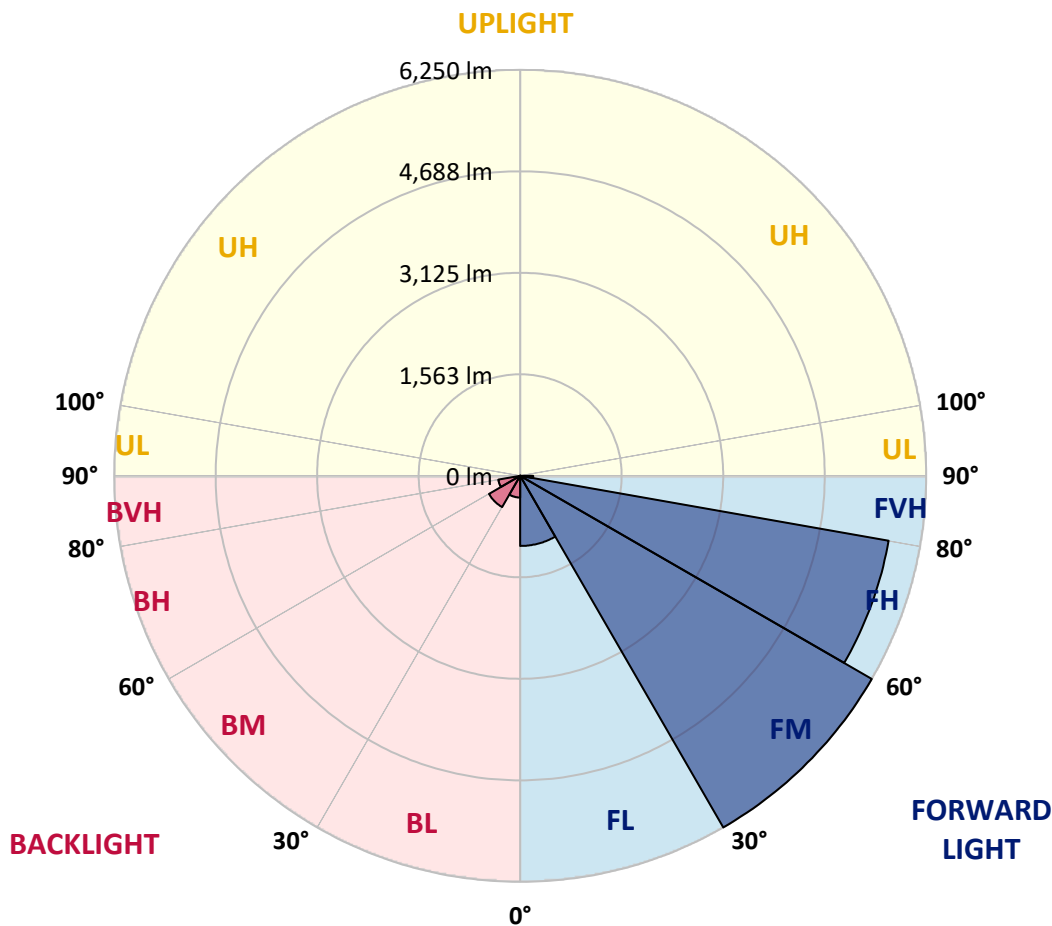


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1080.3	7.4			
FM (30°-60°)	6250.1	43.0			
FH (60°-80°)	5759.0	39.6			G3/7500
FVH (80°-90°)	200.3	1.4			G2/225
BL (0°-30°)	334.1	2.3	B1/500		
BM (30°-60°)	555.4	3.8	B1/1000		
BH (60°-80°)	342.2	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°	1453.3	1453.3	1453.3	1453.3	1453.3	1453.3	1453.3	1453.3	1453.3	1453.3	1453.3
2.5°	1894.5	1823.2	1721.7	1751.9	1779.1	1804.8	1762.2	1737.9	1726.1	1621.7	1752.6
5°	2326.3	2237.3	2190.9	2179.2	2149.8	2084.3	2193.1	2144.6	2160.8	2181.4	2224.0
7.5°	2457.9	2417.5	2350.5	2375.5	2263.8	2254.2	2405.0	2446.9	2502.0	2464.5	2516.0
10°	2390.3	2320.4	2352.0	2343.2	2338.8	2437.3	2543.2	2545.4	2627.8	2667.5	2493.2
12.5°	2256.4	2264.5	2377.7	2368.9	2516.0	2713.1	2737.4	2711.6	2846.2	2777.1	2750.6
15°	2345.4	2411.6	2349.1	2370.4	2422.6	2669.0	2755.0	2834.5	2961.7	3002.9	2824.2
17.5°	2452.8	2459.4	2345.4	2318.9	2450.6	2565.3	2768.3	2833.7	2846.2	3207.3	2989.7
20°	2394.7	2451.3	2315.2	2148.3	2352.7	2508.7	2714.6	2694.0	2777.8	3267.7	3027.2
22.5°	2549.1	2468.2	2293.9	2168.1	2237.3	2379.2	2553.5	2688.1	2813.9	3123.5	3075.7
25°	2563.8	2534.4	2379.2	2267.4	2255.7	2291.7	2534.4	2621.2	2818.3	3252.9	3034.5
27.5°	2729.3	2695.5	2377.7	2388.8	2278.5	2167.4	2441.7	2645.5	2898.5	3174.3	3122.0
30°	2942.6	2945.5	2535.9	2570.4	2413.1	2234.3	2517.5	2573.4	2952.9	3300.0	3186.8
32.5°	3158.8	3247.8	2848.4	2665.3	2616.0	2488.1	2423.3	2681.5	2893.3	3514.8	3348.6
35°	3487.6	3547.9	3105.9	2941.8	2748.4	2602.8	2679.3	2772.0	3107.3	3799.4	3561.1
37.5°	4044.3	3935.5	3567.7	3282.4	3236.0	3021.3	3059.5	2976.4	3325.8	4134.8	3981.8
40°	4357.6	4259.1	3876.6	3737.6	3442.0	3475.1	3354.4	3403.0	3642.7	4484.1	4365.0
42.5°	4684.2	4590.0	4254.6	4156.1	3874.4	3737.6	3683.2	3857.5	4128.9	5065.9	4914.4
45°	5012.2	4773.1	4631.2	4680.5	4554.0	4283.3	4220.1	4375.3	4659.9	5780.7	5493.9
47.5°	5288.7	5087.2	4980.5	4957.7	4908.5	5284.3	5026.9	5095.3	5221.0	6413.2	6216.1
50°	5787.4	5588.8	5421.8	5375.5	5615.3	6148.5	5751.3	5618.9	5870.5	7177.4	7053.1
52.5°	6507.4	6254.4	5988.9	5989.6	6441.9	6734.6	6922.9	6690.5	6737.6	8018.0	7962.8
55°	7086.2	6764.8	6544.9	6718.4	7392.9	7556.9	8275.4	8071.7	8010.7	8797.6	8729.9
57.5°	7165.6	6780.2	6675.8	6980.3	7903.3	8950.6	9723.5	9214.6	9121.2	9450.0	9584.5
60°	6424.3	6015.3	6094.0	6583.9	8069.5	9800.0	11053.3	10637.7	10044.2	10214.1	10306.8
62.5°	4791.5	4465.0	4685.6	5334.3	7428.9	10369.3	12592.6	12785.3	11115.0	10787.8	10767.9
65°	3108.8	2904.3	3049.2	3581.0	5621.9	10304.6	13967.9	14803.4	11958.6	11255.5	10912.8
67.5°	2056.4	1901.2	1921.8	2236.5	3635.4	8380.6	14790.1	15799.9	12907.4	11521.0	10082.4
70°	1532.7	1410.6	1418.0	1588.6	2157.8	5527.0	13643.6	15013.7	13253.8	10600.9	8137.9
72.5°	1105.4	1023.8	1092.2	1281.9	1719.5	2922.7	10169.2	12364.6	11557.0	8361.5	5482.9
75°	765.6	711.9	823.7	1072.3	1569.5	1814.4	6719.9	8900.6	8100.4	5246.1	2478.5
77.5°	424.4	408.2	569.2	873.7	1424.6	1487.1	4116.4	5848.4	4492.9	1880.6	589.8
80°	185.3	179.5	275.8	656.0	1197.3	1343.7	2317.4	3242.7	1767.3	335.4	190.5
82.5°	79.4	76.5	117.7	394.9	870.1	1123.8	1429.0	1560.7	608.2	103.7	108.1
85°	14.0	15.4	47.1	208.1	529.5	570.7	1034.8	923.7	306.0	49.3	77.2
87.5°	0.0	0.0	7.4	40.5	99.3	163.3	448.6	323.6	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°	1453.3	1453.3	1453.3	1453.3	1453.3	1453.3	1453.3	1453.3	1453.3	1453.3	1453.3
2.5°	1771.0	1729.8	1573.2	1553.3	1532.0	1500.3	1488.6	1420.9	1412.1	1498.9	1498.9
5°	2204.2	2057.1	1907.8	1790.1	1684.9	1539.3	1498.1	1455.5	1420.9	1412.1	1439.3
7.5°	2432.9	2253.5	2018.8	1719.5	1476.8	1265.7	1177.5	1115.7	1046.6	1067.2	1078.2
10°	2420.4	2229.9	1930.6	1545.9	1276.8	1043.6	819.3	688.4	615.6	579.5	575.1
12.5°	2543.2	2363.8	1871.0	1407.7	1064.2	742.1	515.6	422.2	368.5	369.2	364.8
15°	2614.6	2418.9	1801.9	1232.6	749.4	477.3	357.4	336.8	329.5	337.6	333.2
17.5°	2740.3	2477.0	1645.2	971.5	515.6	360.4	328.8	320.7	330.2	347.1	342.7
20°	2730.8	2376.3	1422.4	684.7	381.0	324.3	311.1	298.6	318.5	336.1	333.2
22.5°	2721.9	2277.7	1212.8	505.3	318.5	295.7	284.6	279.5	289.8	310.4	314.8
25°	2644.0	2229.2	1000.2	379.5	288.3	268.4	263.3	258.9	262.6	279.5	278.7
27.5°	2739.6	2106.4	772.2	318.5	267.0	243.4	239.0	231.7	224.3	239.0	241.2
30°	2719.7	2123.3	605.3	280.2	245.6	214.0	215.5	200.0	186.8	200.0	200.0
32.5°	2791.8	1999.7	484.7	254.5	224.3	201.5	183.1	166.9	157.4	165.5	166.9
35°	2897.0	2004.9	379.5	238.3	205.9	179.5	157.4	141.2	132.4	136.1	138.3
37.5°	3249.3	1969.6	317.0	225.8	199.3	166.2	143.4	122.1	116.2	120.6	122.8
40°	3478.7	2063.7	279.5	219.2	182.4	153.0	122.8	107.4	102.2	104.4	108.1
42.5°	3911.2	2115.9	261.1	211.8	166.9	130.9	105.2	96.3	89.0	91.9	94.9
45°	4373.8	2204.9	247.1	203.7	155.2	114.7	92.7	85.3	75.8	76.5	79.4
47.5°	4942.3	2416.7	230.9	189.7	139.0	104.4	82.4	71.3	62.5	61.8	65.5
50°	5705.7	2699.9	216.2	172.1	128.7	95.6	72.1	58.1	50.7	48.5	51.5
52.5°	6520.6	3066.1	200.8	159.6	116.2	83.8	61.8	47.1	40.5	39.0	41.2
55°	7328.1	3417.7	186.1	151.5	103.0	72.1	52.2	39.0	33.1	31.6	33.1
57.5°	8248.2	3797.9	166.9	135.3	90.5	62.5	43.4	32.4	27.2	25.7	26.5
60°	8941.0	3931.8	150.8	117.7	78.7	55.2	36.8	25.7	22.1	20.6	21.3
62.5°	9269.8	3713.3	135.3	102.2	69.1	47.8	30.9	21.3	18.4	16.9	16.9
65°	9184.4	3229.4	119.9	87.5	59.6	39.7	24.3	18.4	16.2	14.0	13.2
67.5°	8198.9	2527.0	102.2	73.5	50.0	32.4	20.6	17.7	14.7	13.2	11.0
70°	6502.2	1829.8	83.1	61.0	41.9	26.5	16.2	16.2	14.0	13.2	10.3
72.5°	4262.0	1151.7	67.7	49.3	34.6	20.6	12.5	14.7	13.2	13.2	9.6
75°	1846.7	411.9	54.4	39.7	28.7	14.0	11.0	13.2	14.0	13.2	11.0
77.5°	432.5	128.0	42.7	31.6	23.5	9.6	11.0	13.2	14.0	12.5	9.6
80°	162.5	54.4	27.9	20.6	18.4	5.9	9.6	8.1	7.4	5.1	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)