

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: P368079

Luminaire Tested: **MSA-SA3D-730-U-SL3-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368079
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-SA3D-730-U-SL3-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) 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: 14886 lumens
Efficiency: N/A
Efficacy: 77.5 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G3

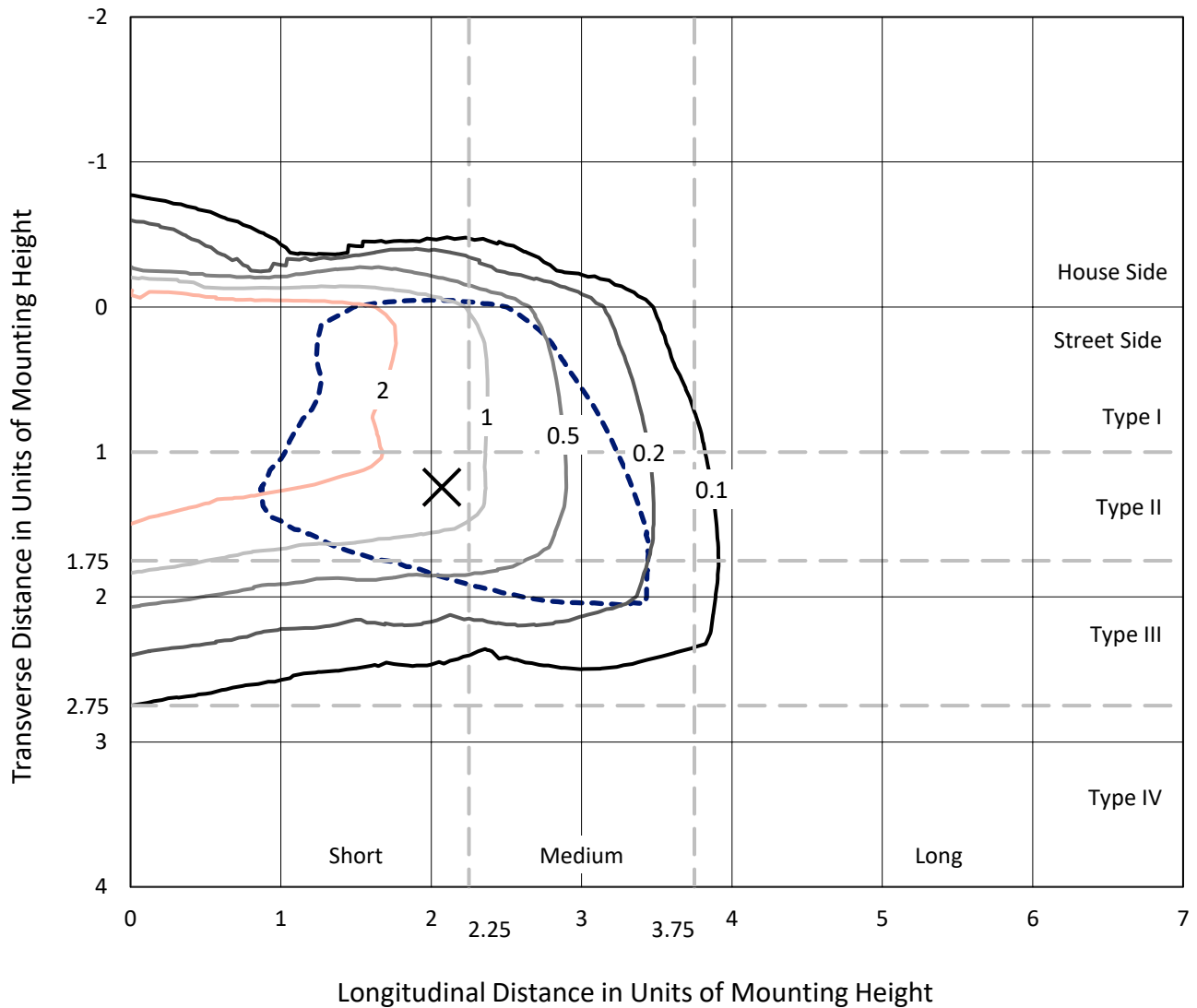
Input Watts (W): 192
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

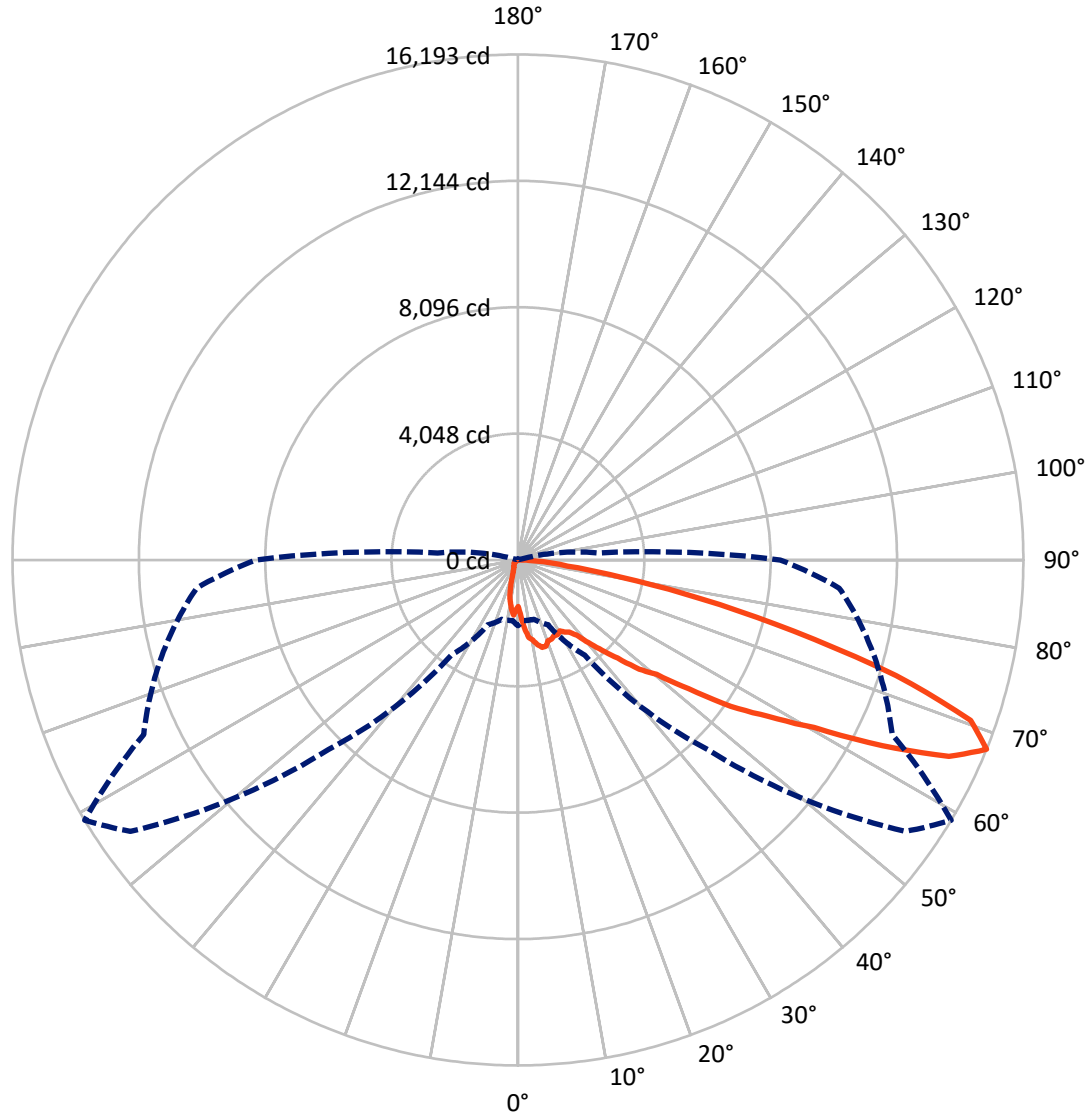
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.3 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	1266.0	0.0	1266.0
	% Fixture	8.5	0.0	8.5
Street Side	Lumens	13620.0	0.0	13620.0
	% Fixture	91.5	0.0	91.5
Total	Lumens	14886.0	0.0	14886.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	181.1	1.2
10°-20°	509.9	3.4
20°-30°	758.5	5.1
30°-40°	1170.1	7.9
40°-50°	2088.3	14.0
50°-60°	3716.2	25.0
60°-70°	4328.1	29.1
70°-80°	1924.8	12.9
80°-90°	209.0	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°	14886.0	100.0
0°-180°	14886.0	100.0

Coefficient of Utilization

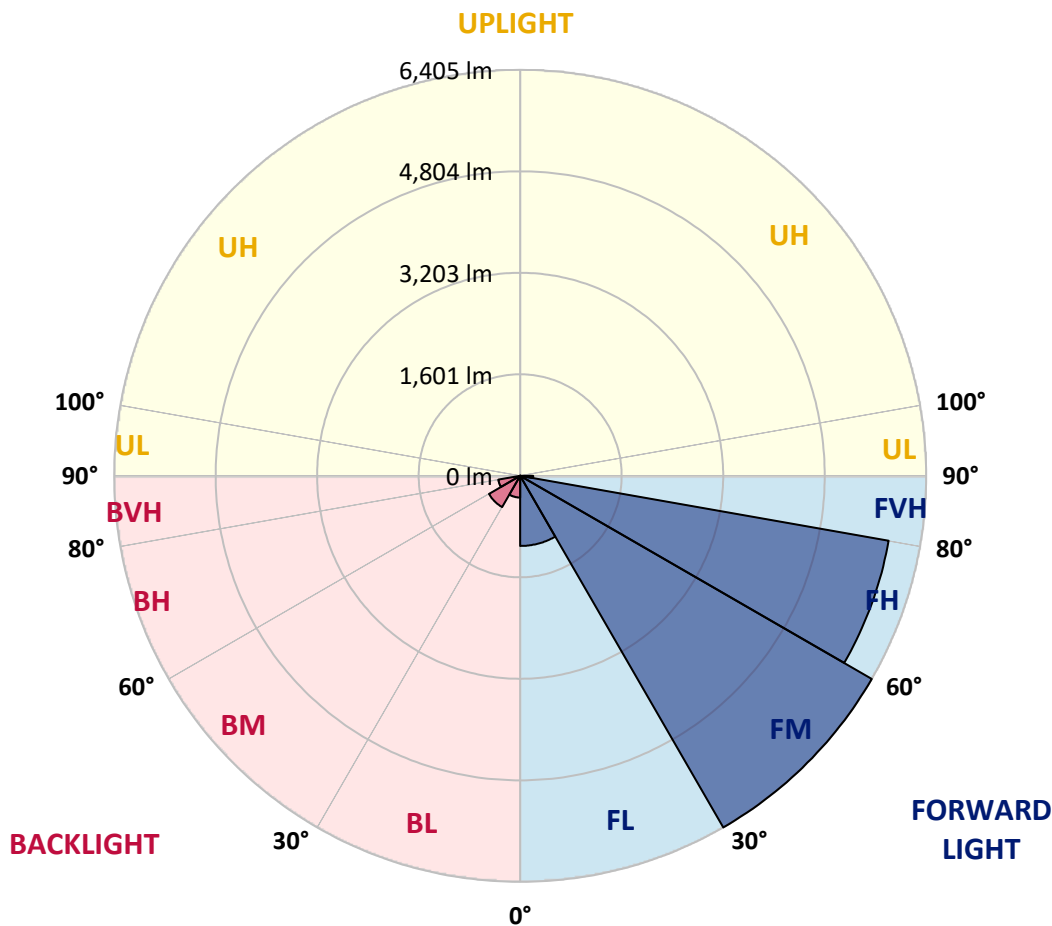


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1107.1	7.4			
FM (30°-60°)	6405.5	43.0			
FH (60°-80°)	5902.2	39.6			G3/7500
FVH (80°-90°)	205.3	1.4			G2/225
BL (0°-30°)	342.4	2.3	B1/500		
BM (30°-60°)	569.2	3.8	B1/1000		
BH (60°-80°)	350.7	2.4	B1/500		G1/500
BVH (80°-90°)	3.7	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°	1489.4	1489.4	1489.4	1489.4	1489.4	1489.4	1489.4	1489.4	1489.4	1489.4	1489.4
2.5°	1941.6	1868.5	1764.5	1795.4	1823.3	1849.7	1806.0	1781.1	1769.0	1662.0	1796.2
5°	2384.1	2292.9	2245.4	2233.3	2203.2	2136.1	2247.7	2197.9	2214.5	2235.6	2279.3
7.5°	2519.0	2477.5	2409.0	2434.6	2320.0	2310.2	2464.7	2507.7	2564.2	2525.8	2578.5
10°	2449.7	2378.1	2410.5	2401.4	2396.9	2497.9	2606.4	2608.7	2693.1	2733.8	2555.2
12.5°	2312.5	2320.8	2436.8	2427.8	2578.5	2780.6	2805.4	2779.0	2917.0	2846.1	2819.0
15°	2403.7	2471.5	2407.4	2429.3	2482.8	2735.3	2823.5	2904.9	3035.3	3077.5	2894.4
17.5°	2513.7	2520.5	2403.7	2376.5	2511.5	2629.0	2837.1	2904.2	2917.0	3287.1	3064.0
20°	2454.2	2512.2	2372.8	2201.7	2411.2	2571.0	2782.1	2761.0	2846.9	3348.9	3102.4
22.5°	2612.5	2529.6	2350.9	2222.0	2292.9	2438.4	2617.0	2754.9	2883.8	3201.1	3152.1
25°	2627.5	2597.4	2438.4	2323.8	2311.7	2348.7	2597.4	2686.3	2888.3	3333.8	3109.9
27.5°	2797.1	2762.5	2436.8	2448.2	2335.1	2221.3	2502.4	2711.2	2970.5	3253.1	3199.6
30°	3015.7	3018.7	2598.9	2634.3	2473.0	2289.9	2580.1	2637.3	3026.3	3382.0	3266.0
32.5°	3237.3	3328.5	2919.2	2731.6	2681.1	2549.9	2483.6	2748.1	2965.2	3602.1	3431.8
35°	3574.2	3636.0	3183.0	3015.0	2816.7	2667.5	2745.9	2840.8	3184.6	3893.8	3649.6
37.5°	4144.8	4033.3	3656.4	3363.9	3316.5	3096.4	3135.6	3050.4	3408.4	4237.5	4080.8
40°	4465.9	4364.9	3973.0	3830.5	3527.5	3561.4	3437.8	3487.6	3733.3	4595.6	4473.5
42.5°	4800.6	4704.1	4360.4	4259.4	3970.7	3830.5	3774.7	3953.4	4231.5	5191.8	5036.5
45°	5136.7	4891.8	4746.3	4796.8	4667.2	4389.8	4325.0	4484.0	4775.7	5924.4	5630.4
47.5°	5420.2	5213.6	5104.3	5081.0	5030.5	5415.6	5151.8	5221.9	5350.8	6572.6	6370.6
50°	5931.2	5727.7	5556.6	5509.1	5754.8	6301.3	5894.3	5758.6	6016.4	7355.8	7228.4
52.5°	6669.1	6409.8	6137.7	6138.5	6602.0	6902.0	7095.0	6856.8	6905.0	8217.3	8160.8
55°	7262.3	6932.9	6707.5	6885.4	7576.6	7744.7	8481.1	8272.3	8209.7	9016.2	8946.9
57.5°	7343.7	6948.7	6841.7	7153.8	8099.7	9173.0	9965.2	9443.6	9347.9	9684.8	9822.8
60°	6583.9	6164.8	6245.5	6747.5	8270.0	10043.6	11328.0	10902.1	10293.8	10468.0	10562.9
62.5°	4910.6	4576.0	4802.1	5466.9	7613.5	10627.0	12905.6	13103.0	11391.3	11055.9	11035.5
65°	3186.1	2976.5	3125.0	3670.0	5761.6	10560.7	14315.0	15171.3	12255.8	11535.3	11184.0
67.5°	2107.5	1948.4	1969.5	2292.1	3725.7	8588.9	15157.7	16192.6	13228.2	11807.4	10333.0
70°	1570.8	1445.7	1453.2	1628.1	2211.5	5664.4	13982.6	15386.9	13583.2	10864.4	8340.1
72.5°	1132.9	1049.2	1119.3	1313.8	1762.2	2995.4	10422.0	12671.9	11844.3	8569.3	5619.1
75°	784.6	729.6	844.2	1099.0	1608.5	1859.5	6886.9	9121.8	8301.7	5376.4	2540.1
77.5°	434.9	418.3	583.4	895.4	1460.0	1524.1	4218.7	5993.7	4604.6	1927.3	604.5
80°	189.9	183.9	282.7	672.3	1227.1	1377.1	2375.0	3323.2	1811.2	343.7	195.2
82.5°	81.4	78.4	120.6	404.8	891.7	1151.7	1464.5	1599.4	623.3	106.3	110.8
85°	14.3	15.8	48.2	213.3	542.7	584.9	1060.5	946.7	313.6	50.5	79.1
87.5°	0.0	0.0	7.5	41.5	101.8	167.3	459.8	331.6	59.5	16.6	13.6
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°	1489.4	1489.4	1489.4	1489.4	1489.4	1489.4	1489.4	1489.4	1489.4	1489.4	1489.4
2.5°	1815.0	1772.8	1612.3	1591.9	1570.0	1537.6	1525.6	1456.2	1447.2	1536.1	1536.1
5°	2259.0	2108.2	1955.2	1834.6	1726.8	1577.6	1535.4	1491.7	1456.2	1447.2	1475.1
7.5°	2493.4	2309.5	2069.0	1762.2	1513.5	1297.2	1206.7	1143.4	1072.6	1093.7	1105.0
10°	2480.6	2285.3	1978.6	1584.4	1308.5	1069.6	839.7	705.5	630.9	593.9	589.4
12.5°	2606.4	2422.5	1917.5	1442.7	1090.7	760.5	528.4	432.6	377.6	378.4	373.9
15°	2679.5	2479.1	1846.7	1263.3	768.1	489.2	366.3	345.2	337.7	346.0	341.4
17.5°	2808.4	2538.6	1686.1	995.7	528.4	369.3	336.9	328.6	338.4	355.8	351.2
20°	2798.6	2435.3	1457.7	701.7	390.4	332.4	318.8	306.0	326.4	344.5	341.4
22.5°	2789.6	2334.3	1242.9	517.8	326.4	303.0	291.7	286.4	297.0	318.1	322.6
25°	2709.7	2284.6	1025.1	388.9	295.5	275.1	269.8	265.3	269.1	286.4	285.7
27.5°	2807.7	2158.7	791.4	326.4	273.6	249.5	245.0	237.4	229.9	245.0	247.2
30°	2787.3	2176.0	620.3	287.2	251.7	219.3	220.8	205.0	191.5	205.0	205.0
32.5°	2861.2	2049.4	496.7	260.8	229.9	206.5	187.7	171.1	161.3	169.6	171.1
35°	2969.0	2054.7	388.9	244.2	211.0	183.9	161.3	144.7	135.7	139.4	141.7
37.5°	3330.0	2018.5	324.9	231.4	204.3	170.3	147.0	125.1	119.1	123.6	125.9
40°	3565.2	2115.0	286.4	224.6	186.9	156.8	125.9	110.0	104.8	107.0	110.8
42.5°	4008.4	2168.5	267.6	217.1	171.1	134.2	107.8	98.7	91.2	94.2	97.2
45°	4482.5	2259.7	253.3	208.8	159.0	117.6	95.0	87.4	77.6	78.4	81.4
47.5°	5065.1	2476.8	236.7	194.5	142.5	107.0	84.4	73.1	64.1	63.3	67.1
50°	5847.5	2767.0	221.6	176.4	131.9	98.0	73.9	59.5	52.0	49.7	52.8
52.5°	6682.7	3142.3	205.8	163.6	119.1	85.9	63.3	48.2	41.5	39.9	42.2
55°	7510.3	3502.6	190.7	155.3	105.5	73.9	53.5	39.9	33.9	32.4	33.9
57.5°	8453.2	3892.3	171.1	138.7	92.7	64.1	44.5	33.2	27.9	26.4	27.1
60°	9163.2	4029.5	154.5	120.6	80.7	56.5	37.7	26.4	22.6	21.1	21.9
62.5°	9500.2	3805.6	138.7	104.8	70.9	49.0	31.7	21.9	18.8	17.3	17.3
65°	9412.7	3309.7	122.9	89.7	61.1	40.7	24.9	18.8	16.6	14.3	13.6
67.5°	8402.7	2589.9	104.8	75.4	51.3	33.2	21.1	18.1	15.1	13.6	11.3
70°	6663.8	1875.3	85.2	62.6	43.0	27.1	16.6	16.6	14.3	13.6	10.6
72.5°	4367.9	1180.4	69.3	50.5	35.4	21.1	12.8	15.1	13.6	13.6	9.8
75°	1892.6	422.1	55.8	40.7	29.4	14.3	11.3	13.6	14.3	13.6	11.3
77.5°	443.2	131.2	43.7	32.4	24.1	9.8	11.3	13.6	14.3	12.8	9.8
80°	166.6	55.8	28.6	21.1	18.8	6.0	9.8	8.3	7.5	5.3	1.5
82.5°	101.0	23.4	15.1	10.6	9.0	1.5	4.5	3.0	1.5	1.5	0.0
85°	71.6	11.3	8.3	7.5	4.5	0.0	0.8	0.0	0.0	0.8	0.0
87.5°	9.8	3.0	3.8	3.8	3.0	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)