

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: P597119

Luminaire Tested: **MSA-SA4B-835-U-SL3-HSS**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P597119
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-SA4B-835-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: 13153 lumens
Efficiency: N/A
Efficacy: 76.9 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G3

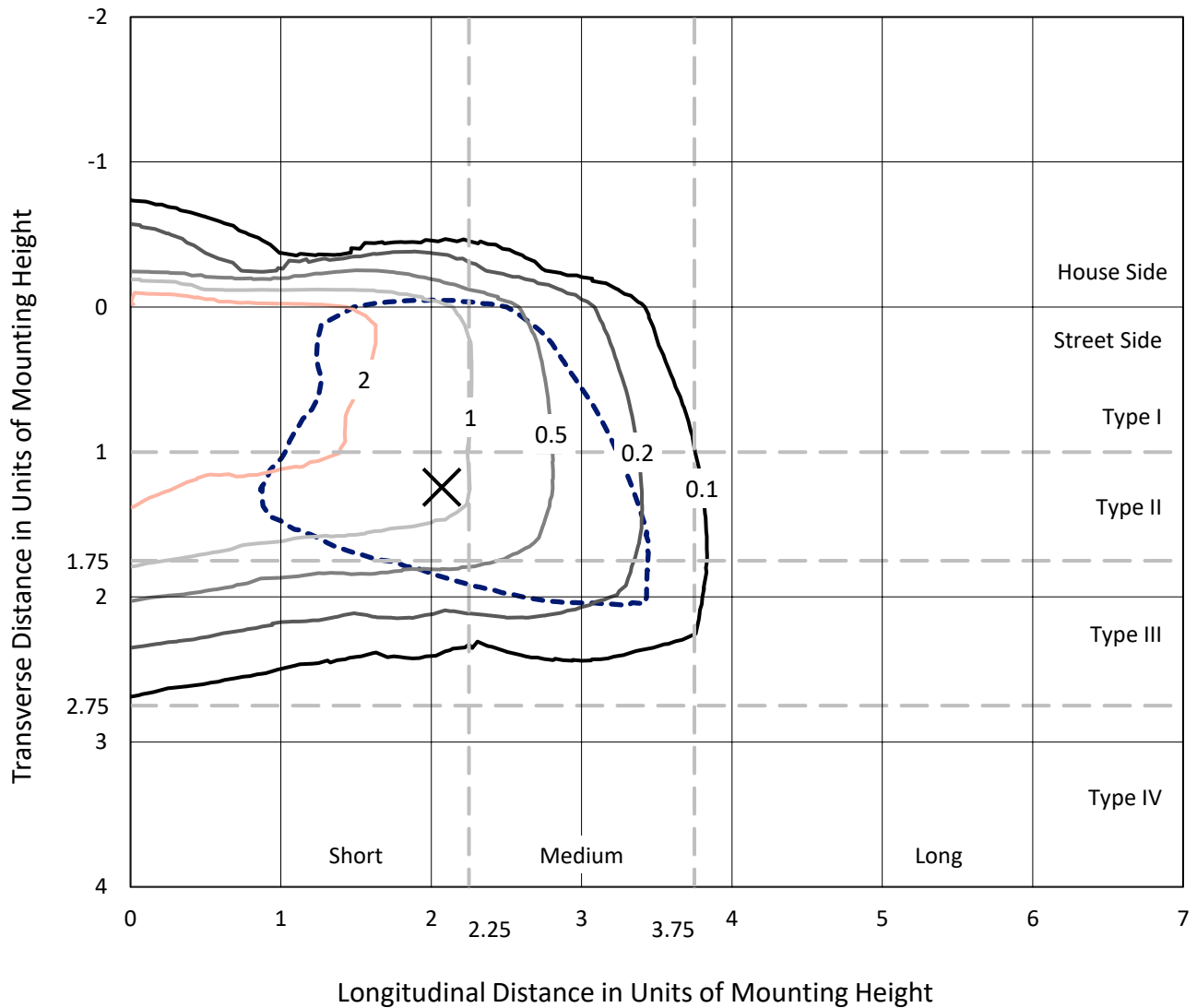
Input Watts (W): 171
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

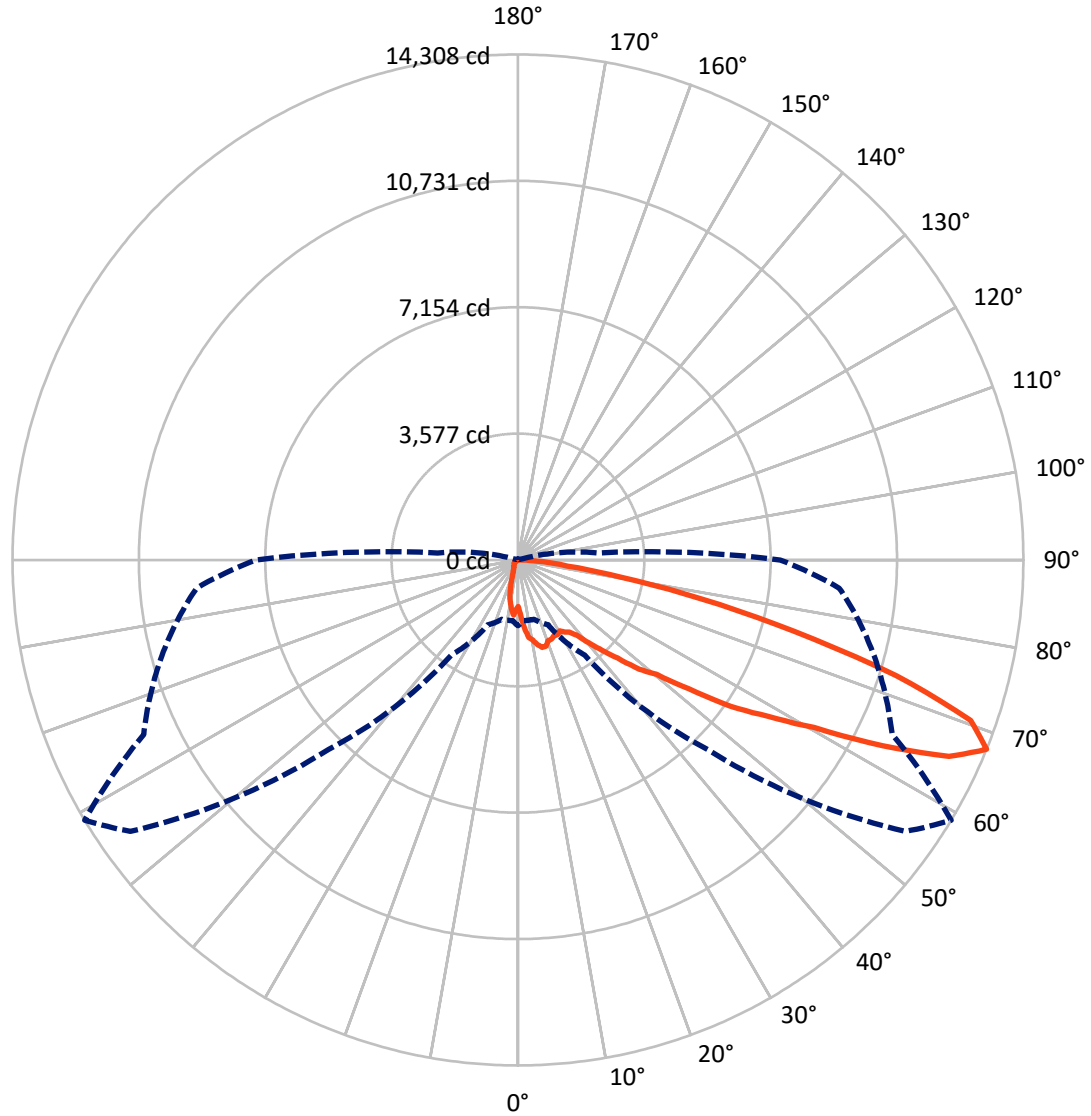
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.8 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	1118.6	0.0	1118.6
	% Fixture	8.5	0.0	8.5
Street Side	Lumens	12034.4	0.0	12034.4
	% Fixture	91.5	0.0	91.5
Total	Lumens	13153.0	0.0	13153.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	160.0	1.2
10°-20°	450.6	3.4
20°-30°	670.2	5.1
30°-40°	1033.9	7.9
40°-50°	1845.2	14.0
50°-60°	3283.6	25.0
60°-70°	3824.2	29.1
70°-80°	1700.7	12.9
80°-90°	184.7	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°	13153.0	100.0
0°-180°	13153.0	100.0

Coefficient of Utilization



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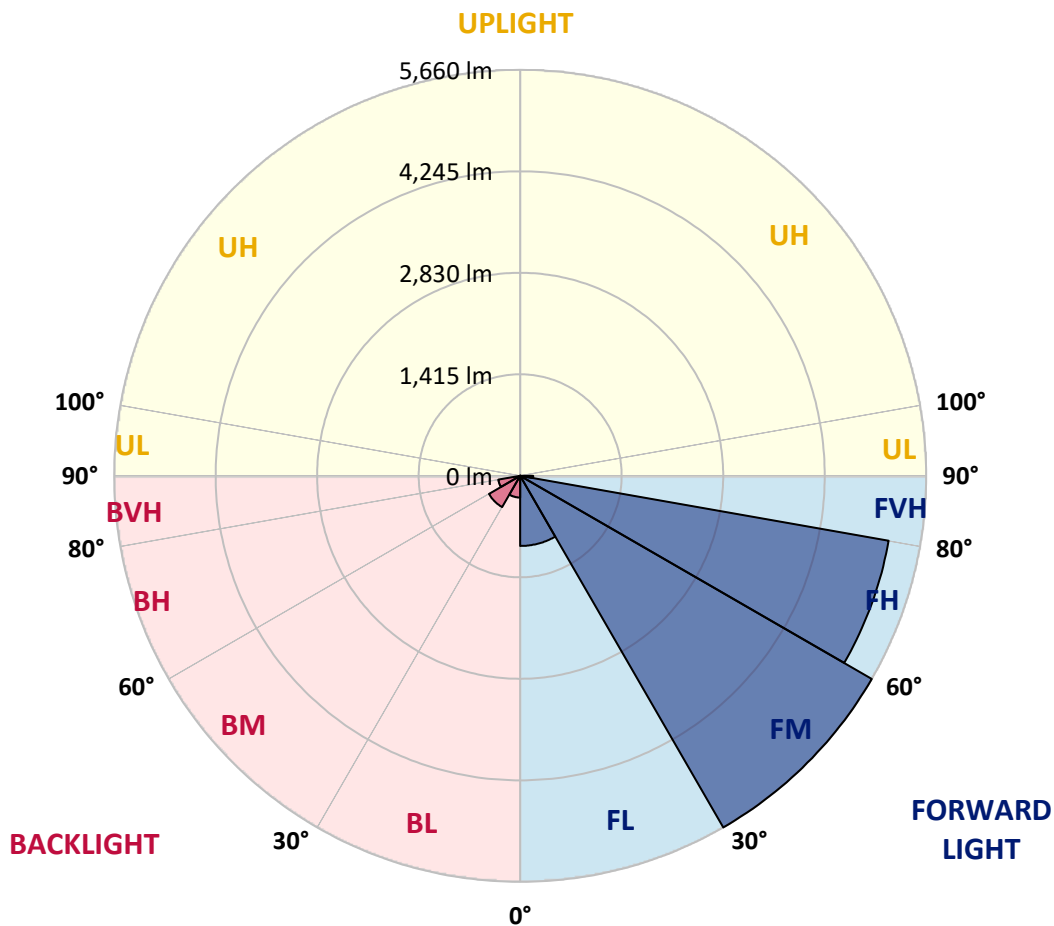
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	978.2	7.4			
FM (30°-60°)	5659.7	43.0			
FH (60°-80°)	5215.1	39.6			G3/7500
FVH (80°-90°)	181.4	1.4			G2/225
BL (0°-30°)	302.5	2.3	B1/500		
BM (30°-60°)	502.9	3.8	B1/1000		
BH (60°-80°)	309.9	2.4	B1/500		G1/500
BVH (80°-90°)	3.3	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°	1316.0	1316.0	1316.0	1316.0	1316.0	1316.0	1316.0	1316.0	1316.0	1316.0	1316.0
2.5°	1715.6	1651.0	1559.1	1586.4	1611.0	1634.3	1595.7	1573.7	1563.1	1468.5	1587.1
5°	2106.5	2025.9	1984.0	1973.3	1946.7	1887.4	1986.0	1942.0	1956.7	1975.3	2014.0
7.5°	2225.7	2189.1	2128.5	2151.2	2049.9	2041.3	2177.8	2215.8	2265.7	2231.7	2278.4
10°	2164.5	2101.2	2129.8	2121.8	2117.9	2207.1	2303.0	2305.0	2379.6	2415.6	2257.7
12.5°	2043.3	2050.6	2153.2	2145.2	2278.4	2456.8	2478.8	2455.5	2577.4	2514.8	2490.8
15°	2123.8	2183.8	2127.2	2146.5	2193.8	2416.9	2494.8	2566.7	2681.9	2719.2	2557.4
17.5°	2221.1	2227.1	2123.8	2099.9	2219.1	2323.0	2506.8	2566.1	2577.4	2904.4	2707.3
20°	2168.5	2219.8	2096.5	1945.4	2130.5	2271.7	2458.2	2439.5	2515.5	2959.0	2741.2
22.5°	2308.3	2235.1	2077.2	1963.3	2025.9	2154.5	2312.3	2434.2	2548.1	2828.5	2785.2
25°	2321.6	2295.0	2154.5	2053.3	2042.6	2075.2	2295.0	2373.6	2552.1	2945.7	2747.9
27.5°	2471.5	2440.9	2153.2	2163.1	2063.2	1962.7	2211.1	2395.6	2624.7	2874.4	2827.1
30°	2664.6	2667.3	2296.3	2327.6	2185.1	2023.3	2279.7	2330.3	2674.0	2988.3	2885.7
32.5°	2860.4	2941.0	2579.4	2413.6	2368.9	2253.1	2194.4	2428.2	2620.0	3182.8	3032.3
35°	3158.1	3212.7	2812.5	2664.0	2488.8	2356.9	2426.2	2510.1	2813.8	3440.5	3224.7
37.5°	3662.3	3563.7	3230.7	2972.3	2930.4	2735.9	2770.5	2695.3	3011.6	3744.2	3605.7
40°	3946.0	3856.8	3510.4	3384.6	3116.8	3146.8	3037.6	3081.5	3298.7	4060.6	3952.7
42.5°	4241.7	4156.5	3852.8	3763.5	3508.4	3384.6	3335.3	3493.1	3738.9	4587.4	4450.2
45°	4538.7	4322.3	4193.8	4238.4	4123.8	3878.7	3821.5	3962.0	4219.7	5234.7	4975.0
47.5°	4789.1	4606.7	4510.1	4489.5	4444.8	4785.2	4552.1	4614.0	4727.9	5807.4	5629.0
50°	5240.7	5060.9	4909.7	4867.7	5084.8	5567.7	5208.1	5088.2	5315.9	6499.4	6386.9
52.5°	5892.7	5663.6	5423.2	5423.8	5833.4	6098.5	6269.0	6058.5	6101.2	7260.6	7210.7
55°	6416.8	6125.8	5926.7	6083.8	6694.5	6843.1	7493.7	7309.3	7254.0	7966.6	7905.3
57.5°	6488.8	6139.8	6045.2	6320.9	7156.7	8105.1	8805.1	8344.2	8259.6	8557.3	8679.2
60°	5817.4	5447.1	5518.4	5962.0	7307.3	8874.3	10009.2	9632.9	9095.5	9249.3	9333.2
62.5°	4338.9	4043.2	4243.0	4830.4	6727.2	9389.8	11403.1	11577.6	10065.1	9768.8	9750.8
65°	2815.1	2630.0	2761.2	3242.7	5090.8	9331.2	12648.5	13405.1	10829.0	10192.3	9882.0
67.5°	1862.1	1721.6	1740.2	2025.3	3292.0	7589.0	13393.1	14307.5	11688.2	10432.8	9130.1
70°	1387.9	1277.4	1284.0	1438.5	1954.0	5004.9	12354.8	13595.6	12001.8	9599.6	7369.2
72.5°	1001.0	927.1	989.0	1160.8	1557.1	2646.7	9208.7	11196.7	10465.4	7571.7	4965.0
75°	693.3	644.7	745.9	971.0	1421.2	1643.0	6085.2	8059.8	7335.2	4750.5	2244.4
77.5°	384.3	369.6	515.5	791.2	1290.0	1346.6	3727.6	5296.0	4068.5	1702.9	534.1
80°	167.8	162.5	249.7	594.1	1084.2	1216.8	2098.5	2936.4	1600.4	303.7	172.5
82.5°	71.9	69.3	106.6	357.6	787.9	1017.6	1294.0	1413.2	550.8	93.9	97.9
85°	12.7	14.0	42.6	188.5	479.5	516.8	937.1	836.5	277.1	44.6	69.9
87.5°	0.0	0.0	6.7	36.6	89.9	147.9	406.3	293.0	52.6	14.7	12.0
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°	1316.0	1316.0	1316.0	1316.0	1316.0	1316.0	1316.0	1316.0	1316.0	1316.0	1316.0
2.5°	1603.7	1566.4	1424.6	1406.6	1387.3	1358.6	1348.0	1286.7	1278.7	1357.3	1357.3
5°	1996.0	1862.8	1727.6	1621.0	1525.8	1393.9	1356.6	1318.0	1286.7	1278.7	1303.3
7.5°	2203.1	2040.6	1828.1	1557.1	1337.3	1146.2	1066.3	1010.3	947.7	966.4	976.3
10°	2191.8	2019.3	1748.2	1399.9	1156.2	945.0	741.9	623.4	557.4	524.8	520.8
12.5°	2303.0	2140.5	1694.3	1274.7	963.7	672.0	466.9	382.3	333.7	334.3	330.3
15°	2367.6	2190.4	1631.7	1116.2	678.6	432.2	323.7	305.0	298.4	305.7	301.7
17.5°	2481.5	2243.1	1489.8	879.8	466.9	326.3	297.7	290.4	299.0	314.3	310.4
20°	2472.8	2151.8	1288.0	620.0	345.0	293.7	281.7	270.4	288.4	304.4	301.7
22.5°	2464.8	2062.6	1098.2	457.5	288.4	267.7	257.7	253.1	262.4	281.0	285.0
25°	2394.2	2018.6	905.7	343.7	261.1	243.1	238.4	234.4	237.8	253.1	252.4
27.5°	2480.8	1907.4	699.3	288.4	241.8	220.4	216.4	209.8	203.1	216.4	218.4
30°	2462.8	1922.7	548.1	253.7	222.4	193.8	195.1	181.1	169.2	181.1	181.1
32.5°	2528.1	1810.8	438.9	230.4	203.1	182.5	165.8	151.2	142.5	149.8	151.2
35°	2623.3	1815.5	343.7	215.8	186.5	162.5	142.5	127.9	119.9	123.2	125.2
37.5°	2942.4	1783.5	287.0	204.5	180.5	150.5	129.9	110.6	105.2	109.2	111.2
40°	3150.1	1868.8	253.1	198.5	165.2	138.5	111.2	97.2	92.6	94.6	97.9
42.5°	3541.7	1916.1	236.4	191.8	151.2	118.5	95.2	87.2	80.6	83.2	85.9
45°	3960.7	1996.6	223.8	184.5	140.5	103.9	83.9	77.3	68.6	69.3	71.9
47.5°	4475.5	2188.4	209.1	171.8	125.9	94.6	74.6	64.6	56.6	55.9	59.3
50°	5166.8	2444.9	195.8	155.8	116.5	86.6	65.3	52.6	46.0	44.0	46.6
52.5°	5904.7	2776.5	181.8	144.5	105.2	75.9	55.9	42.6	36.6	35.3	37.3
55°	6635.9	3094.9	168.5	137.2	93.2	65.3	47.3	35.3	30.0	28.6	30.0
57.5°	7469.1	3439.2	151.2	122.5	81.9	56.6	39.3	29.3	24.6	23.3	24.0
60°	8096.5	3560.4	136.5	106.6	71.3	49.9	33.3	23.3	20.0	18.6	19.3
62.5°	8394.2	3362.6	122.5	92.6	62.6	43.3	28.0	19.3	16.6	15.3	15.3
65°	8316.9	2924.4	108.6	79.3	53.9	36.0	22.0	16.6	14.7	12.7	12.0
67.5°	7424.5	2288.3	92.6	66.6	45.3	29.3	18.6	16.0	13.3	12.0	10.0
70°	5888.0	1657.0	75.3	55.3	38.0	24.0	14.7	14.7	12.7	12.0	9.3
72.5°	3859.4	1042.9	61.3	44.6	31.3	18.6	11.3	13.3	12.0	12.0	8.7
75°	1672.3	373.0	49.3	36.0	26.0	12.7	10.0	12.0	12.7	12.0	10.0
77.5°	391.6	115.9	38.6	28.6	21.3	8.7	10.0	12.0	12.7	11.3	8.7
80°	147.2	49.3	25.3	18.6	16.6	5.3	8.7	7.3	6.7	4.7	1.3
82.5°	89.2	20.6	13.3	9.3	8.0	1.3	4.0	2.7	1.3	1.3	0.0
85°	63.3	10.0	7.3	6.7	4.0	0.0	0.7	0.0	0.0	0.7	0.0
87.5°	8.7	2.7	3.3	3.3	2.7	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)