

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: P366959

Luminaire Tested: **MSA-SA1C-760-U-SL4-HSS**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P366959  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-21)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA1C-760-U-SL4-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) 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: 5187 lumens  
Efficiency: N/A  
Efficacy: 87.9 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G2

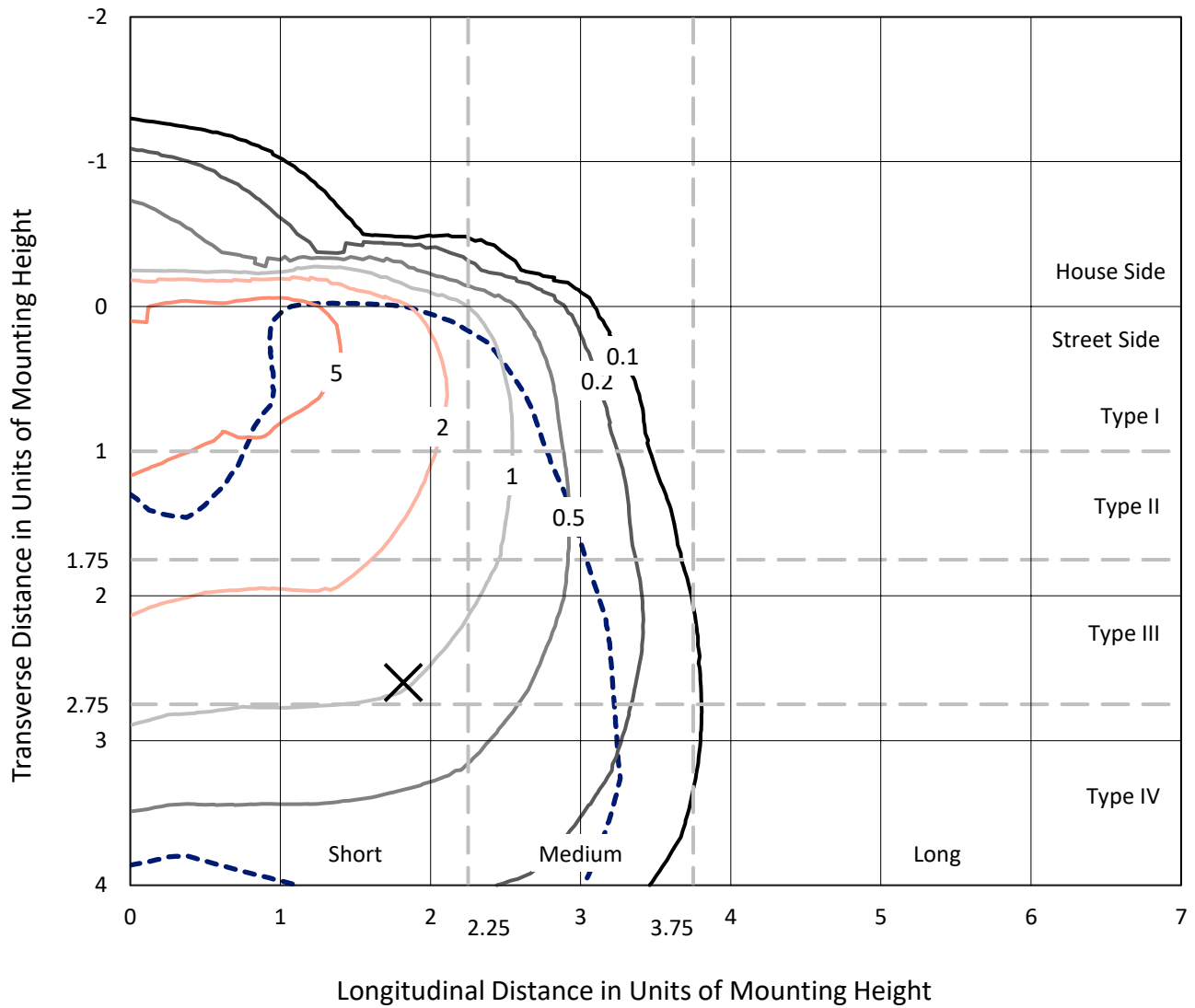
Input Watts (W): 59  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

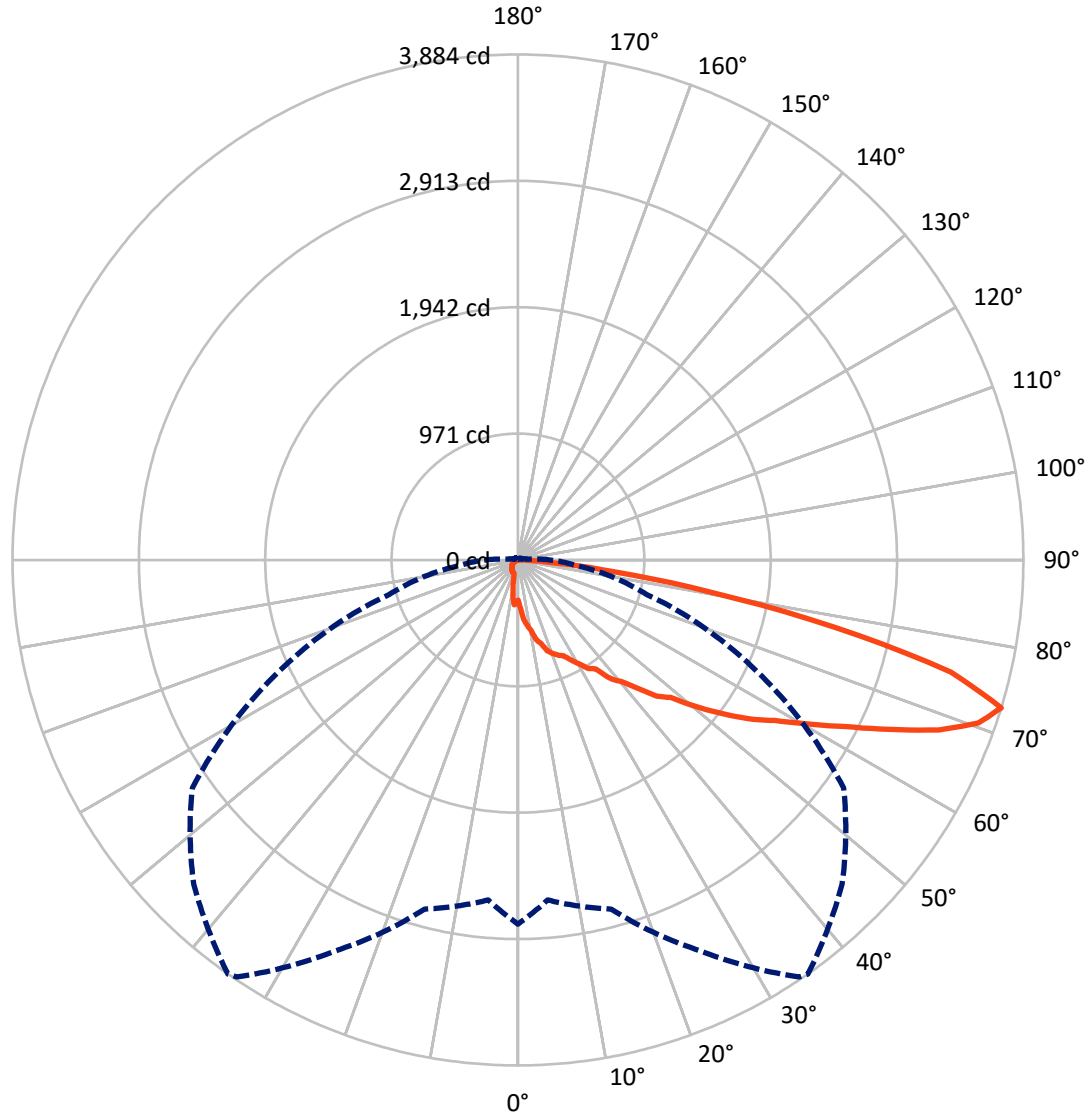
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 7.4 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
<b>House Side</b>	Lumens	404.6	0.0	404.6
	% Fixture	7.8	0.0	7.8
<b>Street Side</b>	Lumens	4782.4	0.0	4782.4
	% Fixture	92.2	0.0	92.2
<b>Total</b>	Lumens	5187.0	0.0	5187.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	39.4	0.8
10°-20°	132.7	2.6
20°-30°	241.7	4.7
30°-40°	417.0	8.0
40°-50°	741.2	14.3
50°-60°	1106.1	21.3
60°-70°	1413.2	27.2
70°-80°	983.2	19.0
80°-90°	112.5	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°	5187.0	100.0
0°-180°	5187.0	100.0

**Coefficient of Utilization**



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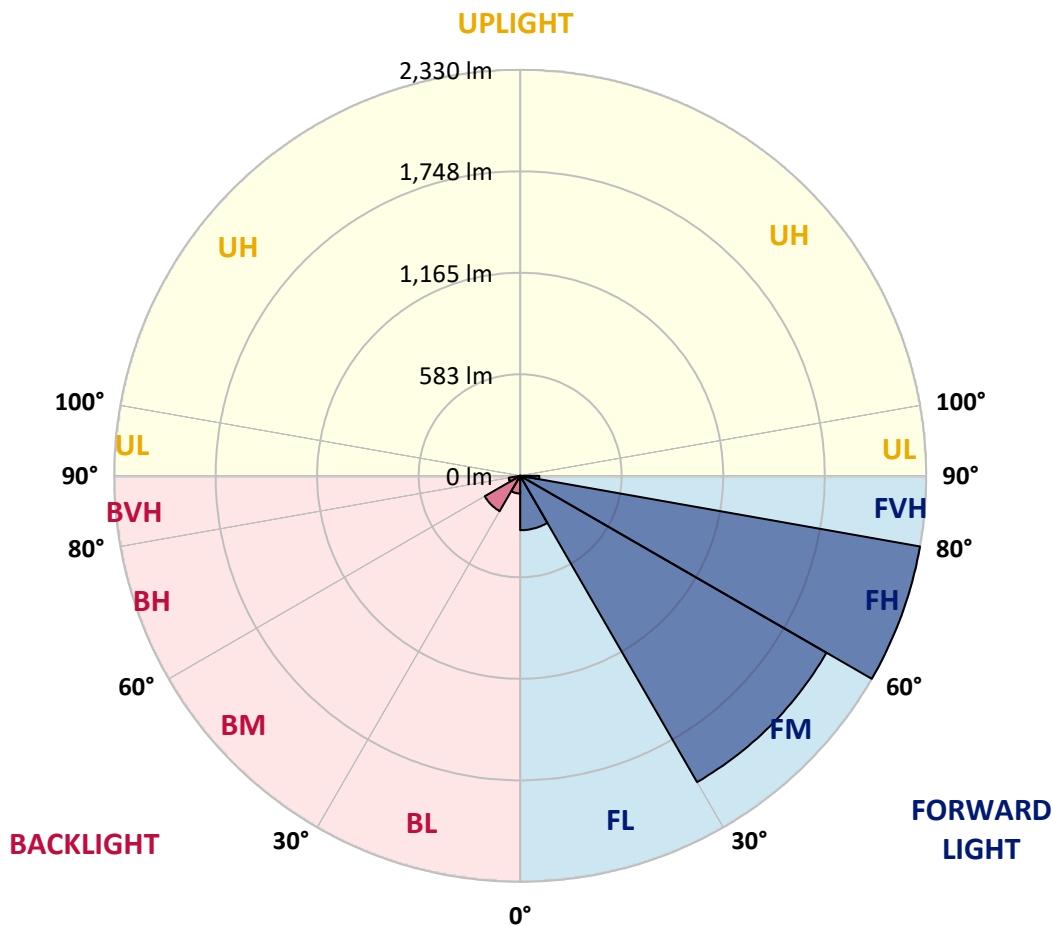
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	312.1	6.0			
FM (30°-60°)	2029.7	39.1			
FH (60°-80°)	2330.0	44.9			G2/5000
FVH (80°-90°)	110.6	2.1			G2/225
BL (0°-30°)	101.8	2.0	B0/110		
BM (30°-60°)	234.6	4.5	B1/1000		
BH (60°-80°)	66.3	1.3	B0/110		G0/110
BVH (80°-90°)	1.9	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-G2**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	34°	35°	45°	55°	65°	75°	85°
0°	309.0	309.0	309.0	309.0	309.0	309.0	309.0	309.0	309.0	309.0	309.0
2.5°	393.2	377.8	352.8	354.6	365.8	368.2	371.6	362.7	354.9	341.1	367.9
5°	503.8	481.6	467.5	463.1	456.6	457.1	441.2	446.9	445.4	455.5	467.8
7.5°	566.1	553.8	536.1	531.1	507.2	504.6	485.0	511.3	513.9	510.3	530.4
10°	590.9	574.7	576.8	558.3	546.3	549.4	552.5	554.6	558.0	561.4	536.9
12.5°	605.5	608.3	636.8	617.5	629.5	629.5	650.6	628.1	628.9	604.4	608.6
15°	671.2	687.1	674.3	674.0	661.0	664.4	688.9	671.2	680.3	673.0	644.8
17.5°	753.6	756.7	732.4	721.8	733.5	733.8	723.3	722.5	690.7	744.4	710.3
20°	779.9	797.6	763.2	721.5	770.3	767.9	767.1	754.9	701.9	776.5	748.4
22.5°	851.6	826.3	802.8	775.5	794.5	794.5	791.6	764.8	744.2	773.6	785.6
25°	874.0	877.2	846.7	837.8	838.3	814.8	812.8	801.3	781.5	831.8	807.8
27.5°	951.2	949.9	876.6	901.4	869.9	870.1	812.5	838.3	841.7	834.7	861.5
30°	1027.1	1048.2	937.7	968.9	935.8	925.9	869.6	892.5	898.5	890.5	924.4
32.5°	1123.8	1154.9	1047.4	1016.7	966.1	994.2	955.4	901.2	930.9	1003.1	1022.1
35°	1226.3	1241.4	1127.0	1083.9	1026.8	1026.6	1025.3	1029.7	1062.6	1143.9	1160.1
37.5°	1410.4	1374.7	1271.2	1172.6	1185.4	1156.9	1137.1	1158.0	1192.1	1326.2	1395.3
40°	1513.1	1487.3	1341.6	1283.2	1219.8	1230.2	1283.9	1281.6	1372.6	1512.9	1616.4
42.5°	1613.0	1588.5	1445.1	1397.9	1316.5	1344.9	1368.4	1398.1	1584.6	1810.9	1867.8
45°	1701.9	1629.9	1528.8	1530.6	1488.4	1491.8	1533.2	1560.6	1830.2	2062.3	2102.2
47.5°	1755.6	1696.4	1599.4	1597.6	1595.0	1579.1	1774.4	1799.4	2026.0	2301.6	2305.3
50°	1831.2	1757.2	1672.2	1673.8	1734.0	1767.6	2000.7	1998.1	2215.1	2501.4	2417.2
52.5°	1925.4	1834.9	1741.3	1810.9	1904.0	1958.8	2148.1	2225.2	2418.2	2626.8	2461.0
55°	2045.8	1932.7	1842.5	1931.6	2134.8	2155.9	2292.3	2455.2	2639.6	2754.8	2475.0
57.5°	2187.2	2052.1	1979.1	2122.8	2325.4	2325.9	2502.2	2700.3	2775.4	2807.0	2459.1
60°	2339.5	2182.0	2108.4	2237.8	2535.5	2556.9	2735.5	2835.7	2913.4	2833.3	2430.7
62.5°	2473.5	2299.6	2242.5	2394.5	2766.0	2816.6	2938.9	2924.6	3013.0	2866.4	2358.5
65°	2633.1	2451.8	2414.3	2638.8	3066.9	3136.6	3167.3	3082.3	3046.3	2840.9	2170.5
67.5°	2791.1	2621.6	2620.5	2909.7	3461.5	3485.4	3453.1	3304.7	3007.5	2615.6	1826.0
70°	2902.4	2720.4	2789.0	3206.4	3820.0	3752.7	3616.6	3409.8	2726.9	2004.6	1192.9
72.5°	2797.8	2622.4	2777.0	3312.0	3864.3	3883.6	3522.0	3054.4	2026.0	1025.3	431.8
75°	2126.2	2018.7	2411.2	2938.4	3430.9	3435.4	2939.7	2154.3	997.6	278.5	119.4
77.5°	1070.9	1036.7	1526.2	2086.0	2503.2	2495.9	2019.8	1154.1	321.0	92.6	60.2
80°	542.1	514.7	649.5	1125.4	1486.5	1497.5	1153.3	516.8	161.9	50.3	41.7
82.5°	333.0	316.0	355.4	509.2	721.5	739.0	437.5	327.2	100.4	29.7	38.1
85°	64.4	67.8	204.2	255.0	288.1	281.3	129.6	269.4	30.2	17.7	27.6
87.5°	0.0	1.0	47.2	83.2	83.4	74.1	29.5	59.7	4.2	5.0	3.4
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°	309.0	309.0	309.0	309.0	309.0	309.0	309.0	309.0	309.0	309.0	309.0
2.5°	372.4	368.4	335.8	332.2	333.0	327.5	325.7	314.2	311.3	329.1	332.2
5°	462.6	436.5	406.2	395.3	378.3	349.7	345.5	338.2	330.1	333.2	330.9
7.5°	517.8	483.2	450.8	393.2	345.5	303.8	297.0	284.5	272.0	272.2	280.3
10°	526.7	497.5	452.9	382.8	328.3	276.1	230.8	197.9	183.0	169.7	173.7
12.5°	578.1	551.0	468.8	379.7	303.3	221.9	162.4	130.4	116.3	111.6	111.1
15°	619.3	597.9	495.9	370.0	247.7	156.2	116.3	106.9	104.3	108.7	107.4
17.5°	680.6	642.0	493.1	330.1	188.8	118.6	107.2	105.9	109.0	111.6	112.4
20°	707.4	651.9	473.5	267.5	141.3	108.7	104.6	102.0	107.7	115.5	113.9
22.5°	734.5	668.8	450.6	219.0	113.7	104.0	101.7	99.6	104.0	111.6	113.4
25°	746.8	695.9	425.0	171.1	105.6	98.6	97.0	97.8	101.4	108.2	107.4
27.5°	808.6	699.1	376.3	135.1	102.2	94.7	94.7	96.5	96.5	105.6	104.8
30°	847.2	752.0	336.6	113.7	98.3	89.2	92.3	93.1	91.8	101.7	102.5
32.5°	915.0	766.6	298.0	104.3	92.0	88.4	87.9	88.4	89.4	99.1	99.3
35°	1019.3	838.6	245.4	100.6	88.9	84.5	80.8	83.7	86.3	93.3	94.7
37.5°	1223.2	912.4	200.0	97.8	87.4	80.8	79.5	79.0	83.7	91.8	94.4
40°	1388.2	1043.0	162.7	95.4	84.2	78.7	75.4	75.6	79.8	85.8	89.7
42.5°	1621.9	1137.4	137.9	91.8	79.8	74.3	70.4	72.7	74.6	80.8	83.4
45°	1816.9	1210.7	121.5	89.4	75.4	70.1	67.0	69.6	67.8	70.9	74.6
47.5°	1972.1	1274.5	109.3	83.7	72.5	67.8	63.9	63.1	60.0	60.8	64.1
50°	2057.3	1263.9	99.1	78.0	68.8	65.4	60.0	54.5	50.3	50.1	52.2
52.5°	2087.6	1206.8	90.7	73.0	64.4	60.2	54.0	46.4	42.2	40.9	42.8
55°	2095.9	1124.6	83.2	67.5	60.2	53.7	47.2	39.1	34.7	32.6	34.4
57.5°	2068.8	998.2	75.9	62.3	55.3	47.5	40.4	32.1	27.9	25.3	26.9
60°	2001.8	837.5	69.4	55.8	50.1	42.0	34.2	25.8	21.4	19.0	19.8
62.5°	1853.4	656.6	62.3	49.8	44.6	36.8	28.7	20.3	16.2	14.1	14.3
65°	1627.6	489.4	54.2	44.1	39.6	31.8	22.9	15.6	12.3	10.4	10.2
67.5°	1296.7	331.7	46.2	38.1	35.2	26.9	18.3	12.3	9.6	8.3	7.8
70°	762.2	167.1	38.3	32.9	30.2	22.4	14.3	9.9	8.9	7.8	7.3
72.5°	251.4	72.2	30.0	27.1	25.0	18.0	11.2	9.1	8.6	7.6	7.0
75°	87.6	41.7	22.2	20.9	19.8	13.6	9.4	8.3	8.3	7.3	6.5
77.5°	57.4	32.3	16.4	15.1	14.9	9.9	8.1	7.8	7.3	6.0	5.0
80°	47.7	18.3	11.5	10.7	10.4	6.3	6.5	5.7	4.4	2.6	1.0
82.5°	44.1	11.0	6.0	6.5	6.0	2.3	3.7	3.1	2.3	1.0	0.0
85°	25.8	5.0	3.4	3.4	2.6	0.5	1.8	1.8	1.0	0.3	0.0
87.5°	2.9	2.3	1.8	1.8	1.3	0.0	0.8	0.5	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)