

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: P367223

Luminaire Tested: **MSA-SA2A-760-U-SL4-HSS**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P367223  
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-SA2A-760-U-SL4-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

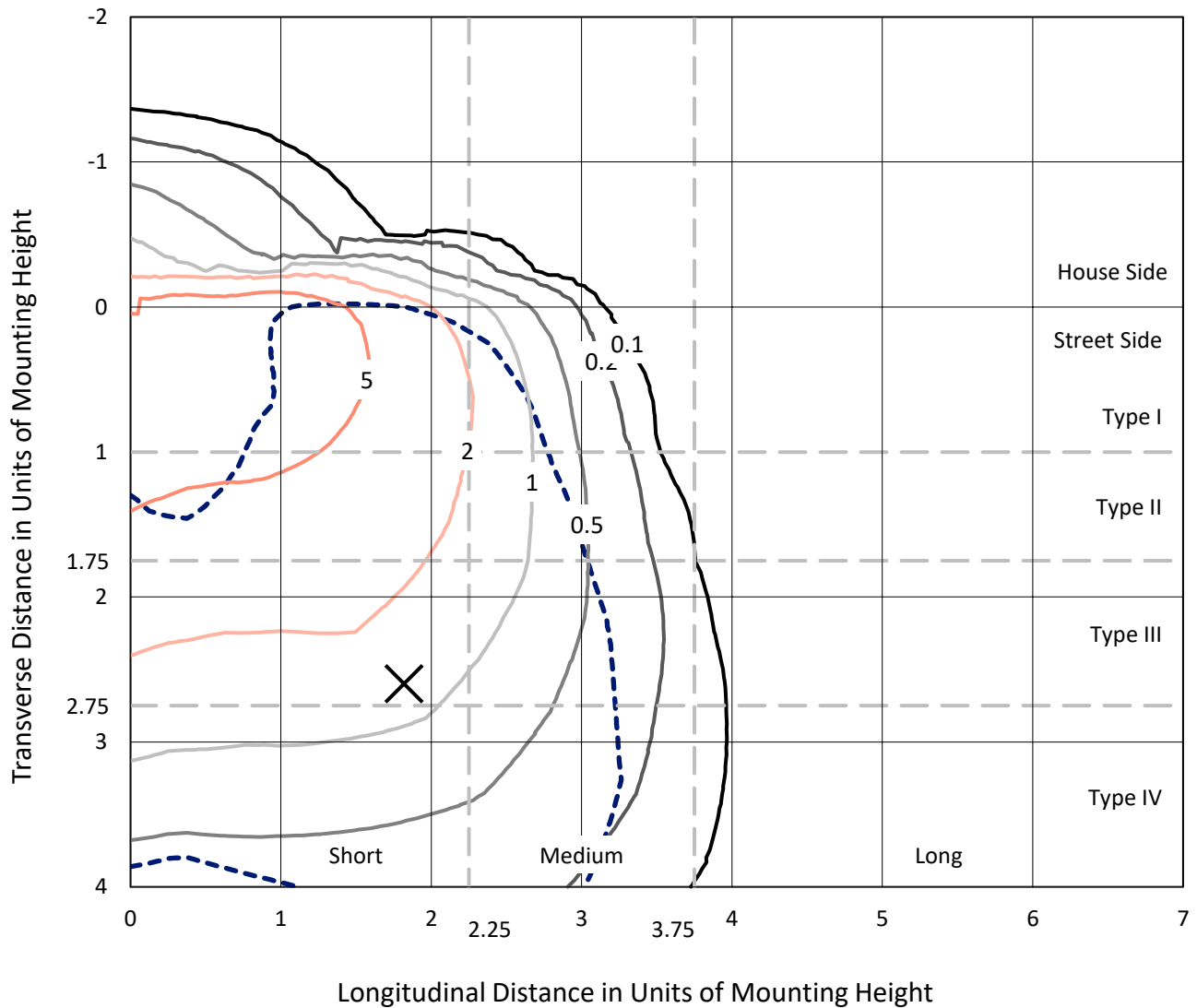
Lumens per Lamp: N/A  
Luminaire Lumens: 6574 lumens  
Efficiency: N/A  
Efficacy: 99.6 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G2  
  
Input Watts (W): 66  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage 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

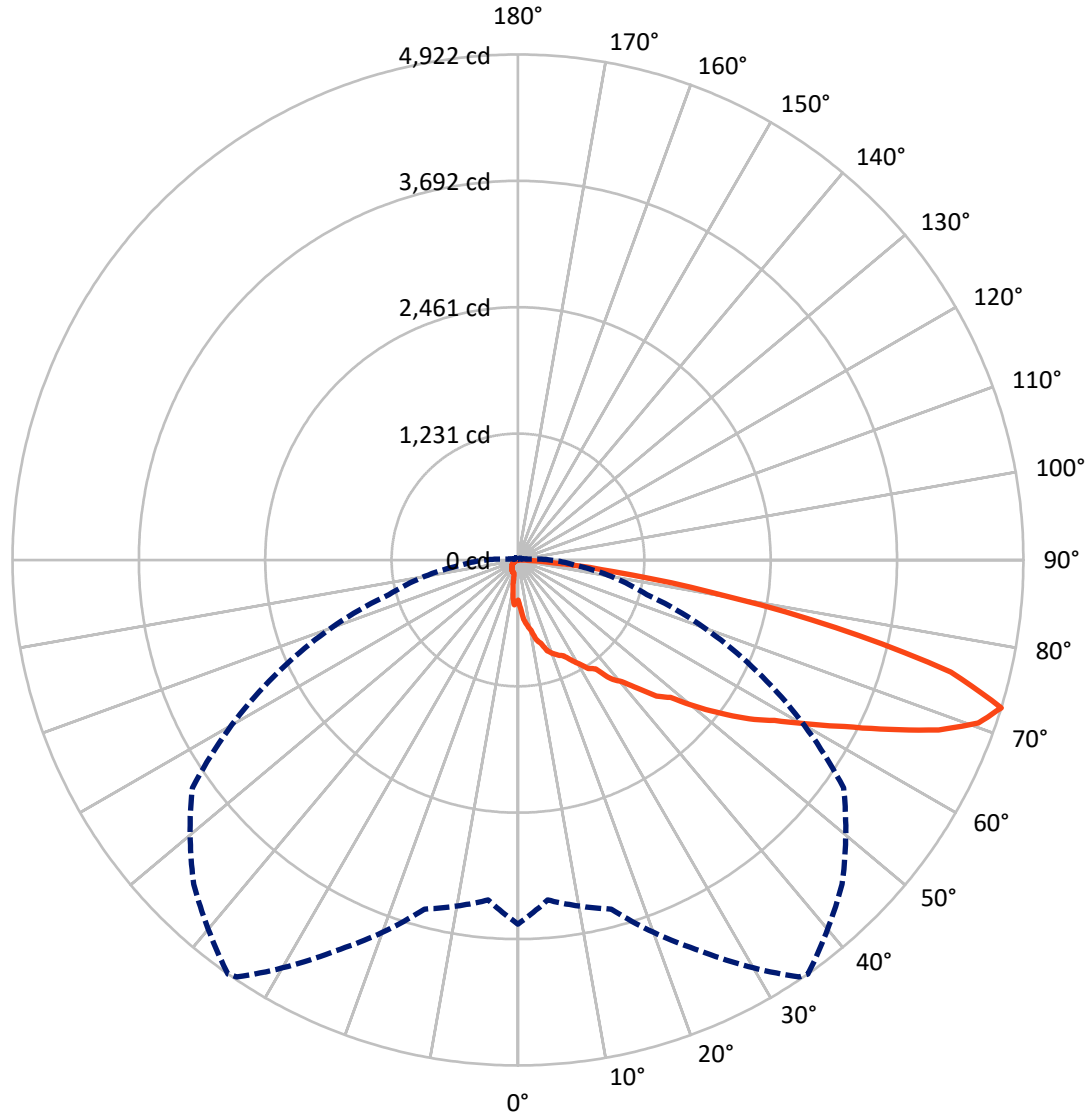
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 9.4 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	512.8	0.0	512.8
	% Fixture	7.8	0.0	7.8
<b>Street Side</b>	Lumens	6061.2	0.0	6061.2
	% Fixture	92.2	0.0	92.2
<b>Total</b>	Lumens	6574.0	0.0	6574.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	49.9	0.8
10°-20°	168.2	2.6
20°-30°	306.4	4.7
30°-40°	528.5	8.0
40°-50°	939.4	14.3
50°-60°	1401.9	21.3
60°-70°	1791.0	27.2
70°-80°	1246.1	19.0
80°-90°	142.5	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°	6574.0	100.0
0°-180°	6574.0	100.0

**Coefficient of Utilization**

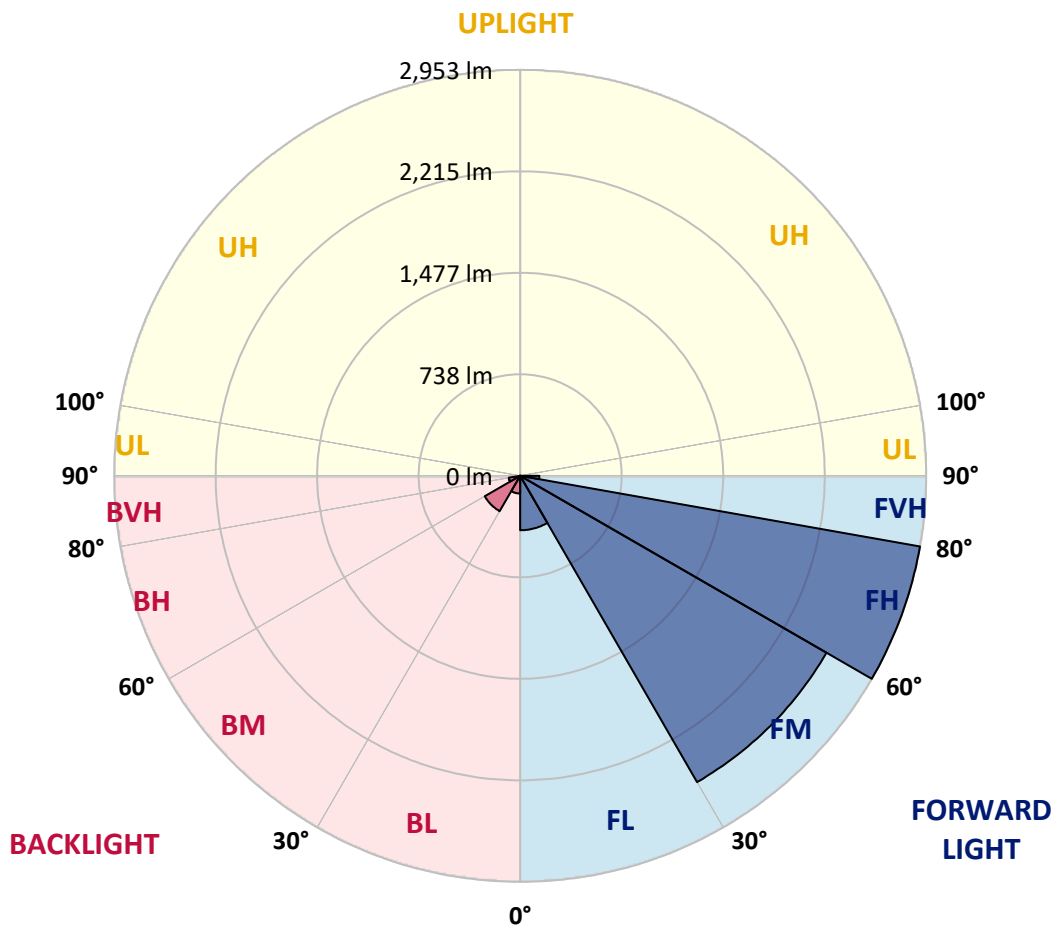


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	395.6	6.0			
FM (30°-60°)	2572.4	39.1			
FH (60°-80°)	2953.1	44.9			G2/5000
FVH (80°-90°)	140.1	2.1			G2/225
BL (0°-30°)	129.0	2.0	B1/500		
BM (30°-60°)	297.3	4.5	B1/1000		
BH (60°-80°)	84.1	1.3	B0/110		G0/110
BVH (80°-90°)	2.4	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°	391.6	391.6	391.6	391.6	391.6	391.6	391.6	391.6	391.6	391.6	391.6
2.5°	498.4	478.9	447.1	449.4	463.7	466.6	470.9	459.7	449.8	432.3	466.3
5°	638.5	610.4	592.5	586.9	578.7	579.3	559.2	566.4	564.5	577.3	592.9
7.5°	717.5	701.9	679.5	673.2	642.8	639.5	614.7	648.1	651.4	646.7	672.2
10°	748.9	728.4	731.0	707.5	692.3	696.3	700.3	702.9	707.2	711.5	680.4
12.5°	767.4	771.0	807.0	782.6	797.8	797.8	824.5	796.1	797.1	766.0	771.3
15°	850.6	870.8	854.6	854.3	837.8	842.0	873.1	850.6	862.2	853.0	817.3
17.5°	955.1	959.0	928.3	914.8	929.6	930.0	916.7	915.7	875.4	943.5	900.2
20°	988.4	1010.9	967.3	914.4	976.2	973.2	972.3	956.7	889.6	984.2	948.5
22.5°	1079.3	1047.3	1017.5	982.8	1007.0	1007.0	1003.3	969.3	943.2	980.5	995.7
25°	1107.8	1111.7	1073.1	1061.8	1062.5	1032.7	1030.1	1015.5	990.4	1054.2	1023.8
27.5°	1205.6	1203.9	1111.1	1142.5	1102.5	1102.8	1029.8	1062.5	1066.8	1057.8	1091.9
30°	1301.7	1328.5	1188.4	1228.0	1186.1	1173.5	1102.1	1131.2	1138.8	1128.6	1171.5
32.5°	1424.3	1463.7	1327.5	1288.5	1224.4	1260.1	1210.9	1142.1	1179.8	1271.3	1295.5
35°	1554.2	1573.4	1428.3	1373.8	1301.4	1301.1	1299.4	1305.0	1346.7	1449.8	1470.3
37.5°	1787.5	1742.3	1611.1	1486.1	1502.3	1466.3	1441.2	1467.6	1510.9	1680.8	1768.4
40°	1917.7	1885.0	1700.3	1626.3	1546.0	1559.2	1627.3	1624.3	1739.6	1917.4	2048.6
42.5°	2044.3	2013.3	1831.5	1771.7	1668.6	1704.6	1734.3	1772.0	2008.3	2295.1	2367.2
45°	2157.0	2065.8	1937.6	1939.9	1886.3	1890.6	1943.2	1977.9	2319.6	2613.7	2664.3
47.5°	2225.1	2150.1	2027.1	2024.8	2021.5	2001.4	2248.9	2280.6	2567.8	2917.1	2921.7
50°	2320.9	2227.1	2119.3	2121.3	2197.7	2240.3	2535.7	2532.4	2807.4	3170.2	3063.5
52.5°	2440.2	2325.5	2206.9	2295.1	2413.1	2482.5	2722.4	2820.3	3064.8	3329.2	3119.0
55°	2592.9	2449.5	2335.1	2448.2	2705.6	2732.4	2905.2	3111.7	3345.4	3491.5	3136.9
57.5°	2772.0	2600.8	2508.3	2690.4	2947.2	2947.8	3171.2	3422.4	3517.6	3557.6	3116.7
60°	2965.0	2765.4	2672.2	2836.1	3213.5	3240.6	3467.0	3593.9	3692.4	3590.9	3080.7
62.5°	3134.9	2914.5	2842.1	3034.7	3505.7	3569.8	3724.8	3706.6	3818.6	3632.9	2989.1
65°	3337.1	3107.5	3059.9	3344.4	3887.0	3975.3	4014.3	3906.5	3860.9	3600.5	2750.9
67.5°	3537.4	3322.6	3321.3	3687.8	4387.0	4417.5	4376.5	4188.4	3811.7	3315.0	2314.3
70°	3678.5	3447.8	3534.8	4063.8	4841.5	4756.2	4583.7	4321.6	3456.1	2540.7	1511.9
72.5°	3546.0	3323.6	3519.6	4197.7	4897.6	4922.1	4463.7	3871.2	2567.8	1299.4	547.3
75°	2694.7	2558.5	3055.9	3724.1	4348.4	4354.0	3725.8	2730.4	1264.4	352.9	151.4
77.5°	1357.3	1314.0	1934.3	2643.8	3172.6	3163.3	2559.9	1462.7	406.8	117.3	76.3
80°	687.1	652.4	823.2	1426.3	1884.0	1897.9	1461.7	655.0	205.2	63.8	52.9
82.5°	422.0	400.5	450.4	645.4	914.4	936.6	554.5	414.7	127.2	37.7	48.2
85°	81.6	85.9	258.8	323.2	365.2	356.6	164.2	341.4	38.3	22.5	35.0
87.5°	0.0	1.3	59.8	105.4	105.8	93.9	37.3	75.7	5.3	6.3	4.3
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°	391.6	391.6	391.6	391.6	391.6	391.6	391.6	391.6	391.6	391.6	391.6
2.5°	471.9	467.0	425.7	421.0	422.0	415.1	412.8	398.2	394.6	417.1	421.0
5°	586.3	553.2	514.9	501.0	479.5	443.2	437.9	428.6	418.4	422.3	419.4
7.5°	656.3	612.4	571.4	498.4	437.9	385.0	376.4	360.5	344.7	345.0	355.3
10°	667.6	630.5	574.0	485.1	416.1	350.0	292.5	250.8	232.0	215.1	220.1
12.5°	732.7	698.3	594.2	481.2	384.3	281.2	205.9	165.2	147.4	141.4	140.8
15°	784.9	757.8	628.6	468.9	314.0	198.0	147.4	135.5	132.2	137.8	136.2
17.5°	862.5	813.6	624.9	418.4	239.3	150.4	135.8	134.2	138.1	141.4	142.4
20°	896.6	826.2	600.1	339.1	179.1	137.8	132.5	129.2	136.5	146.4	144.4
22.5°	930.9	847.7	571.1	277.6	144.1	131.9	128.9	126.2	131.9	141.4	143.8
25°	946.5	882.0	538.7	216.8	133.8	124.9	122.9	123.9	128.6	137.1	136.2
27.5°	1024.8	886.0	476.9	171.2	129.5	120.0	120.0	122.3	122.3	133.8	132.9
30°	1073.7	953.1	426.6	144.1	124.6	113.0	117.0	118.0	116.3	128.9	129.9
32.5°	1159.6	971.6	377.7	132.2	116.7	112.0	111.4	112.0	113.4	125.6	125.9
35°	1291.8	1062.8	311.0	127.6	112.7	107.1	102.4	106.1	109.4	118.3	120.0
37.5°	1550.3	1156.3	253.5	123.9	110.7	102.4	100.8	100.1	106.1	116.3	119.6
40°	1759.4	1321.9	206.2	121.0	106.7	99.8	95.5	95.8	101.1	108.7	113.7
42.5°	2055.6	1441.5	174.8	116.3	101.1	94.2	89.2	92.2	94.5	102.4	105.8
45°	2302.7	1534.4	154.0	113.4	95.5	88.9	84.9	88.2	85.9	89.9	94.5
47.5°	2499.4	1615.4	138.5	106.1	91.9	85.9	81.0	80.0	76.0	77.0	81.3
50°	2607.4	1601.8	125.6	98.8	87.2	82.9	76.0	69.1	63.8	63.5	66.1
52.5°	2645.8	1529.4	115.0	92.5	81.6	76.3	68.4	58.8	53.5	51.9	54.2
55°	2656.4	1425.3	105.4	85.6	76.3	68.1	59.8	49.6	44.0	41.3	43.6
57.5°	2622.0	1265.1	96.2	79.0	70.1	60.1	51.2	40.6	35.4	32.1	34.0
60°	2537.1	1061.5	87.9	70.7	63.5	53.2	43.3	32.7	27.1	24.1	25.1
62.5°	2349.0	832.1	79.0	63.1	56.5	46.6	36.4	25.8	20.5	17.8	18.2
65°	2062.8	620.3	68.7	55.9	50.2	40.3	29.1	19.8	15.5	13.2	12.9
67.5°	1643.4	420.4	58.5	48.2	44.6	34.0	23.1	15.5	12.2	10.6	9.9
70°	966.0	211.8	48.6	41.6	38.3	28.4	18.2	12.6	11.2	9.9	9.3
72.5°	318.6	91.5	38.0	34.4	31.7	22.8	14.2	11.6	10.9	9.6	8.9
75°	111.0	52.9	28.1	26.4	25.1	17.2	11.9	10.6	10.6	9.3	8.3
77.5°	72.7	41.0	20.8	19.2	18.8	12.6	10.2	9.9	9.3	7.6	6.3
80°	60.5	23.1	14.5	13.5	13.2	7.9	8.3	7.3	5.6	3.3	1.3
82.5°	55.9	13.9	7.6	8.3	7.6	3.0	4.6	4.0	3.0	1.3	0.0
85°	32.7	6.3	4.3	4.3	3.3	0.7	2.3	2.3	1.3	0.3	0.0
87.5°	3.6	3.0	2.3	2.3	1.7	0.0	1.0	0.7	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)