

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: P596593

Luminaire Tested: **MSA-SA2B-827-U-SL4-HSS**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P596593  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-21)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 5/27/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA2B-827-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: 6056 lumens  
Efficiency: N/A  
Efficacy: 71.2 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G2

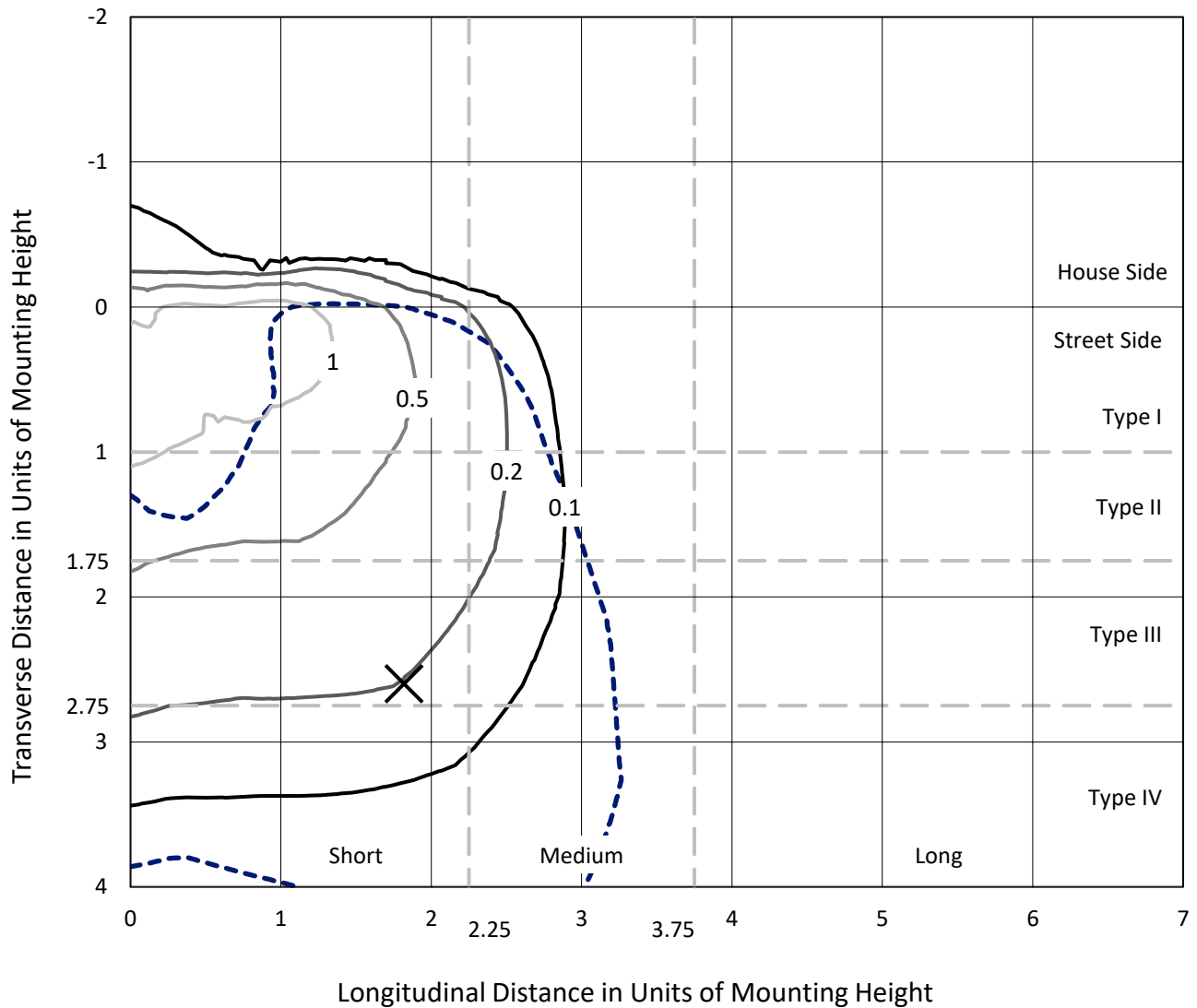
Input Watts (W): 85  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

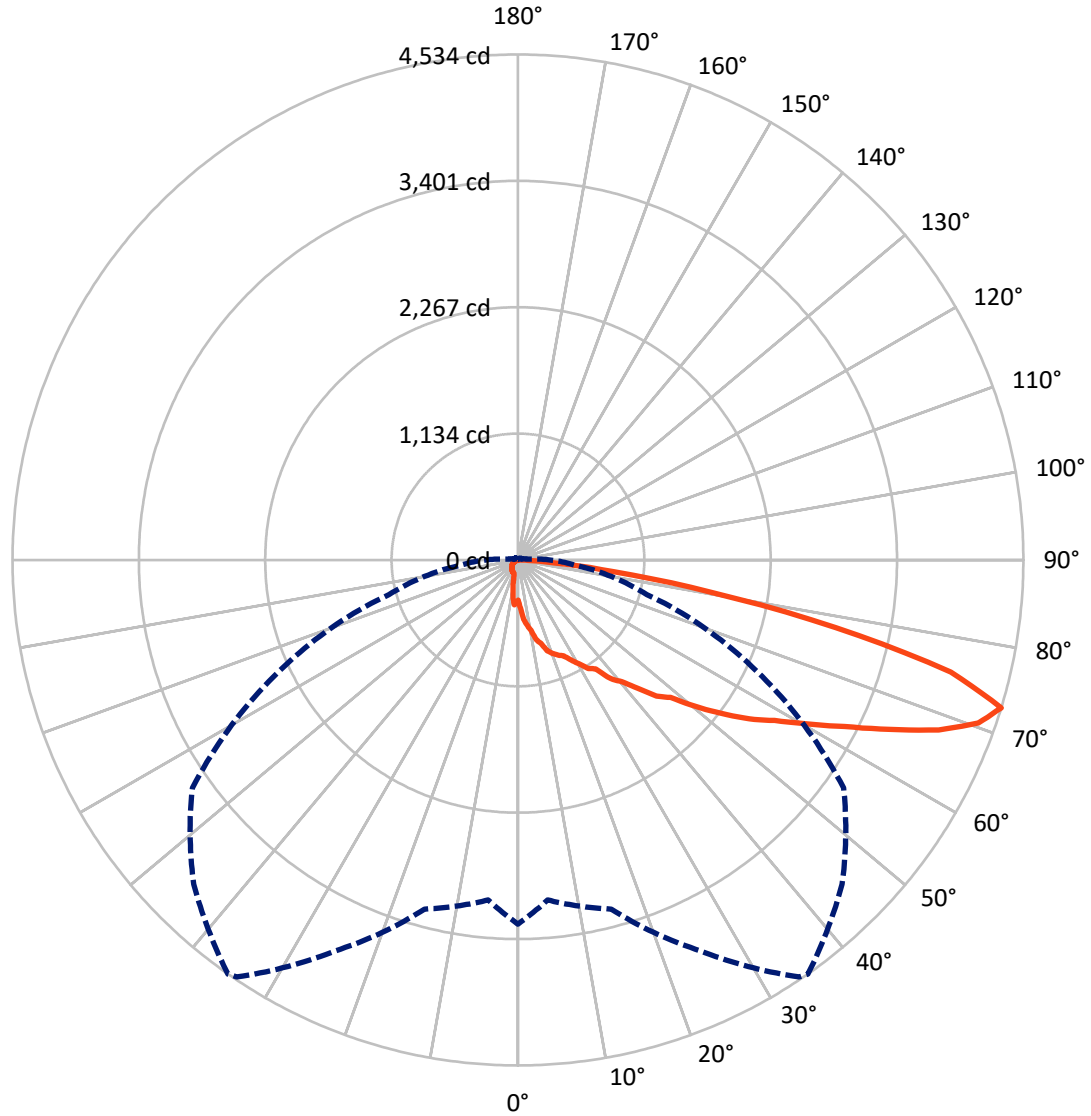
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.4 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	472.4	0.0	472.4
	% Fixture	7.8	0.0	7.8
<b>Street Side</b>	Lumens	5583.6	0.0	5583.6
	% Fixture	92.2	0.0	92.2
<b>Total</b>	Lumens	6056.0	0.0	6056.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	46.0	0.8
10°-20°	155.0	2.6
20°-30°	282.2	4.7
30°-40°	486.8	8.0
40°-50°	865.4	14.3
50°-60°	1291.4	21.3
60°-70°	1649.9	27.2
70°-80°	1147.9	19.0
80°-90°	131.3	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°	6056.0	100.0
0°-180°	6056.0	100.0

**Coefficient of Utilization**



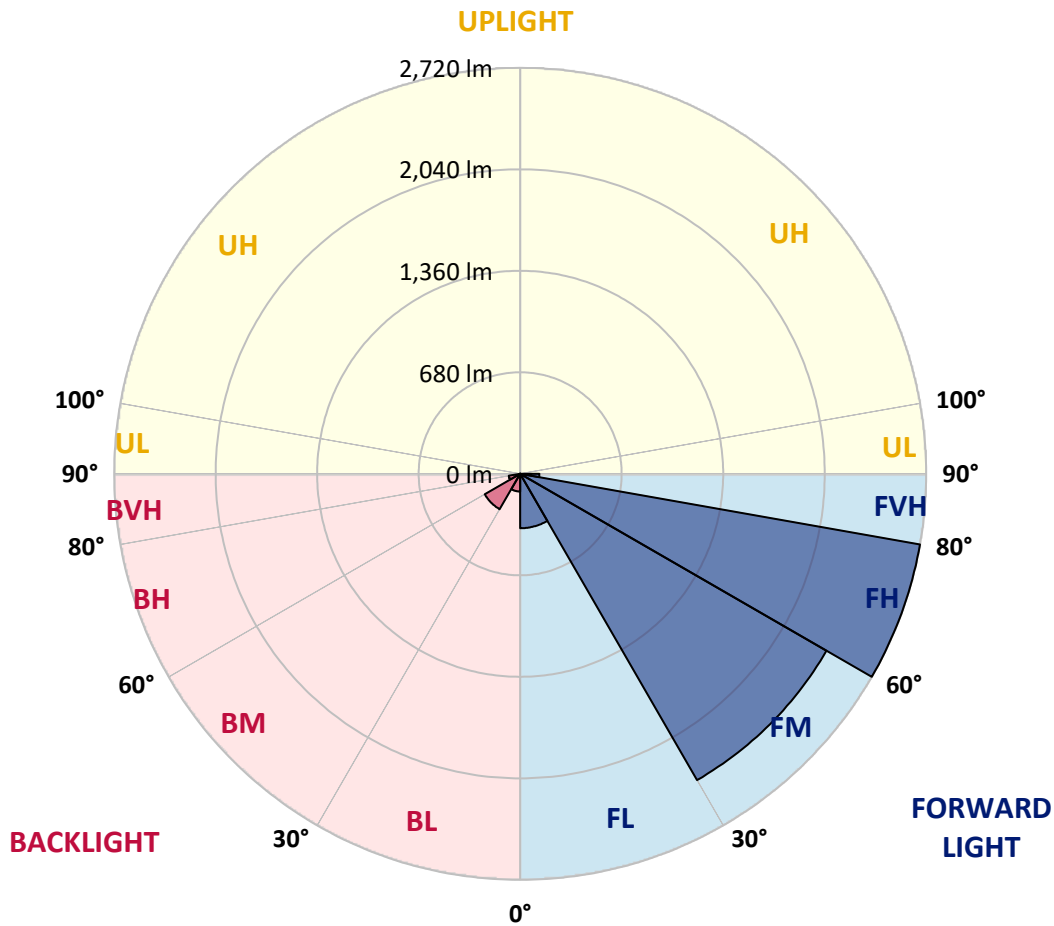
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	364.4	6.0			
FM (30°-60°)	2369.7	39.1			
FH (60°-80°)	2720.4	44.9			G2/5000
FVH (80°-90°)	129.1	2.1			G2/225
BL (0°-30°)	118.8	2.0	B1/500		
BM (30°-60°)	273.9	4.5	B1/1000		
BH (60°-80°)	77.4	1.3	B0/110		G0/110
BVH (80°-90°)	2.2	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°	360.8	360.8	360.8	360.8	360.8	360.8	360.8	360.8	360.8	360.8	360.8
2.5°	459.1	441.1	411.9	414.0	427.1	429.9	433.8	423.5	414.3	398.2	429.6
5°	588.2	562.3	545.9	540.7	533.1	533.7	515.1	521.8	520.0	531.8	546.2
7.5°	660.9	646.6	625.9	620.1	592.1	589.1	566.2	597.0	600.0	595.8	619.2
10°	689.8	671.0	673.4	651.8	637.8	641.4	645.1	647.5	651.5	655.4	626.8
12.5°	706.9	710.2	743.4	720.9	734.9	734.9	759.6	733.4	734.3	705.7	710.6
15°	783.6	802.2	787.3	787.0	771.7	775.7	804.3	783.6	794.3	785.7	752.9
17.5°	879.8	883.5	855.2	842.7	856.4	856.7	844.5	843.6	806.4	869.2	829.3
20°	910.6	931.3	891.1	842.4	899.3	896.6	895.6	881.3	819.5	906.6	873.7
22.5°	994.3	964.8	937.4	905.4	927.6	927.6	924.3	892.9	868.9	903.3	917.3
25°	1020.5	1024.1	988.5	978.1	978.8	951.4	948.9	935.5	912.4	971.1	943.1
27.5°	1110.6	1109.1	1023.5	1052.4	1015.6	1015.9	948.6	978.8	982.7	974.5	1005.9
30°	1199.2	1223.8	1094.7	1131.3	1092.6	1081.0	1015.3	1042.1	1049.1	1039.6	1079.2
32.5°	1312.1	1348.3	1222.9	1187.0	1127.9	1160.8	1115.4	1052.1	1086.8	1171.2	1193.4
35°	1431.8	1449.4	1315.8	1265.5	1198.9	1198.6	1197.0	1202.2	1240.6	1335.6	1354.4
37.5°	1646.7	1605.0	1484.1	1369.0	1384.0	1350.8	1327.6	1352.0	1391.9	1548.4	1629.0
40°	1766.6	1736.5	1566.3	1498.1	1424.1	1436.3	1499.0	1496.3	1602.5	1766.3	1887.2
42.5°	1883.2	1854.6	1687.2	1632.1	1537.1	1570.3	1597.7	1632.4	1850.0	2114.3	2180.7
45°	1987.0	1903.0	1784.9	1787.0	1737.7	1741.7	1790.1	1822.0	2136.8	2407.8	2454.4
47.5°	2049.8	1980.7	1867.4	1865.3	1862.2	1843.7	2071.7	2100.9	2365.5	2687.2	2691.5
50°	2138.0	2051.6	1952.3	1954.2	2024.5	2063.8	2335.9	2332.9	2586.2	2920.4	2822.1
52.5°	2247.9	2142.3	2033.0	2114.3	2223.0	2286.9	2507.9	2598.0	2823.3	3066.9	2873.3
55°	2388.6	2256.5	2151.1	2255.3	2492.4	2517.1	2676.3	2866.6	3081.8	3216.4	2889.7
57.5°	2553.6	2395.9	2310.7	2478.4	2714.9	2715.6	2921.4	3152.7	3240.4	3277.2	2871.1
60°	2731.4	2547.5	2461.7	2612.7	2960.3	2985.3	3193.8	3310.7	3401.4	3308.0	2837.9
62.5°	2887.9	2684.8	2618.1	2795.6	3229.4	3288.5	3431.3	3414.5	3517.7	3346.7	2753.6
65°	3074.2	2862.6	2818.8	3080.9	3580.8	3662.0	3698.0	3598.7	3556.7	3316.8	2534.1
67.5°	3258.7	3060.8	3059.6	3397.2	4041.4	4069.4	4031.6	3858.4	3511.3	3053.8	2132.0
70°	3388.7	3176.2	3256.2	3743.6	4460.0	4381.4	4222.5	3981.1	3183.8	2340.5	1392.8
72.5°	3266.6	3061.7	3242.2	3866.9	4511.7	4534.3	4112.0	3566.1	2365.5	1197.0	504.1
75°	2482.4	2356.9	2815.1	3430.7	4005.8	4010.9	3432.2	2515.2	1164.8	325.1	139.4
77.5°	1250.3	1210.4	1781.9	2435.5	2922.6	2914.0	2358.2	1347.4	374.8	108.1	70.3
80°	632.9	601.0	758.3	1313.9	1735.6	1748.4	1346.5	603.4	189.1	58.8	48.7
82.5°	388.8	369.0	414.9	594.6	842.4	862.8	510.8	382.1	117.2	34.7	44.4
85°	75.2	79.2	238.4	297.7	336.4	328.5	151.3	314.5	35.3	20.7	32.3
87.5°	0.0	1.2	55.1	97.1	97.4	86.5	34.4	69.7	4.9	5.8	4.0
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°	360.8	360.8	360.8	360.8	360.8	360.8	360.8	360.8	360.8	360.8	360.8
2.5°	434.7	430.2	392.1	387.8	388.8	382.4	380.2	366.8	363.5	384.2	387.8
5°	540.1	509.6	474.3	461.5	441.7	408.2	403.4	394.9	385.4	389.1	386.3
7.5°	604.6	564.1	526.4	459.1	403.4	354.7	346.8	332.1	317.5	317.8	327.3
10°	615.0	580.9	528.8	446.9	383.3	322.4	269.4	231.1	213.7	198.2	202.8
12.5°	674.9	643.3	547.4	443.3	354.1	259.1	189.7	152.2	135.8	130.3	129.7
15°	723.0	698.1	579.0	432.0	289.2	182.4	135.8	124.8	121.8	126.9	125.4
17.5°	794.6	749.5	575.7	385.4	220.4	138.5	125.1	123.6	127.3	130.3	131.2
20°	825.9	761.1	552.9	312.3	165.0	126.9	122.1	119.0	125.7	134.9	133.0
22.5°	857.6	780.9	526.1	255.7	132.7	121.5	118.7	116.3	121.5	130.3	132.4
25°	871.9	812.5	496.2	199.7	123.3	115.1	113.2	114.2	118.4	126.3	125.4
27.5°	944.1	816.2	439.3	157.7	119.3	110.5	110.5	112.6	112.6	123.3	122.4
30°	989.1	878.0	393.0	132.7	114.8	104.1	107.8	108.7	107.2	118.7	119.6
32.5°	1068.3	895.0	348.0	121.8	107.5	103.2	102.6	103.2	104.4	115.7	116.0
35°	1190.0	979.1	286.5	117.5	103.8	98.6	94.4	97.7	100.8	109.0	110.5
37.5°	1428.1	1065.2	233.5	114.2	102.0	94.4	92.9	92.2	97.7	107.2	110.2
40°	1620.8	1217.7	190.0	111.4	98.3	91.9	88.0	88.3	93.2	100.2	104.7
42.5°	1893.6	1327.9	161.0	107.2	93.2	86.8	82.2	84.9	87.1	94.4	97.4
45°	2121.3	1413.5	141.9	104.4	88.0	81.9	78.2	81.3	79.2	82.8	87.1
47.5°	2302.4	1488.1	127.6	97.7	84.6	79.2	74.6	73.7	70.0	70.9	74.9
50°	2402.0	1475.6	115.7	91.0	80.4	76.4	70.0	63.6	58.8	58.5	60.9
52.5°	2437.3	1408.9	105.9	85.2	75.2	70.3	63.0	54.2	49.3	47.8	49.9
55°	2447.0	1313.0	97.1	78.8	70.3	62.7	55.1	45.7	40.5	38.1	40.2
57.5°	2415.4	1165.4	88.6	72.8	64.5	55.4	47.2	37.4	32.6	29.5	31.4
60°	2337.1	977.8	81.0	65.1	58.5	49.0	39.9	30.1	25.0	22.2	23.1
62.5°	2163.9	766.6	72.8	58.1	52.1	42.9	33.5	23.7	18.9	16.4	16.7
65°	1900.3	571.4	63.3	51.4	46.3	37.1	26.8	18.3	14.3	12.2	11.9
67.5°	1514.0	387.2	53.9	44.4	41.1	31.4	21.3	14.3	11.3	9.7	9.1
70°	889.9	195.1	44.8	38.4	35.3	26.2	16.7	11.6	10.4	9.1	8.5
72.5°	293.5	84.3	35.0	31.7	29.2	21.0	13.1	10.7	10.0	8.8	8.2
75°	102.3	48.7	25.9	24.4	23.1	15.8	11.0	9.7	9.7	8.5	7.6
77.5°	67.0	37.7	19.2	17.7	17.4	11.6	9.4	9.1	8.5	7.0	5.8
80°	55.7	21.3	13.4	12.5	12.2	7.3	7.6	6.7	5.2	3.0	1.2
82.5°	51.4	12.8	7.0	7.6	7.0	2.7	4.3	3.7	2.7	1.2	0.0
85°	30.1	5.8	4.0	4.0	3.0	0.6	2.1	2.1	1.2	0.3	0.0
87.5°	3.3	2.7	2.1	2.1	1.5	0.0	0.9	0.6	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)