

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: P367553

Luminaire Tested: **MSA-SA2D-730-U-SL4-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367553
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-SA2D-730-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: 10159 lumens
Efficiency: N/A
Efficacy: 78.8 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

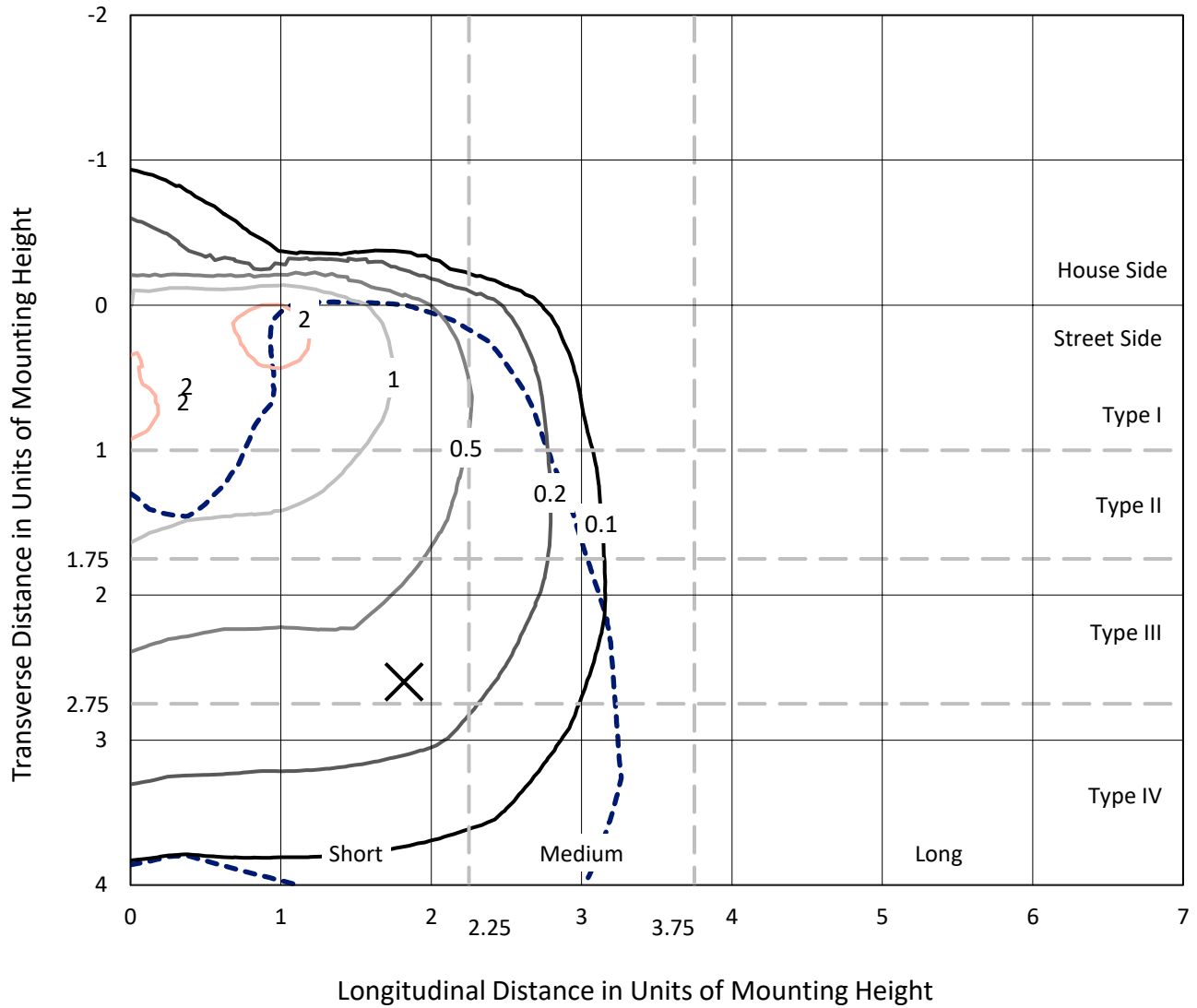
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

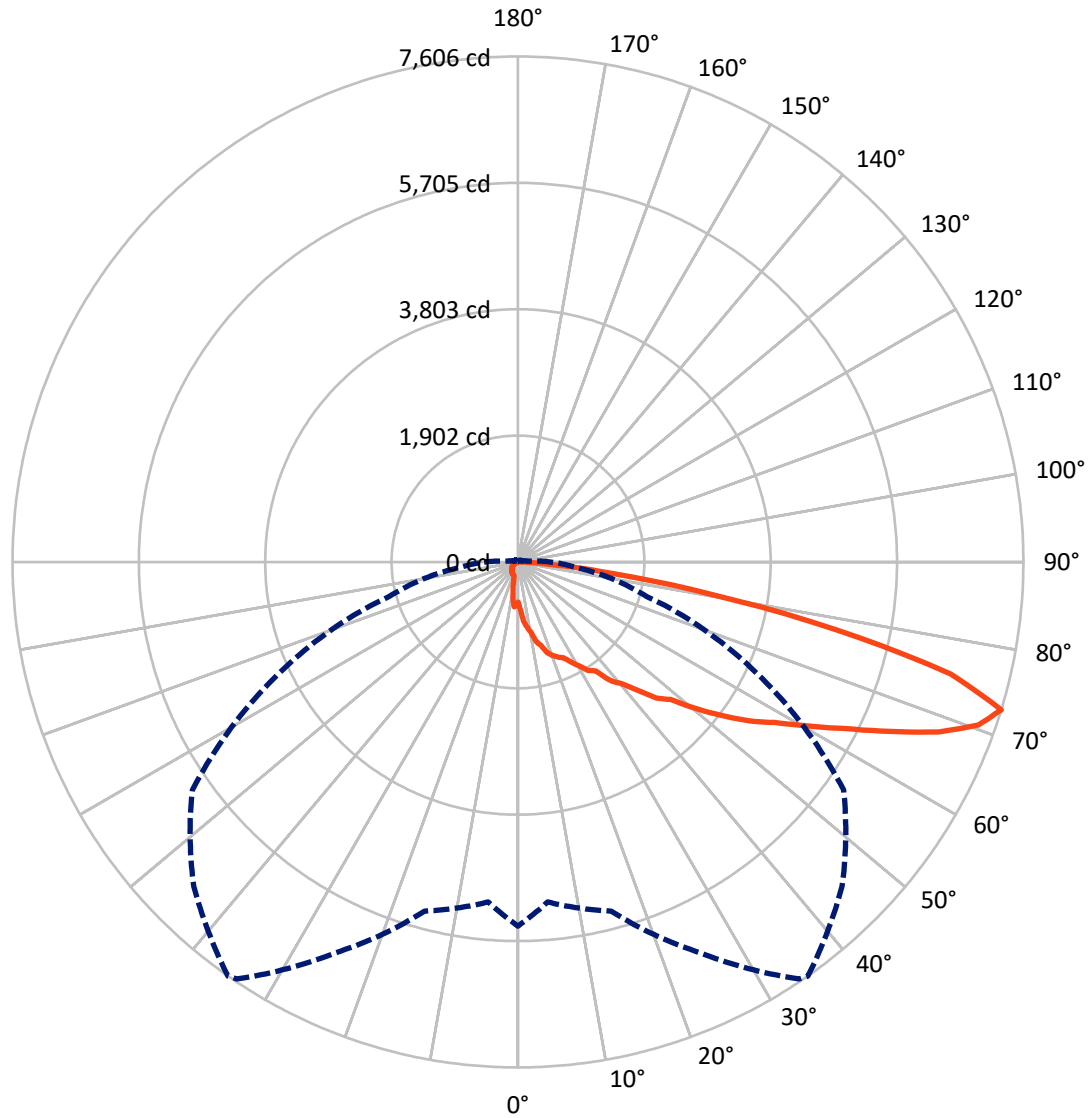
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.3 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
House Side	Lumens	792.4	0.0	792.4
	% Fixture	7.8	0.0	7.8
Street Side	Lumens	9366.6	0.0	9366.6
	% Fixture	92.2	0.0	92.2
Total	Lumens	10159.0	0.0	10159.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	77.2	0.8
10°-20°	260.0	2.6
20°-30°	473.5	4.7
30°-40°	816.7	8.0
40°-50°	1451.7	14.3
50°-60°	2166.3	21.3
60°-70°	2767.7	27.2
70°-80°	1925.6	19.0
80°-90°	220.3	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°	10159.0	100.0
0°-180°	10159.0	100.0

Coefficient of Utilization

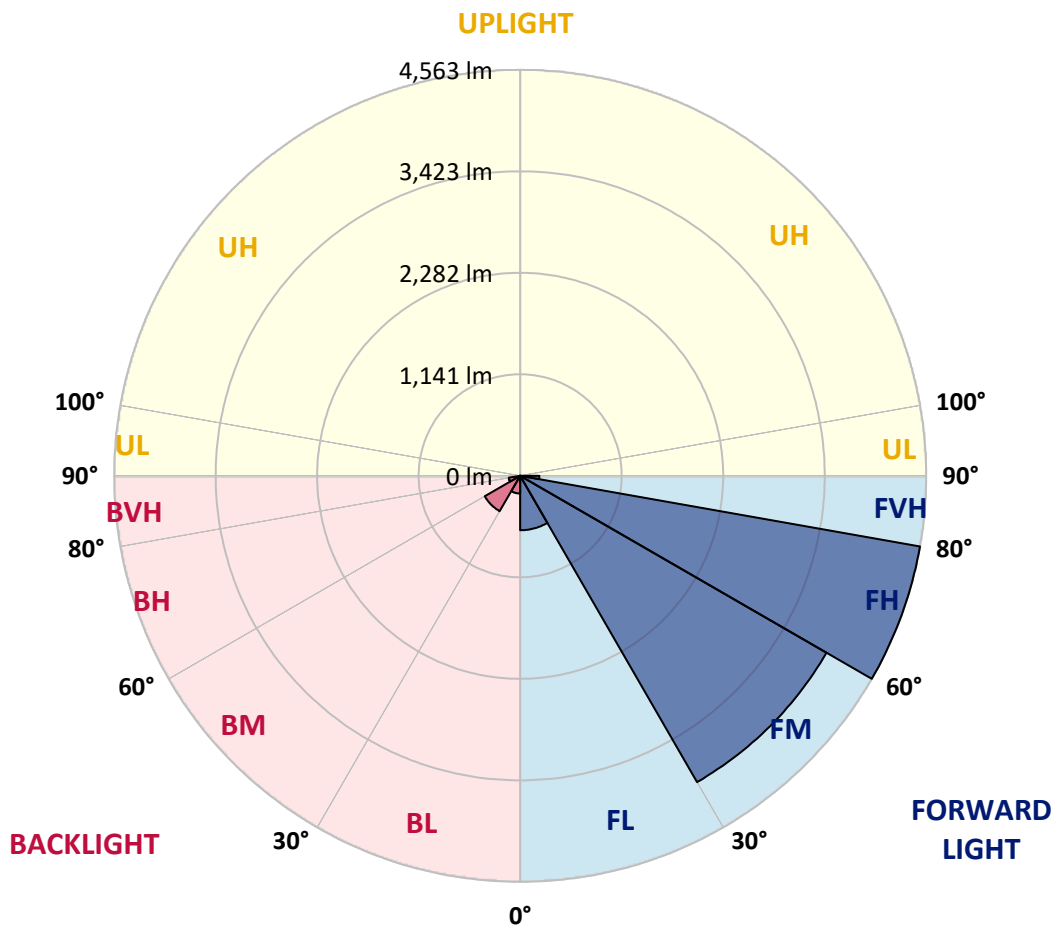


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	611.3	6.0			
FM (30°-60°)	3975.3	39.1			
FH (60°-80°)	4563.4	44.9			G2/5000
FVH (80°-90°)	216.6	2.1			G2/225
BL (0°-30°)	199.3	2.0	B1/500		
BM (30°-60°)	459.5	4.5	B1/1000		
BH (60°-80°)	129.9	1.3	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-G2
 Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	34°	35°	45°	55°	65°	75°	85°
0°	605.2	605.2	605.2	605.2	605.2	605.2	605.2	605.2	605.2	605.2	605.2
2.5°	770.1	740.0	691.0	694.5	716.5	721.1	727.7	710.4	695.1	668.0	720.6
5°	986.7	943.2	915.7	907.0	894.2	895.2	864.1	875.3	872.3	892.2	916.2
7.5°	1108.7	1084.7	1050.0	1040.3	993.3	988.2	949.9	1001.5	1006.6	999.4	1038.7
10°	1157.2	1125.6	1129.7	1093.4	1069.9	1076.0	1082.2	1086.2	1092.9	1099.5	1051.5
12.5°	1185.8	1191.4	1247.1	1209.3	1232.8	1232.8	1274.2	1230.3	1231.8	1183.8	1192.0
15°	1314.5	1345.7	1320.7	1320.1	1294.6	1301.2	1349.2	1314.5	1332.4	1318.1	1262.9
17.5°	1475.9	1482.0	1434.5	1413.6	1436.6	1437.1	1416.7	1415.1	1352.8	1458.0	1391.1
20°	1527.5	1562.2	1494.8	1413.1	1508.6	1504.0	1502.5	1478.5	1374.8	1520.8	1465.7
22.5°	1667.9	1618.4	1572.4	1518.8	1556.1	1556.1	1550.5	1497.9	1457.5	1515.2	1538.7
25°	1711.8	1718.0	1658.2	1640.9	1641.9	1595.9	1591.8	1569.4	1530.5	1629.1	1582.1
27.5°	1863.0	1860.5	1716.9	1765.5	1703.7	1704.2	1591.3	1641.9	1648.5	1634.7	1687.3
30°	2011.6	2053.0	1836.4	1897.7	1832.9	1813.5	1703.2	1748.1	1759.8	1744.0	1810.4
32.5°	2201.1	2261.9	2051.5	1991.2	1892.1	1947.3	1871.2	1765.0	1823.2	1964.6	2001.9
35°	2401.8	2431.4	2207.2	2122.9	2011.1	2010.6	2008.0	2016.7	2081.1	2240.4	2272.1
37.5°	2762.3	2692.4	2489.6	2296.6	2321.6	2265.9	2227.1	2268.0	2334.9	2597.4	2732.7
40°	2963.5	2913.0	2627.5	2513.1	2389.0	2409.4	2514.6	2510.1	2688.3	2963.0	3165.8
42.5°	3159.1	3111.1	2830.3	2737.8	2578.5	2634.2	2680.1	2738.3	3103.5	3546.8	3658.1
45°	3333.3	3192.3	2994.2	2997.8	2915.0	2921.7	3002.9	3056.5	3584.5	4039.1	4117.2
47.5°	3438.5	3322.6	3132.6	3129.0	3123.9	3092.8	3475.3	3524.3	3968.1	4507.9	4515.0
50°	3586.6	3441.6	3275.1	3278.1	3396.1	3462.0	3918.5	3913.4	4338.3	4899.1	4734.1
52.5°	3771.0	3593.7	3410.4	3546.8	3729.1	3836.3	4207.1	4358.2	4736.2	5144.7	4819.9
55°	4006.9	3785.3	3608.6	3783.2	4181.0	4222.4	4489.5	4808.7	5169.7	5395.5	4847.5
57.5°	4283.7	4019.1	3876.2	4157.5	4554.4	4555.4	4900.6	5288.7	5435.8	5497.6	4816.3
60°	4581.9	4273.5	4129.5	4382.8	4966.0	5007.8	5357.7	5553.8	5706.0	5549.2	4760.7
62.5°	4844.4	4503.8	4392.0	4689.7	5417.4	5516.5	5756.0	5727.9	5901.0	5614.0	4619.2
65°	5157.0	4802.0	4728.5	5168.2	6006.8	6143.1	6203.4	6036.9	5966.4	5564.0	4251.0
67.5°	5466.4	5134.5	5132.5	5698.8	6779.4	6826.4	6763.1	6472.5	5890.3	5122.8	3576.4
70°	5684.5	5328.1	5462.4	6280.0	7481.6	7349.9	7083.3	6678.3	5340.8	3926.2	2336.4
72.5°	5479.7	5136.0	5438.9	6486.8	7568.5	7606.2	6897.9	5982.2	3968.1	2008.0	845.7
75°	4164.2	3953.8	4722.4	5755.0	6719.7	6728.4	5757.5	4219.3	1953.9	545.4	233.9
77.5°	2097.4	2030.5	2989.1	4085.5	4902.6	4888.3	3955.8	2260.3	628.7	181.3	118.0
80°	1061.7	1008.1	1272.1	2204.1	2911.5	2932.9	2258.8	1012.2	317.1	98.6	81.7
82.5°	652.2	619.0	696.1	997.4	1413.1	1447.3	856.9	640.9	196.6	58.2	74.6
85°	126.1	132.8	399.9	499.5	564.3	551.0	253.8	527.5	59.2	34.7	54.1
87.5°	0.0	2.0	92.4	162.9	163.4	145.0	57.7	116.9	8.2	9.7	6.6
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°	605.2	605.2	605.2	605.2	605.2	605.2	605.2	605.2	605.2	605.2	605.2
2.5°	729.3	721.6	657.8	650.6	652.2	641.4	637.9	615.4	609.8	644.5	650.6
5°	906.0	854.9	795.7	774.2	741.0	684.8	676.7	662.4	646.5	652.7	648.1
7.5°	1014.2	946.3	883.0	770.1	676.7	595.0	581.7	557.2	532.7	533.2	549.0
10°	1031.6	974.4	887.1	749.7	643.0	540.8	452.0	387.6	358.5	332.5	340.1
12.5°	1132.2	1079.1	918.2	743.6	593.9	434.6	318.2	255.3	227.8	218.6	217.6
15°	1212.9	1171.0	971.3	724.7	485.2	305.9	227.8	209.4	204.3	213.0	210.4
17.5°	1332.9	1257.3	965.7	646.5	369.7	232.4	209.9	207.3	213.5	218.6	220.1
20°	1385.5	1276.7	927.4	524.0	276.8	213.0	204.8	199.7	210.9	226.2	223.2
22.5°	1438.6	1309.9	882.5	429.0	222.7	203.8	199.2	195.1	203.8	218.6	222.2
25°	1462.6	1363.0	832.4	335.0	206.8	193.0	190.0	191.5	198.7	211.9	210.4
27.5°	1583.7	1369.2	736.9	264.5	200.2	185.4	185.4	189.0	189.0	206.8	205.3
30°	1659.2	1472.8	659.3	222.7	192.5	174.7	180.8	182.3	179.8	199.2	200.7
32.5°	1792.0	1501.4	583.7	204.3	180.3	173.1	172.1	173.1	175.2	194.1	194.6
35°	1996.3	1642.4	480.6	197.1	174.1	165.5	158.3	163.9	169.0	182.8	185.4
37.5°	2395.7	1786.9	391.7	191.5	171.1	158.3	155.8	154.7	163.9	179.8	184.9
40°	2718.9	2042.8	318.7	186.9	165.0	154.2	147.6	148.1	156.3	168.0	175.7
42.5°	3176.5	2227.6	270.2	179.8	156.3	145.5	137.9	142.5	146.1	158.3	163.4
45°	3558.5	2371.1	238.0	175.2	147.6	137.4	131.2	136.4	132.8	138.9	146.1
47.5°	3862.4	2496.3	214.0	163.9	142.0	132.8	125.1	123.6	117.5	119.0	125.6
50°	4029.4	2475.3	194.1	152.7	134.8	128.2	117.5	106.7	98.6	98.1	102.1
52.5°	4088.6	2363.5	177.7	143.0	126.1	118.0	105.7	90.9	82.7	80.2	83.8
55°	4104.9	2202.6	162.9	132.3	118.0	105.2	92.4	76.6	67.9	63.8	67.4
57.5°	4051.8	1954.9	148.6	122.1	108.3	92.9	79.2	62.8	54.6	49.5	52.6
60°	3920.6	1640.3	135.8	109.3	98.1	82.2	66.9	50.6	41.9	37.3	38.8
62.5°	3630.0	1285.9	122.1	97.5	87.3	72.0	56.2	39.8	31.7	27.6	28.1
65°	3187.7	958.6	106.2	86.3	77.6	62.3	44.9	30.6	24.0	20.4	19.9
67.5°	2539.7	649.6	90.4	74.6	68.9	52.6	35.7	24.0	18.9	16.3	15.3
70°	1492.8	327.4	75.1	64.3	59.2	43.9	28.1	19.4	17.4	15.3	14.3
72.5°	492.3	141.5	58.7	53.1	49.0	35.2	22.0	17.9	16.9	14.8	13.8
75°	171.6	81.7	43.4	40.9	38.8	26.6	18.4	16.3	16.3	14.3	12.8
77.5°	112.4	63.3	32.2	29.6	29.1	19.4	15.8	15.3	14.3	11.7	9.7
80°	93.5	35.7	22.5	20.9	20.4	12.3	12.8	11.2	8.7	5.1	2.0
82.5°	86.3	21.4	11.7	12.8	11.7	4.6	7.1	6.1	4.6	2.0	0.0
85°	50.6	9.7	6.6	6.6	5.1	1.0	3.6	3.6	2.0	0.5	0.0
87.5°	5.6	4.6	3.6	3.6	2.6	0.0	1.5	1.0	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)