

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: P367099

Luminaire Tested: **MSA-SA1D-760-U-T3-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367099
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-11)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA1D-760-U-T3-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5064 lumens
Efficiency: N/A
Efficacy: 75.6 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G2

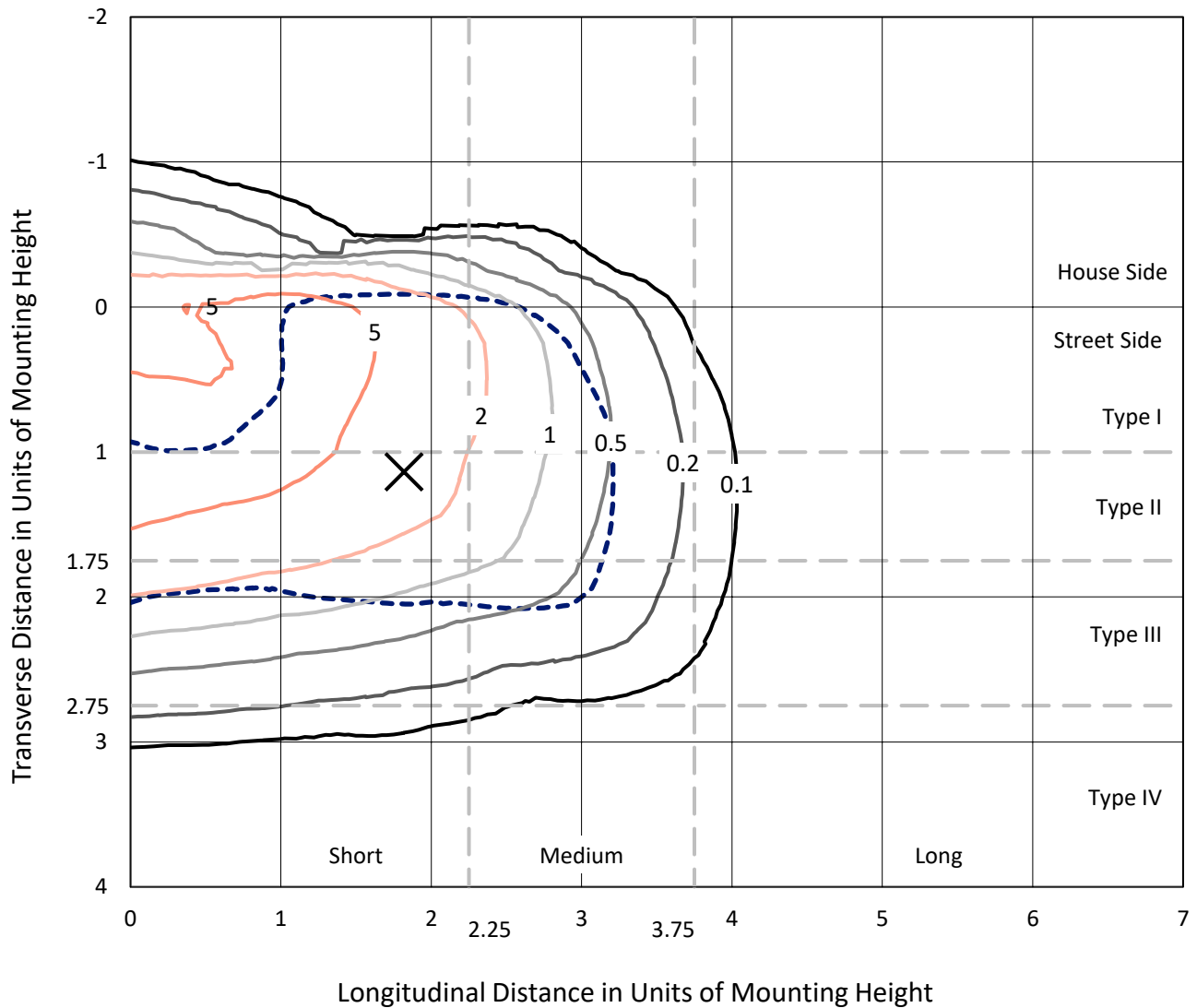
Input Watts (W): 67
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

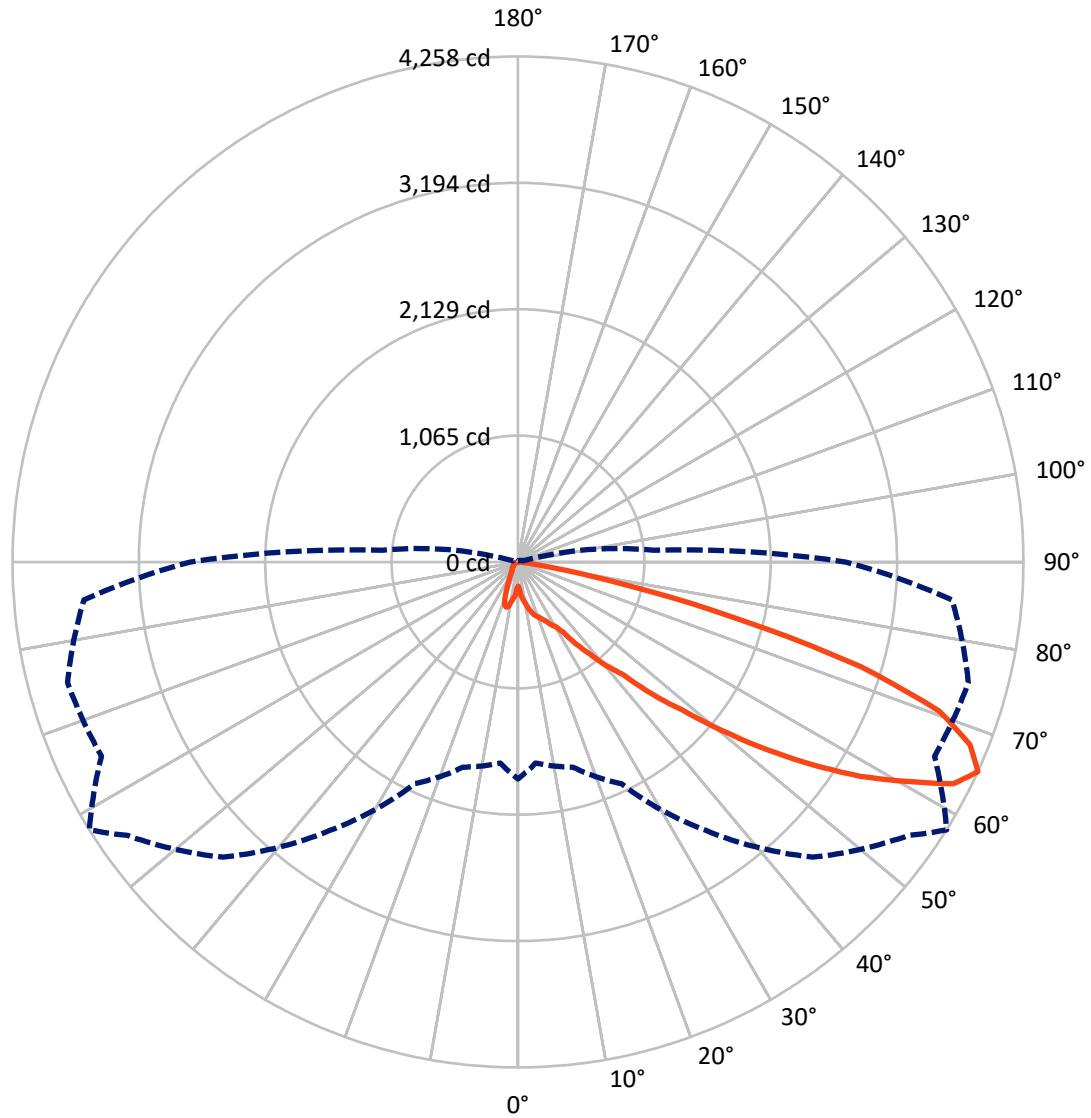
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 8.2 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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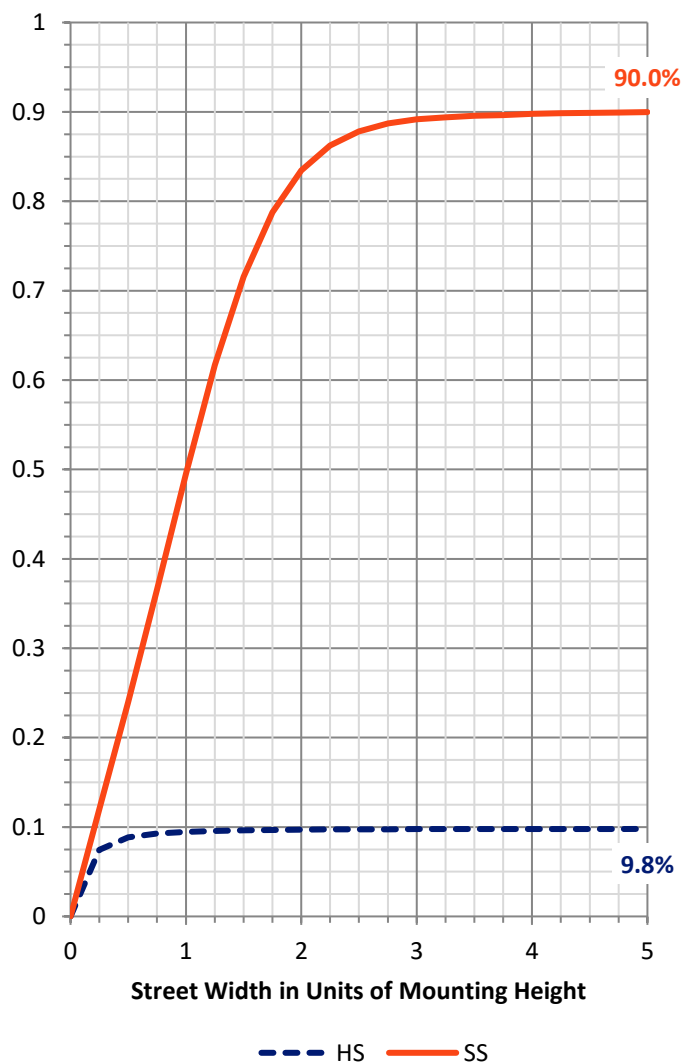
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	499.7	0.0	499.7
	% Fixture	9.9	0.0	9.9
Street Side	Lumens	4564.3	0.0	4564.3
	% Fixture	90.1	0.0	90.1
Total	Lumens	5064.0	0.0	5064.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	28.5	0.6
10°-20°	103.9	2.1
20°-30°	201.2	4.0
30°-40°	401.4	7.9
40°-50°	820.7	16.2
50°-60°	1455.7	28.7
60°-70°	1534.7	30.3
70°-80°	497.6	9.8
80°-90°	20.3	0.4
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°	5064.0	100.0
0°-180°	5064.0	100.0

Coefficient of Utilization



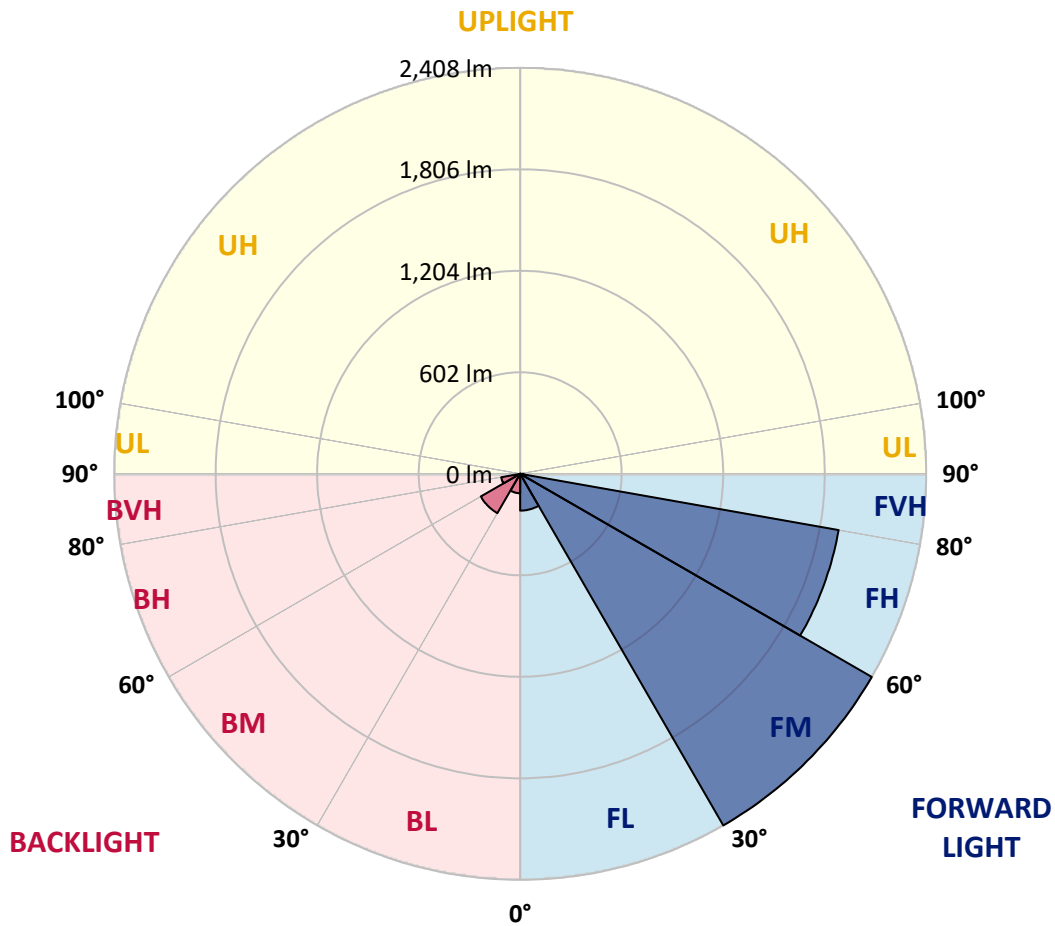
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	218.5	4.3			
FM (30°-60°)	2408.2	47.6			
FH (60°-80°)	1918.2	37.9			G2/5000
FVH (80°-90°)	19.5	0.4			G1/100
BL (0°-30°)	115.2	2.3	B1/500		
BM (30°-60°)	269.6	5.3	B1/1000		
BH (60°-80°)	114.0	2.3	B1/500		G1/500
BVH (80°-90°)	0.9	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 III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	202.7	202.7	202.7	202.7	202.7	202.7	202.7	202.7	202.7	202.7	202.7
2.5°	247.5	240.1	228.4	230.4	232.7	237.2	233.5	230.1	226.4	221.5	240.1
5°	298.8	286.5	285.4	282.8	280.8	280.6	285.1	283.7	285.7	294.8	304.2
7.5°	317.6	312.5	302.8	306.8	300.5	295.7	315.9	322.5	335.0	339.3	363.8
10°	315.6	308.2	312.2	314.2	318.5	336.2	349.0	356.1	366.9	390.3	385.5
12.5°	324.8	331.3	335.6	335.9	357.8	390.3	399.5	405.4	424.8	434.0	457.9
15°	355.3	366.1	359.3	362.1	369.2	408.9	430.2	443.4	470.7	500.4	506.4
17.5°	398.9	405.7	391.5	381.2	400.9	422.5	461.3	475.0	492.4	561.7	574.5
20°	453.9	465.6	434.8	394.0	420.0	445.6	487.8	494.4	512.9	603.3	623.6
22.5°	582.5	565.1	518.1	454.5	446.8	458.2	498.4	524.0	555.4	626.7	673.7
25°	709.4	703.4	634.1	563.1	511.8	486.1	539.4	553.7	605.0	682.3	708.2
27.5°	850.5	862.5	746.7	703.7	603.0	519.2	565.1	600.7	661.5	702.5	765.0
30°	1036.7	1017.6	881.9	838.8	723.9	610.2	631.5	633.8	723.1	769.3	828.6
32.5°	1182.7	1194.9	1024.4	958.3	866.5	750.1	681.4	711.1	775.0	877.9	934.1
35°	1340.6	1339.5	1173.3	1084.3	964.3	864.5	829.4	851.1	931.2	1047.8	1062.6
37.5°	1576.7	1556.5	1360.3	1230.0	1127.9	1042.7	1015.9	987.1	1069.8	1181.0	1236.6
40°	1799.4	1729.5	1548.2	1393.7	1263.1	1228.3	1131.4	1149.0	1173.6	1320.4	1474.1
42.5°	2024.3	1981.0	1738.7	1609.2	1448.7	1366.0	1302.7	1294.4	1411.1	1585.0	1743.8
45°	2321.2	2188.6	1994.7	1880.9	1695.0	1612.1	1561.0	1591.5	1696.5	1950.5	2056.3
47.5°	2570.3	2448.3	2281.8	2109.0	1914.0	2007.2	1911.4	1863.3	2007.2	2269.8	2410.4
50°	2784.5	2648.5	2480.0	2351.9	2320.3	2409.8	2215.9	2233.6	2327.1	2635.6	2714.9
52.5°	2940.1	2797.0	2649.9	2588.0	2717.8	2762.8	2665.6	2626.5	2711.5	2947.6	2986.1
55°	3057.3	2910.8	2795.9	2881.1	3132.0	3117.2	3151.4	3018.0	3099.2	3272.9	3254.6
57.5°	3064.5	2890.8	2823.5	2960.7	3305.1	3534.6	3634.7	3407.7	3453.9	3527.2	3486.2
60°	2840.4	2667.6	2662.2	2856.9	3355.3	3642.7	3861.7	3751.0	3689.2	3743.6	3665.8
62.5°	2393.9	2273.0	2329.4	2544.7	3168.5	3583.1	3982.5	4115.7	3874.8	3887.0	3776.4
65°	1827.9	1701.0	1789.4	2060.6	2760.2	3516.4	4016.8	4258.3	3871.3	3927.8	3670.3
67.5°	1210.6	1137.1	1237.1	1535.9	2194.6	3104.1	3999.1	4108.6	3748.5	3768.4	3276.6
70°	625.0	607.0	688.0	923.8	1475.5	2384.7	3825.4	3765.6	3499.0	3246.4	2527.3
72.5°	200.2	201.0	278.8	422.0	795.5	1451.8	2940.4	3022.5	2799.9	2374.8	1543.1
75°	88.7	87.2	116.6	177.1	331.6	650.9	1826.8	1915.4	1743.2	1306.4	648.6
77.5°	63.9	61.9	74.7	103.5	164.2	220.7	856.5	924.4	790.4	452.8	148.5
80°	45.0	44.8	54.2	72.7	102.6	98.1	270.6	303.4	242.9	109.8	43.6
82.5°	25.4	26.2	37.6	51.3	62.4	49.0	76.1	83.8	81.8	58.4	19.1
85°	12.3	13.7	24.5	37.1	32.8	19.1	27.1	29.4	34.2	33.9	9.7
87.5°	0.0	0.0	10.0	16.8	8.8	2.9	8.3	9.4	9.1	10.8	2.3
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°	202.7	202.7	202.7	202.7	202.7	202.7	202.7	202.7	202.7	202.7	202.7
2.5°	243.8	242.1	220.4	222.1	227.0	225.0	226.7	222.7	218.1	236.6	236.4
5°	308.2	295.4	288.5	282.3	283.4	270.6	278.0	281.4	280.8	291.4	294.2
7.5°	364.7	347.6	333.9	320.8	300.8	282.8	294.0	301.1	305.9	324.2	331.3
10°	391.2	377.2	371.8	346.1	331.9	320.8	307.4	297.7	301.7	296.8	301.7
12.5°	449.3	439.9	419.1	393.2	376.1	353.3	303.4	261.7	236.1	236.4	234.7
15°	502.4	501.8	470.7	427.7	378.1	313.1	235.2	182.8	158.5	151.7	149.4
17.5°	571.7	563.1	506.4	442.8	353.5	242.4	160.2	125.2	122.9	126.9	125.2
20°	615.9	603.3	524.0	420.8	291.4	163.9	120.9	110.9	117.8	123.5	122.0
22.5°	660.1	641.2	537.4	394.0	207.3	120.0	109.2	107.5	111.8	118.9	120.0
25°	684.3	680.6	563.7	343.9	142.0	105.2	105.2	104.6	106.1	111.2	110.3
27.5°	754.7	704.5	544.0	268.3	109.8	96.7	98.1	97.5	92.4	97.5	97.8
30°	798.6	775.5	545.4	191.0	96.7	85.5	89.2	84.7	77.0	81.3	80.4
32.5°	887.0	829.4	541.2	128.9	88.1	81.5	75.8	69.3	63.6	65.3	63.9
35°	989.9	946.0	483.3	103.5	82.1	72.1	63.0	56.5	50.5	51.9	51.6
37.5°	1194.6	1055.2	435.4	93.2	78.1	66.1	55.6	46.5	43.3	44.2	45.0
40°	1384.3	1237.4	346.1	88.7	71.3	59.0	45.9	39.3	37.4	37.9	38.8
42.5°	1667.7	1382.3	261.5	84.1	64.4	49.9	38.2	33.9	31.9	33.1	33.6
45°	1941.9	1505.4	195.3	80.1	58.7	43.1	32.2	29.4	27.1	27.9	29.1
47.5°	2215.9	1642.3	145.7	73.8	52.5	37.1	27.7	25.7	24.2	24.5	25.9
50°	2461.1	1706.2	114.6	66.1	47.3	32.2	25.1	23.1	22.5	22.8	24.0
52.5°	2641.3	1706.7	96.7	59.3	42.5	28.5	23.7	21.4	21.1	21.7	22.8
55°	2804.1	1661.1	83.8	53.3	38.2	25.9	22.5	20.5	20.5	21.1	22.2
57.5°	2912.2	1577.3	72.7	47.0	34.5	24.5	21.7	19.7	19.4	19.1	20.0
60°	2965.0	1462.9	61.6	41.3	31.1	23.7	21.1	17.4	17.1	16.5	17.1
62.5°	2931.6	1319.8	51.6	35.6	27.7	22.5	18.5	15.1	14.5	13.4	14.3
65°	2761.1	1145.9	43.6	30.5	24.0	19.1	15.7	12.8	11.4	10.0	9.7
67.5°	2412.4	930.9	36.5	26.2	20.5	15.7	12.8	11.4	8.8	7.7	7.4
70°	1807.9	635.5	30.2	22.5	17.1	13.4	10.8	10.3	8.3	7.4	6.8
72.5°	1060.6	343.0	25.4	19.7	14.5	11.1	8.8	9.4	8.3	6.8	6.3
75°	423.7	114.0	20.2	15.7	11.7	8.0	7.4	7.7	7.4	6.3	5.1
77.5°	96.7	35.9	15.7	12.3	9.1	5.1	6.0	6.6	6.6	5.1	3.7
80°	30.2	14.3	9.1	7.7	6.6	2.9	4.3	4.6	3.1	1.4	0.0
82.5°	9.7	4.0	3.1	3.1	2.9	0.6	0.9	0.6	0.0	0.0	0.0
85°	3.7	2.6	2.0	2.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	1.4	1.1	0.9	1.1	0.6	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)