

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: P596753

Luminaire Tested: **MSA-SA4A-827-U-T2-HSS**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596753
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-9)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA4A-827-U-T2-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8596 lumens
Efficiency: N/A
Efficacy: 66.6 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B1 - U0 - G2

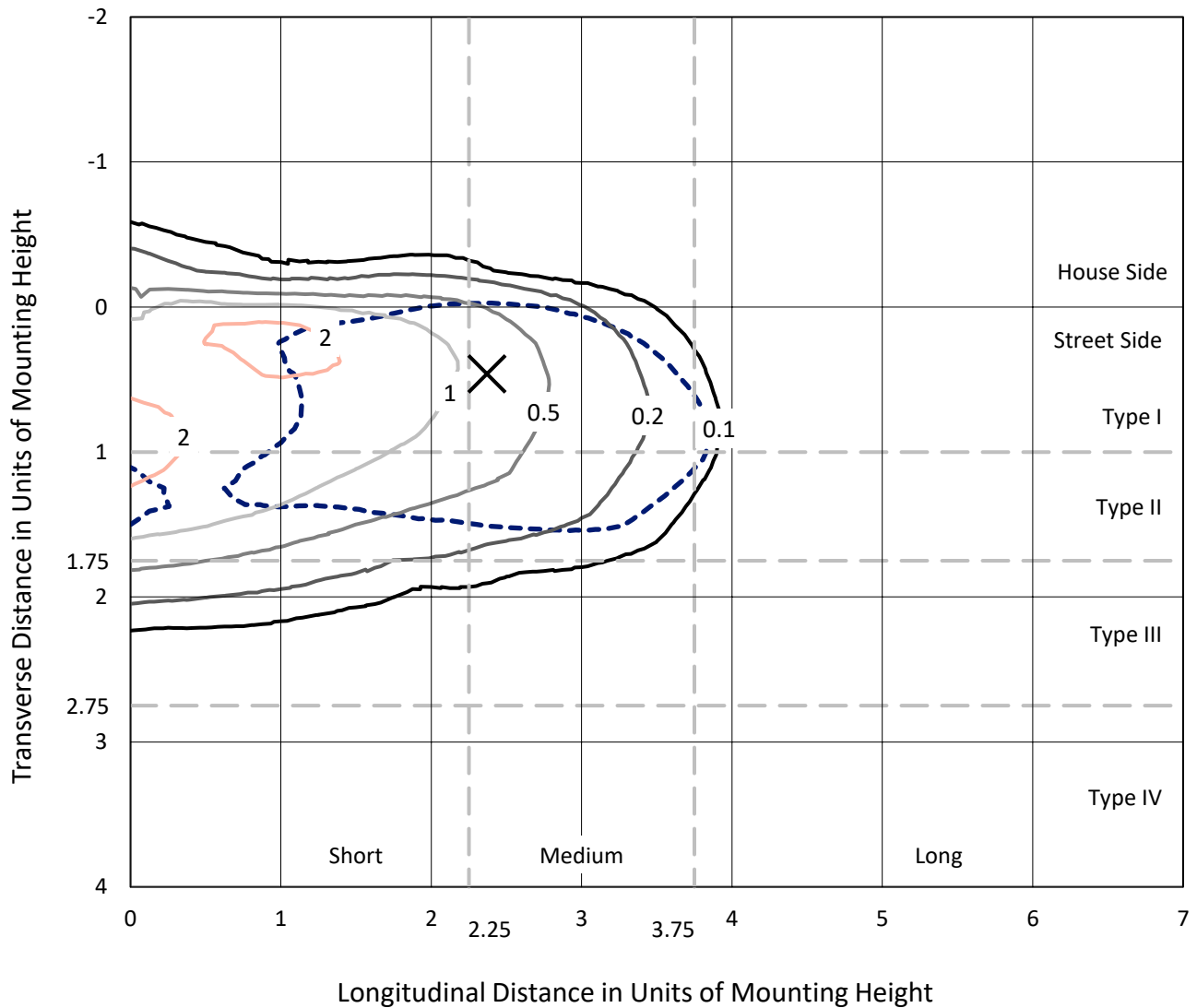
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

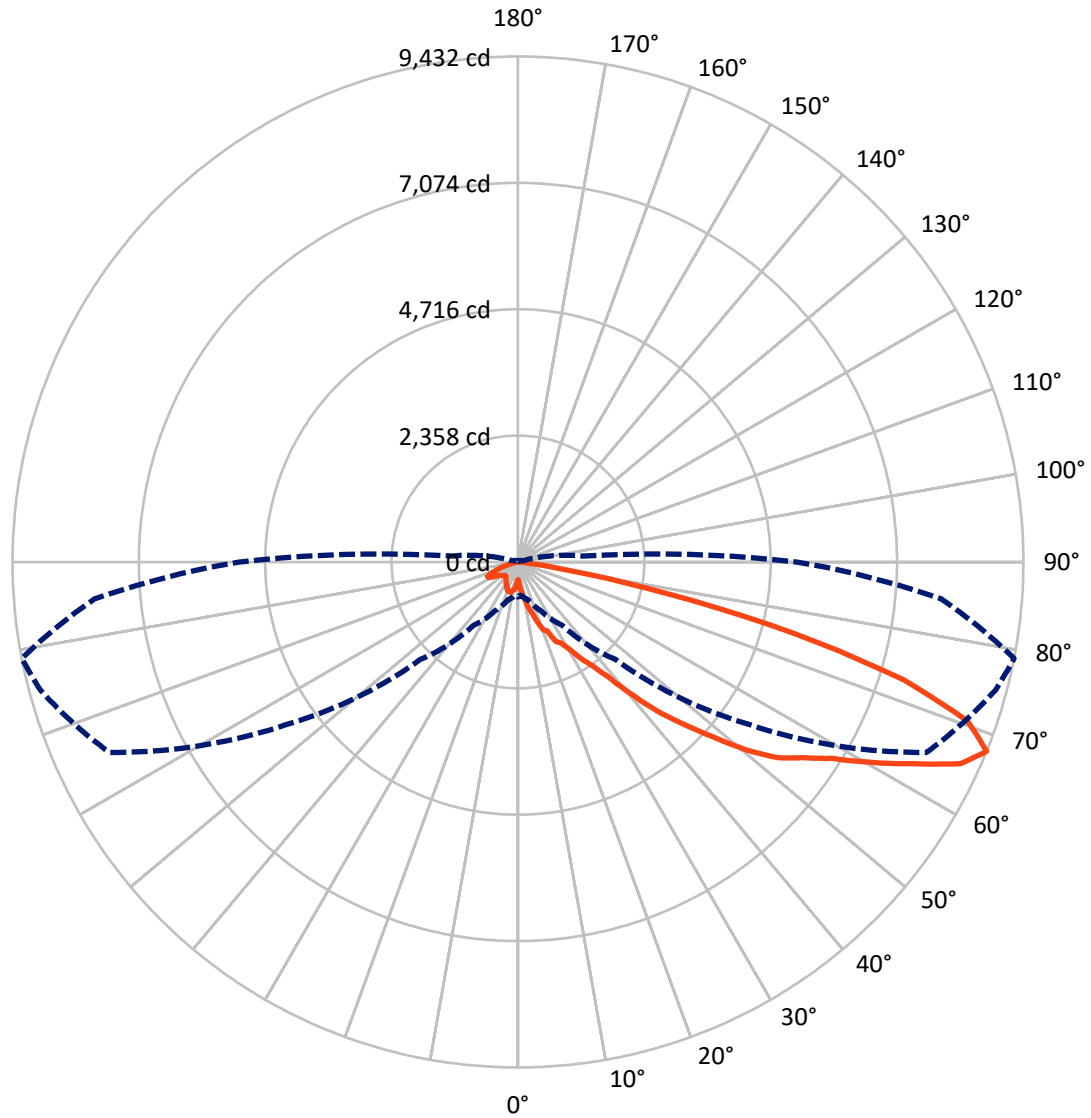
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.6 fc
 Type II - Medium - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 79-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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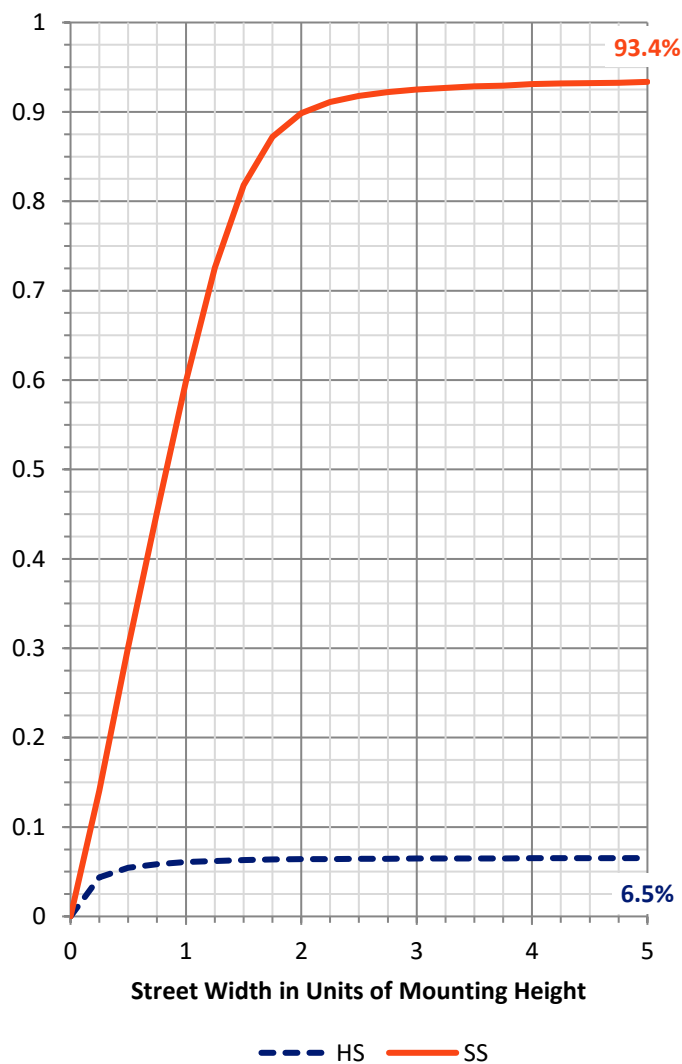
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	564.8	0.0	564.8
	% Fixture	6.6	0.0	6.6
Street Side	Lumens	8031.2	0.0	8031.2
	% Fixture	93.4	0.0	93.4
Total	Lumens	8596.0	0.0	8596.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	48.2	0.6
10°-20°	192.1	2.2
20°-30°	370.6	4.3
30°-40°	727.9	8.5
40°-50°	1458.2	17.0
50°-60°	2330.7	27.1
60°-70°	2345.1	27.3
70°-80°	1057.9	12.3
80°-90°	65.5	0.8
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°	8596.0	100.0
0°-180°	8596.0	100.0

Coefficient of Utilization



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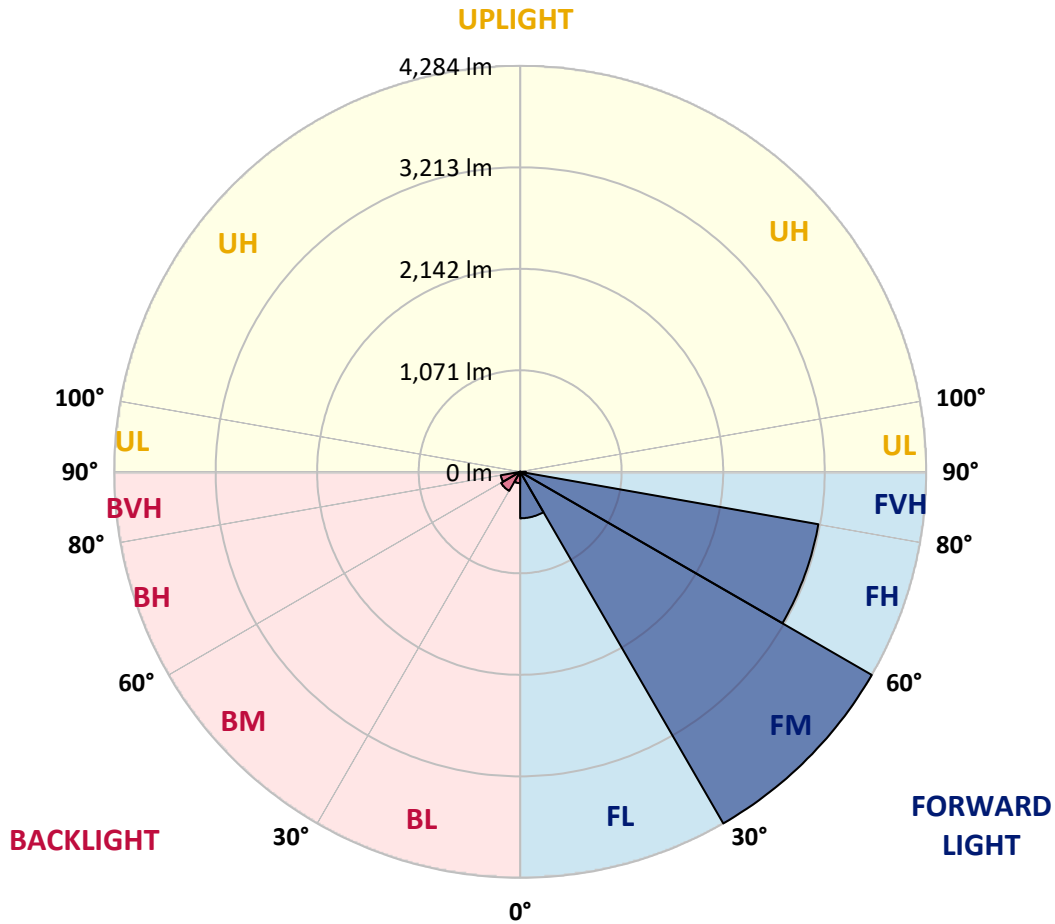
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	490.7	5.7			
FM (30°-60°)	4284.4	49.8			
FH (60°-80°)	3194.8	37.2			G2/5000
FVH (80°-90°)	61.3	0.7			G1/100
BL (0°-30°)	120.1	1.4	B1/500		
BM (30°-60°)	232.4	2.7	B1/1000		
BH (60°-80°)	208.2	2.4	B1/500		G1/500
BVH (80°-90°)	4.2	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 II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	79°	85°
0°	331.2	331.2	331.2	331.2	331.2	331.2	331.2	331.2	331.2	331.2	331.2
2.5°	447.3	431.2	405.1	419.8	418.9	426.5	412.3	396.6	371.5	396.6	398.5
5°	644.0	614.1	595.2	591.4	570.5	551.1	546.8	530.7	518.4	496.1	516.0
7.5°	802.2	788.5	754.9	751.1	699.9	671.5	680.5	673.4	626.4	603.2	622.6
10°	869.5	845.8	850.6	845.8	824.0	832.1	813.6	792.3	754.9	716.5	668.1
12.5°	895.6	891.8	931.1	926.4	977.6	1039.2	997.9	962.4	875.7	866.2	800.3
15°	951.5	975.2	969.5	989.4	1022.1	1126.8	1125.9	1134.4	1042.5	993.2	898.0
17.5°	1001.3	1018.8	990.4	1013.1	1102.2	1165.7	1250.5	1217.3	1227.8	1177.5	1030.2
20°	979.9	999.8	971.4	957.7	1114.5	1234.9	1348.1	1324.0	1386.5	1355.2	1151.9
22.5°	1113.1	1075.7	1004.1	959.6	1076.6	1233.5	1382.7	1483.6	1472.7	1396.0	1265.2
25°	1277.5	1254.8	1169.0	1090.3	1100.8	1224.9	1491.7	1640.0	1672.2	1639.5	1372.8
27.5°	1499.3	1494.1	1318.7	1284.6	1183.2	1187.5	1508.8	1837.1	1763.7	1712.5	1498.3
30°	1788.8	1747.6	1539.6	1495.0	1345.3	1271.8	1613.0	2007.3	1953.2	1883.6	1616.3
32.5°	2100.1	2106.3	1840.9	1694.0	1573.7	1486.5	1571.8	2086.9	2187.8	2131.4	1763.7
35°	2453.6	2481.1	2156.5	1984.0	1750.0	1621.5	1749.0	2331.4	2512.4	2364.1	1961.3
37.5°	2998.1	2997.1	2618.1	2274.5	2104.4	1965.1	2044.2	2553.6	2911.4	2702.9	2315.7
40°	3477.2	3372.9	3020.4	2625.6	2360.3	2322.4	2265.0	2857.8	3337.4	3211.8	2630.9
42.5°	3834.9	3761.5	3335.5	3028.4	2699.6	2579.2	2558.8	3303.7	3966.2	3790.4	3080.5
45°	4262.8	4022.1	3708.4	3431.7	3096.7	3061.6	3013.7	3756.3	4697.8	4301.7	3471.5
47.5°	4646.2	4419.7	4123.0	3767.6	3382.9	3671.9	3488.1	4153.8	5230.0	4858.0	3902.7
50°	4968.9	4728.1	4396.0	4125.4	3960.5	4156.7	3850.1	4481.3	5804.8	5503.4	4305.9
52.5°	5133.3	4860.8	4604.0	4436.7	4537.7	4493.6	4341.0	4877.9	6294.7	6069.2	4663.2
55°	4998.2	4731.9	4624.4	4707.3	5013.9	4886.4	4898.7	5492.5	6757.2	6446.4	4974.1
57.5°	4399.3	4156.2	4204.1	4431.0	5018.6	5352.2	5534.7	6089.5	7128.2	6916.4	5453.6
60°	3327.9	3132.2	3309.4	3712.2	4546.7	5259.3	5985.8	6686.6	7658.5	7592.1	6179.6
62.5°	2032.4	1926.2	2177.4	2679.7	3623.1	4804.0	6248.8	7482.7	8225.7	8296.3	6949.6
65°	1036.8	988.9	1198.4	1640.0	2447.9	3946.3	6058.7	7977.4	8811.9	9072.5	7683.6
67.5°	653.0	622.2	734.0	1000.3	1444.3	2574.0	5304.8	8410.0	9226.0	9432.1	7928.6
70°	452.5	433.1	529.8	686.6	911.2	1386.5	3938.7	8006.3	8897.6	8907.1	7335.8
72.5°	287.2	272.0	366.3	508.4	672.4	716.0	2257.9	6282.4	7616.3	7528.6	5940.7
75°	186.2	178.6	232.7	372.5	516.5	441.6	1115.9	4239.1	5461.2	5323.8	3945.8
77.5°	133.6	128.9	155.9	248.8	367.7	309.0	500.4	2526.6	3131.2	2830.8	1915.3
80°	80.6	80.1	112.8	155.9	261.6	218.0	231.2	1147.2	1214.0	989.9	585.2
82.5°	40.3	41.7	63.0	100.5	168.2	142.6	105.7	381.9	326.0	240.2	118.5
85°	9.5	11.8	33.2	69.2	84.3	56.9	50.2	100.0	89.6	67.8	34.6
87.5°	0.0	0.0	10.4	16.6	22.7	9.5	17.1	19.0	24.2	19.0	7.1
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°	331.2	331.2	331.2	331.2	331.2	331.2	331.2	331.2	331.2	331.2	331.2
2.5°	399.0	393.3	358.7	349.7	348.8	338.8	341.2	331.7	332.2	353.5	353.5
5°	508.4	475.3	442.1	412.7	392.8	364.4	354.0	349.7	345.9	354.4	359.7
7.5°	597.1	548.3	488.5	424.6	365.3	324.6	318.9	308.5	304.7	313.2	319.9
10°	636.4	575.7	493.8	400.4	345.0	311.8	284.3	269.6	266.8	266.3	268.7
12.5°	719.8	644.4	499.4	391.4	331.2	294.7	263.5	238.8	216.1	218.4	216.1
15°	786.6	697.5	499.4	369.6	298.1	261.6	206.6	194.3	191.0	196.2	191.9
17.5°	887.5	750.1	474.3	330.8	269.6	203.3	182.4	181.5	188.1	195.7	191.0
20°	948.2	757.2	432.2	286.2	221.3	176.3	168.7	161.1	170.6	176.7	174.4
22.5°	1011.2	757.7	390.0	262.5	178.2	160.6	148.3	142.2	143.6	149.3	150.2
25°	1038.2	739.2	350.7	231.2	161.6	143.6	130.8	124.2	121.8	124.6	123.7
27.5°	1111.7	703.7	308.0	197.1	153.5	127.5	115.6	107.6	100.5	105.2	106.1
30°	1122.1	692.3	284.8	175.3	143.1	112.8	102.4	93.8	88.6	95.2	95.2
32.5°	1155.3	629.8	272.9	166.3	132.2	104.2	90.0	83.9	82.9	87.2	87.7
35°	1206.4	602.3	255.4	159.2	122.3	94.3	81.0	78.2	77.2	80.6	80.6
37.5°	1379.9	568.2	236.0	153.1	113.7	89.1	78.7	73.9	74.4	77.2	79.1
40°	1495.0	572.4	207.1	145.5	103.8	84.3	73.9	70.6	70.1	71.6	73.0
42.5°	1708.7	575.7	194.3	137.4	96.2	78.7	69.2	66.8	64.9	66.3	67.8
45°	1947.6	593.3	187.6	130.8	91.9	75.3	64.9	63.5	59.2	60.2	62.1
47.5°	2177.8	657.2	179.6	121.3	88.1	73.4	60.7	57.3	54.5	54.0	55.9
50°	2439.4	719.3	170.6	110.9	84.3	70.6	56.4	51.2	49.3	49.3	50.7
52.5°	2673.5	778.5	162.1	103.8	81.5	65.4	52.6	47.4	46.0	46.0	47.9
55°	2919.9	840.6	154.5	97.1	77.7	60.2	49.3	44.5	44.1	43.1	44.5
57.5°	3354.9	976.1	145.0	91.5	72.5	55.9	46.4	41.7	40.8	39.3	40.8
60°	3988.5	1184.2	132.7	85.8	66.3	53.1	44.1	38.4	37.0	34.6	35.1
62.5°	4607.8	1352.4	118.5	78.7	60.7	50.2	40.3	34.6	32.2	29.4	29.9
65°	5138.5	1418.7	103.3	70.1	55.0	43.6	35.1	30.3	27.0	23.2	22.7
67.5°	5201.1	1252.9	88.6	62.1	49.3	37.0	29.9	27.0	21.8	18.5	17.5
70°	4680.8	933.5	73.9	55.0	42.6	31.3	25.6	23.7	20.4	17.5	16.1
72.5°	3727.4	689.0	62.1	48.8	37.4	26.5	21.8	22.3	20.4	17.1	15.2
75°	2465.0	394.2	50.7	40.8	31.3	21.3	19.9	19.9	19.4	16.1	14.2
77.5°	1186.1	170.1	38.9	32.2	25.1	16.1	18.0	18.0	18.5	14.7	11.8
80°	336.4	51.2	24.2	21.8	18.5	10.9	14.2	13.7	12.3	8.5	5.2
82.5°	60.2	19.9	10.9	11.4	10.4	4.3	8.1	7.6	6.2	3.3	0.5
85°	16.6	7.6	6.2	6.6	5.2	1.4	3.3	4.3	3.3	1.9	0.0
87.5°	4.3	3.3	4.3	4.7	3.8	0.5	1.4	0.5	1.4	0.5	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)