

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: P597117

Luminaire Tested: **MSA-SA4B-835-U-SL2-HSS**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P597117
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-17)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA4B-835-U-SL2-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13128 lumens
Efficiency: N/A
Efficacy: 76.8 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Short
BUG Rating: B2 - U0 - G2

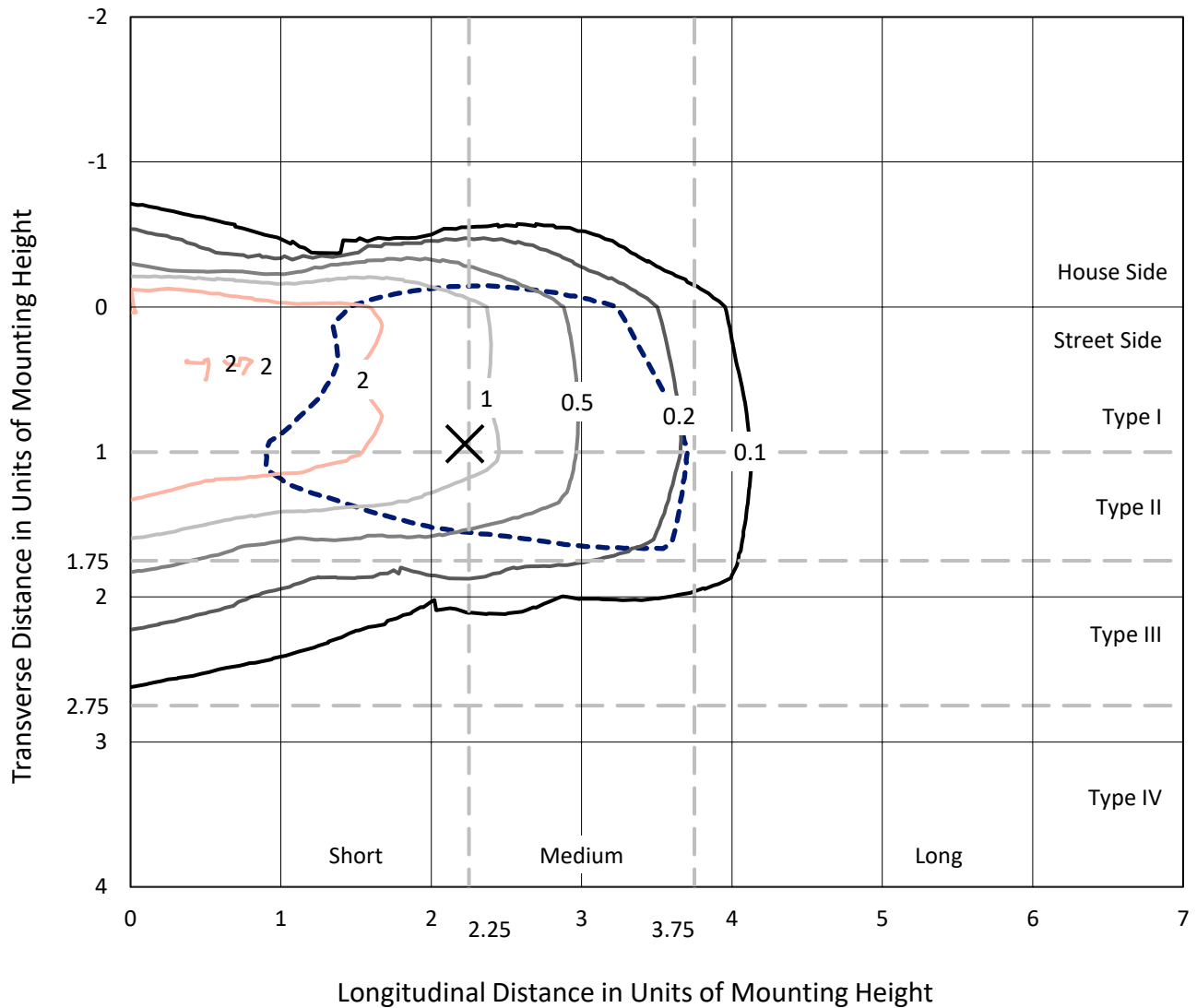
Input Watts (W): 171
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

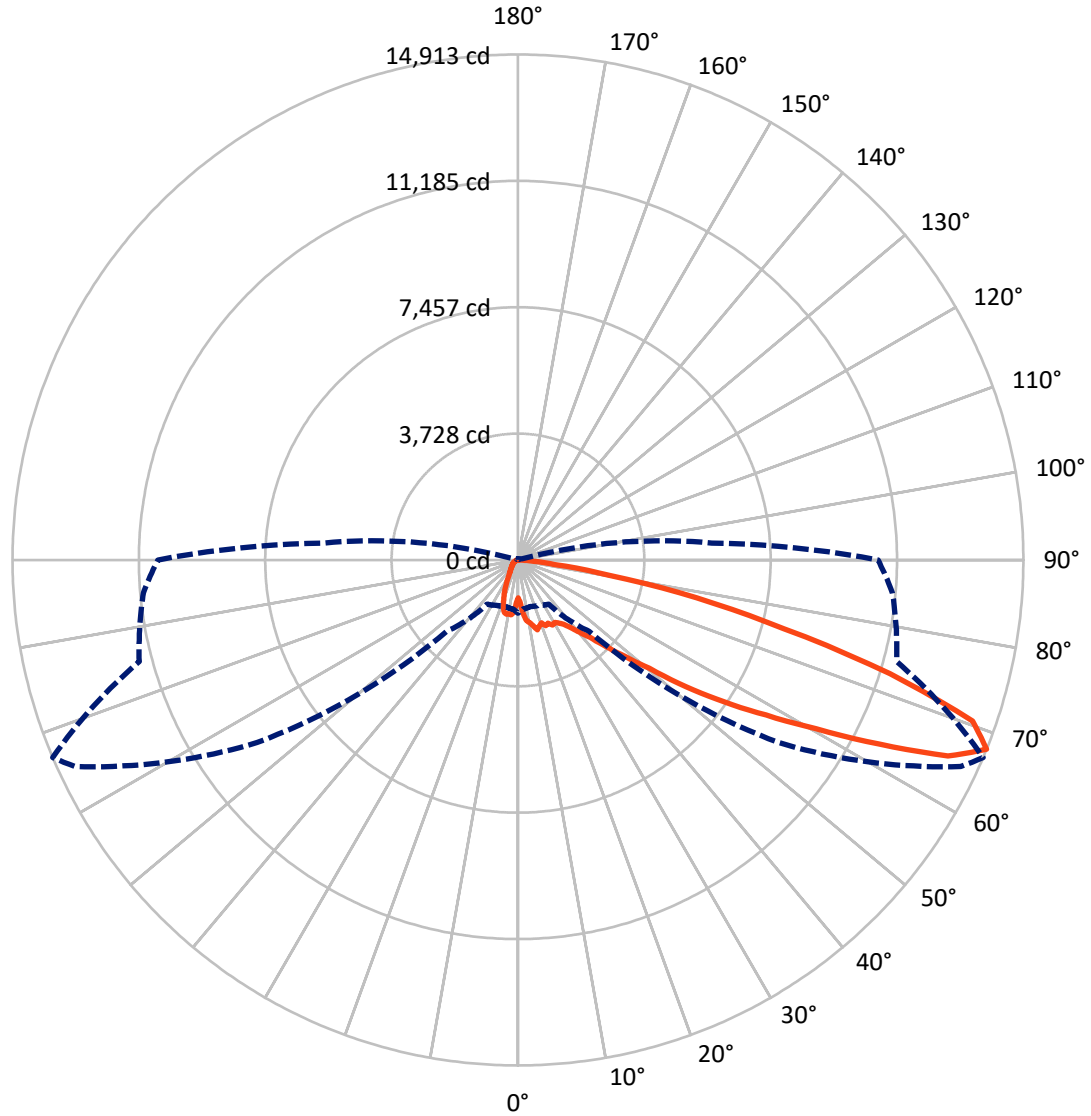
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.5 fc
 Type II - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 67-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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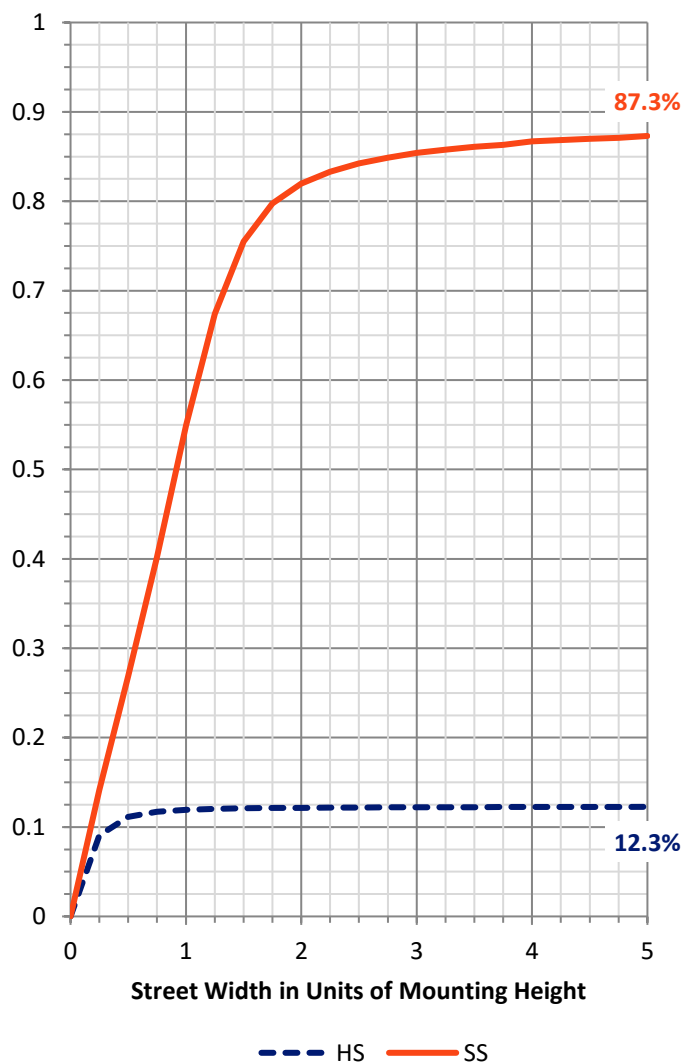
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1623.5	0.0	1623.5
	% Fixture	12.4	0.0	12.4
Street Side	Lumens	11504.4	0.0	11504.4
	% Fixture	87.6	0.0	87.6
Total	Lumens	13128.0	0.0	13128.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	140.3	1.1
10°-20°	415.3	3.2
20°-30°	650.8	5.0
30°-40°	1049.4	8.0
40°-50°	1928.3	14.7
50°-60°	3256.7	24.8
60°-70°	3600.4	27.4
70°-80°	1884.4	14.4
80°-90°	202.4	1.5
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°	13128.0	100.0
0°-180°	13128.0	100.0

Coefficient of Utilization



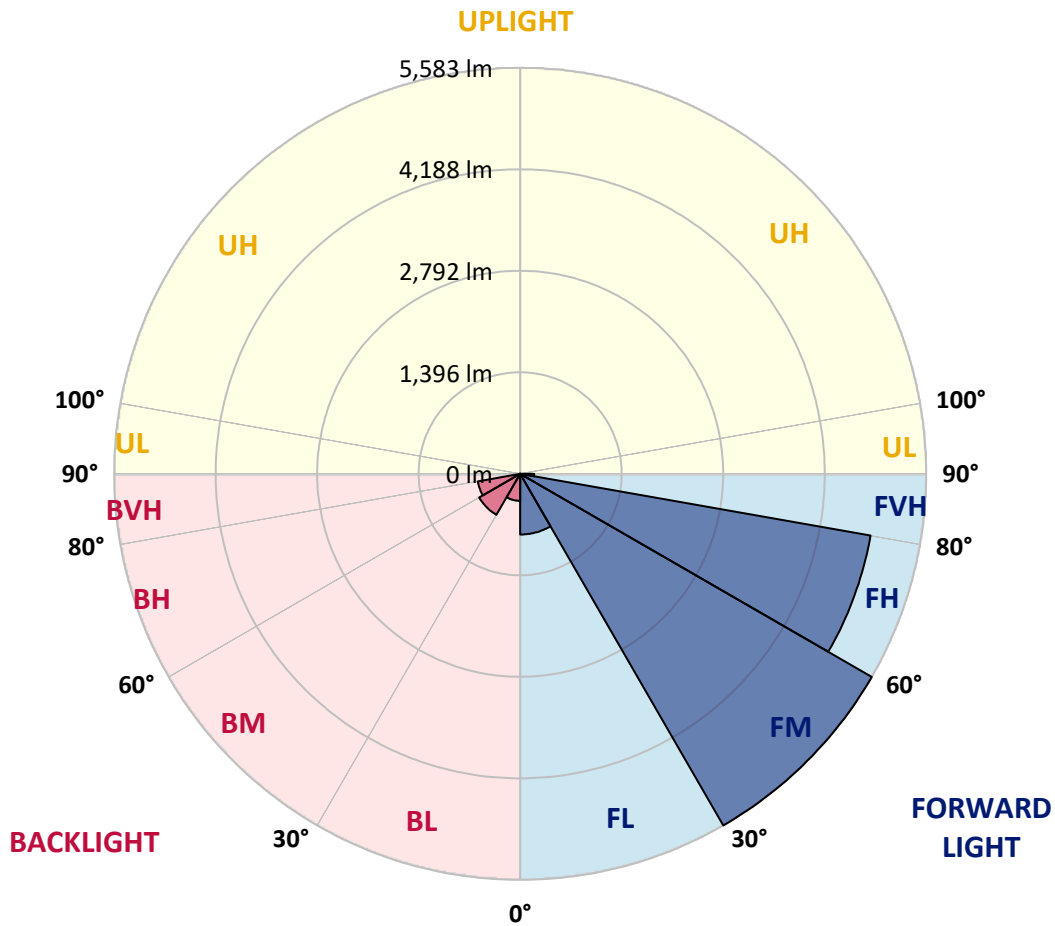
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	834.7	6.4			
FM (30°-60°)	5583.4	42.5			
FH (60°-80°)	4892.6	37.3			G2/5000
FVH (80°-90°)	193.7	1.5			G2/225
BL (0°-30°)	371.7	2.8	B1/500		
BM (30°-60°)	651.0	5.0	B1/1000		
BH (60°-80°)	592.2	4.5	B2/1000		G2/1000
BVH (80°-90°)	8.6	0.1			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G2

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	67°	75°	85°
0°	1118.1	1118.1	1118.1	1118.1	1118.1	1118.1	1118.1	1118.1	1118.1	1118.1	1118.1
2.5°	1319.9	1275.3	1199.4	1221.4	1265.3	1301.9	1284.6	1250.7	1251.3	1216.7	1341.2
5°	1535.7	1475.8	1431.8	1447.1	1445.1	1443.8	1525.7	1557.0	1570.3	1627.6	1712.2
7.5°	1597.6	1576.3	1530.4	1544.3	1498.4	1501.7	1645.6	1781.4	1802.7	1838.0	1988.5
10°	1573.7	1532.4	1549.0	1549.0	1549.7	1624.3	1720.8	1850.7	1876.7	2012.5	2028.5
12.5°	1547.7	1549.7	1615.6	1603.6	1694.2	1828.0	1860.7	2006.5	1993.9	2111.7	2286.9
15°	1644.2	1694.9	1652.2	1668.9	1677.5	1834.7	1887.3	2081.1	2137.0	2286.2	2400.1
17.5°	1810.1	1816.7	1728.2	1704.2	1766.8	1811.4	1917.3	2010.5	2047.8	2439.4	2600.6
20°	1840.0	1882.7	1792.7	1654.2	1786.8	1848.0	1921.9	1966.6	1982.5	2486.7	2713.8
22.5°	2020.5	1973.2	1829.4	1724.2	1762.1	1828.7	1874.7	2009.2	2105.1	2397.4	2822.3
25°	2113.1	2100.4	1963.2	1873.3	1834.7	1829.4	1934.6	2036.5	2067.1	2490.0	2849.0
27.5°	2334.8	2306.2	2040.5	2029.2	1902.0	1790.1	1936.6	2119.7	2177.0	2402.8	2948.8
30°	2636.5	2625.9	2272.2	2264.9	2062.5	1861.3	2044.5	2171.0	2136.4	2447.4	3015.4
32.5°	2940.2	3026.8	2665.1	2458.7	2306.9	2123.1	2013.8	2155.0	2217.0	2555.9	3138.0
35°	3307.1	3369.7	3001.5	2851.6	2514.0	2245.6	2217.0	2307.5	2334.2	2685.1	3277.2
37.5°	3949.1	3854.5	3540.9	3285.8	3108.7	2683.1	2541.9	2470.0	2532.0	2860.3	3561.5
40°	4423.3	4363.3	3977.1	3824.6	3417.0	3167.9	2799.0	2731.7	2801.0	3040.1	3759.3
42.5°	4995.3	4870.8	4507.2	4404.0	3984.4	3504.3	3130.0	3153.3	3110.0	3395.0	4106.3
45°	5512.8	5231.7	5029.3	5052.6	4828.8	4180.2	3682.1	3670.7	3634.8	3909.2	4471.2
47.5°	5861.1	5615.3	5418.2	5353.6	5327.0	5368.9	4479.9	4278.8	4252.1	4449.2	5045.9
50°	6048.2	5779.2	5535.4	5548.7	6089.5	6496.4	5303.0	5017.3	5027.3	5233.1	5831.8
52.5°	5922.3	5618.0	5360.9	5610.7	6680.9	7248.2	6665.5	5982.3	6214.0	6161.4	6886.0
55°	5341.0	5076.6	4894.1	5341.0	6745.5	8057.4	8343.1	7434.7	7382.8	7262.9	7960.8
57.5°	4362.7	4134.9	4022.4	4493.9	6038.9	8709.4	10027.9	9076.3	8633.4	8131.3	8853.2
60°	3250.5	3082.7	2965.5	3214.6	4758.2	8076.0	11131.4	10623.3	10110.5	8968.4	9655.0
62.5°	2407.4	2270.9	2146.4	2169.0	3276.5	6945.9	11555.0	12262.2	11967.9	9852.1	10411.5
65°	1921.3	1796.7	1709.5	1659.6	2029.2	5225.7	10965.6	13605.4	13945.1	10684.6	10957.6
67.5°	1569.0	1463.8	1420.5	1477.8	1591.6	2978.8	9391.3	14420.6	14913.4	11567.6	11092.1
70°	1276.6	1190.1	1185.4	1339.9	1465.8	1816.1	6907.9	13857.8	14228.8	11718.1	10285.7
72.5°	889.7	851.8	912.4	1131.5	1452.4	1512.4	3967.1	11467.7	11481.1	10349.6	8460.3
75°	503.5	497.5	593.4	902.4	1414.5	1497.1	2211.6	8104.0	8110.0	7827.6	5861.1
77.5°	277.0	259.1	345.6	610.0	1214.7	1462.4	1426.5	5533.4	5391.6	4356.0	2677.1
80°	127.9	120.5	187.1	390.9	888.4	1383.2	1143.4	3041.4	2742.4	1419.1	653.3
82.5°	52.6	49.9	85.9	251.1	561.4	1114.1	963.6	1349.2	1082.8	269.7	201.8
85°	9.3	10.0	35.3	151.8	314.3	513.5	781.2	640.6	470.8	74.6	110.5
87.5°	0.0	0.0	7.3	36.6	75.9	140.5	317.0	179.1	123.2	22.0	32.6
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°	1118.1	1118.1	1118.1	1118.1	1118.1	1118.1	1118.1	1118.1	1118.1	1118.1	1118.1
2.5°	1365.9	1354.6	1240.0	1245.3	1253.3	1246.0	1244.7	1212.7	1183.4	1280.0	1278.6
5°	1727.5	1646.9	1567.7	1537.0	1471.1	1384.5	1385.2	1357.9	1329.9	1369.2	1369.2
7.5°	1985.2	1874.0	1773.4	1594.3	1419.8	1262.0	1248.0	1210.7	1168.1	1219.4	1229.4
10°	2045.1	1948.6	1818.7	1555.7	1390.5	1236.7	1067.5	928.3	863.7	833.8	828.4
12.5°	2229.6	2157.7	1867.3	1576.3	1338.6	1078.2	801.1	636.0	523.4	514.8	502.8
15°	2352.8	2302.2	1915.3	1525.0	1118.8	775.2	503.5	386.3	341.0	337.0	331.0
17.5°	2543.9	2456.0	1869.3	1361.9	875.1	511.5	338.3	305.0	310.3	322.3	313.0
20°	2621.9	2450.0	1769.4	1125.5	614.7	343.0	293.7	275.7	289.7	301.0	295.7
22.5°	2701.8	2467.4	1680.9	927.7	401.6	283.7	261.7	252.4	253.7	265.0	265.7
25°	2701.1	2515.3	1578.3	722.6	299.0	252.4	236.4	224.4	219.8	227.8	225.8
27.5°	2832.3	2460.0	1391.2	536.1	263.1	225.8	210.4	195.8	179.1	187.1	187.1
30°	2833.0	2549.9	1260.7	384.9	241.1	201.1	187.8	165.2	145.8	152.5	153.2
32.5°	2908.2	2472.0	1140.1	294.4	223.8	186.5	157.2	136.5	125.2	129.2	129.2
35°	2994.1	2538.6	955.0	259.7	206.4	165.8	134.5	117.9	109.2	112.5	112.5
37.5°	3277.8	2524.6	826.4	241.7	195.1	149.8	122.5	103.9	99.9	101.9	104.6
40°	3380.4	2623.9	652.0	231.1	176.5	135.2	107.9	93.9	88.6	89.9	90.6
42.5°	3641.4	2645.8	520.8	222.4	159.8	117.2	95.9	85.9	79.2	79.2	81.2
45°	3929.8	2701.1	414.2	215.1	145.8	105.2	86.6	78.6	68.6	67.3	69.9
47.5°	4347.3	2912.9	337.6	200.5	129.2	97.9	79.9	67.9	59.9	57.3	59.9
50°	5045.9	3272.5	298.3	182.5	117.2	91.9	70.6	57.9	51.9	48.6	50.6
52.5°	6031.5	3893.8	277.7	165.8	106.6	82.6	63.3	50.6	44.6	42.0	43.3
55°	7126.4	4606.4	267.7	149.2	97.2	72.6	55.3	44.6	39.3	36.0	36.6
57.5°	8138.6	5276.4	257.7	133.2	87.9	64.6	48.6	39.3	34.0	30.6	31.3
60°	9136.2	5811.1	233.7	114.5	79.2	57.9	42.6	34.0	30.6	26.6	26.6
62.5°	10018.6	6130.8	199.1	99.2	71.3	51.3	38.0	30.6	28.0	24.0	24.0
65°	10619.3	6145.4	160.5	85.2	62.6	44.0	33.3	28.6	26.0	21.3	20.6
67.5°	10628.0	5745.9	128.5	75.9	55.3	38.6	30.0	27.3	24.0	20.0	18.6
70°	9512.5	4746.9	107.2	66.6	47.9	34.0	26.0	26.0	23.3	19.3	17.3
72.5°	7609.2	3627.5	89.9	57.9	42.6	29.3	24.0	24.6	22.6	19.3	17.3
75°	5114.5	2080.4	74.6	49.3	37.3	24.6	23.3	24.0	23.3	19.3	16.6
77.5°	2355.5	662.6	57.9	40.6	32.0	20.6	22.6	22.6	21.3	17.3	14.7
80°	530.8	163.2	42.0	30.0	26.0	15.3	20.6	18.6	16.6	12.0	8.7
82.5°	193.1	49.9	25.3	18.6	16.0	6.0	13.3	13.3	12.0	8.7	5.3
85°	110.5	26.0	14.0	12.0	8.7	2.7	7.3	8.0	6.7	6.0	2.7
87.5°	36.0	6.0	6.7	7.3	6.7	1.3	2.7	2.7	2.0	1.3	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)