

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: P597160

Luminaire Tested: **MSA-SA4D-835-U-RW**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P597160
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-7)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA4D-835-U-RW
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 22273 lumens
Efficiency: N/A
Efficacy: 86.0 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B4 - U0 - G4

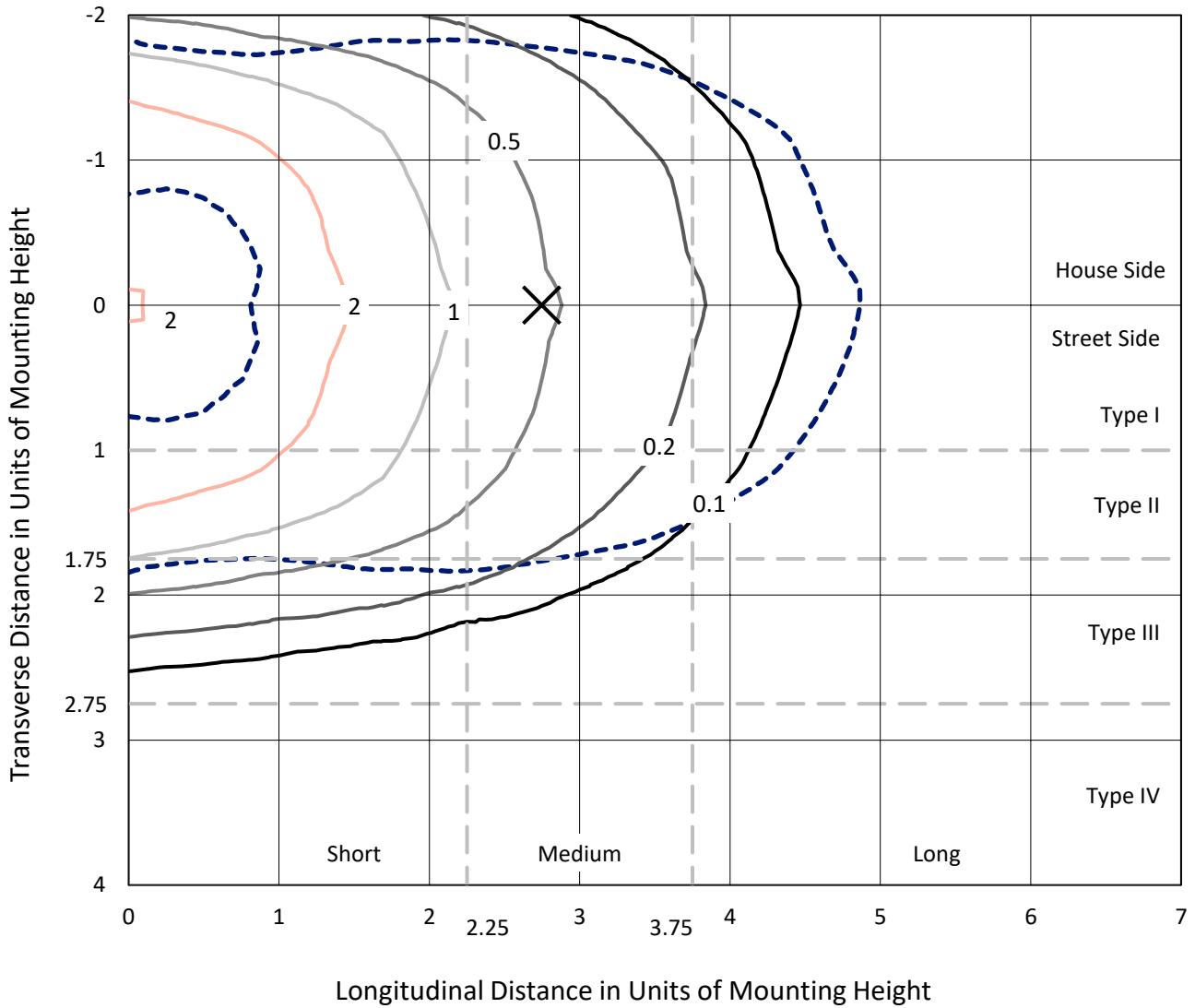
Input Watts (W): 259
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

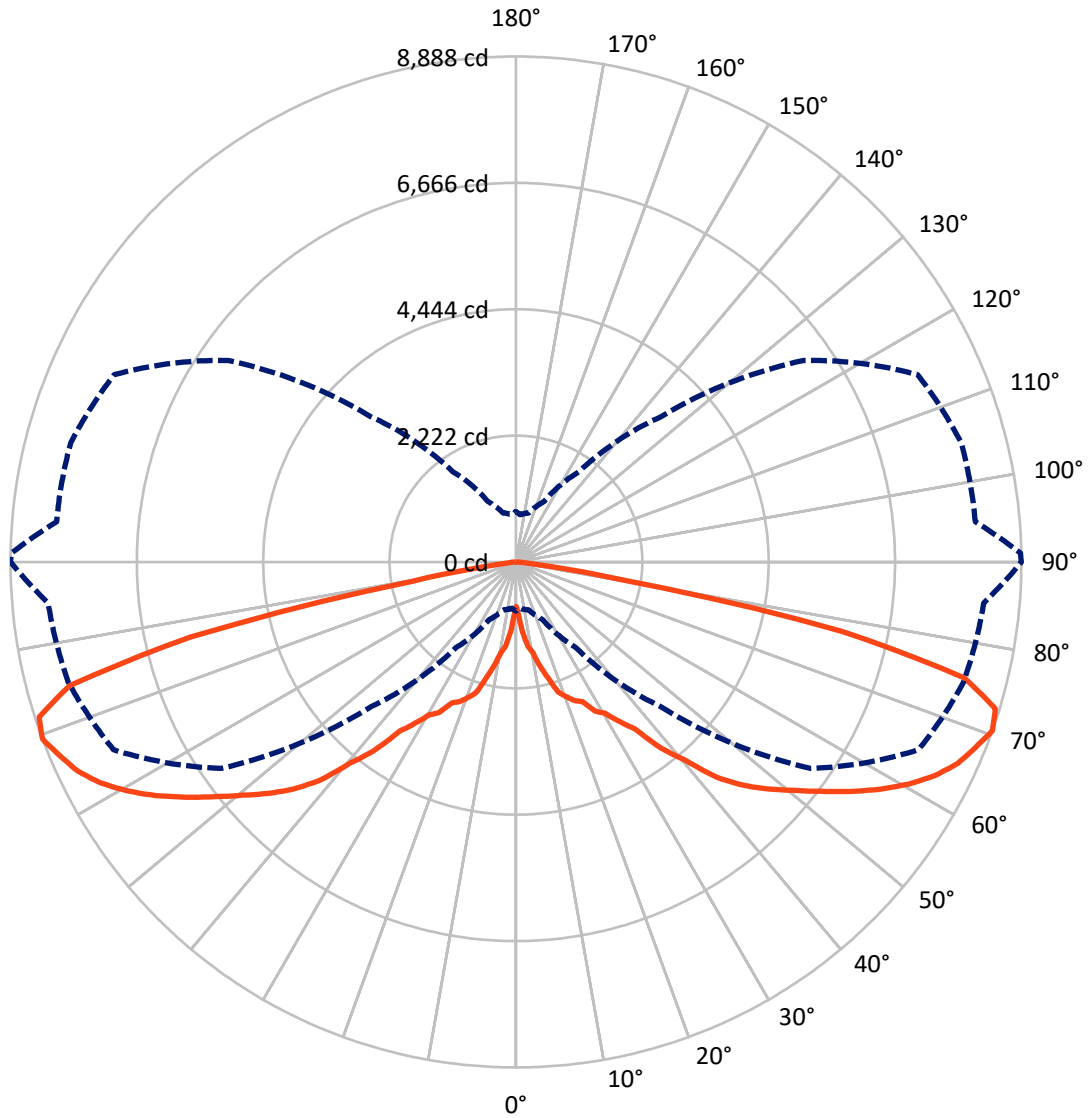
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.6 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 90-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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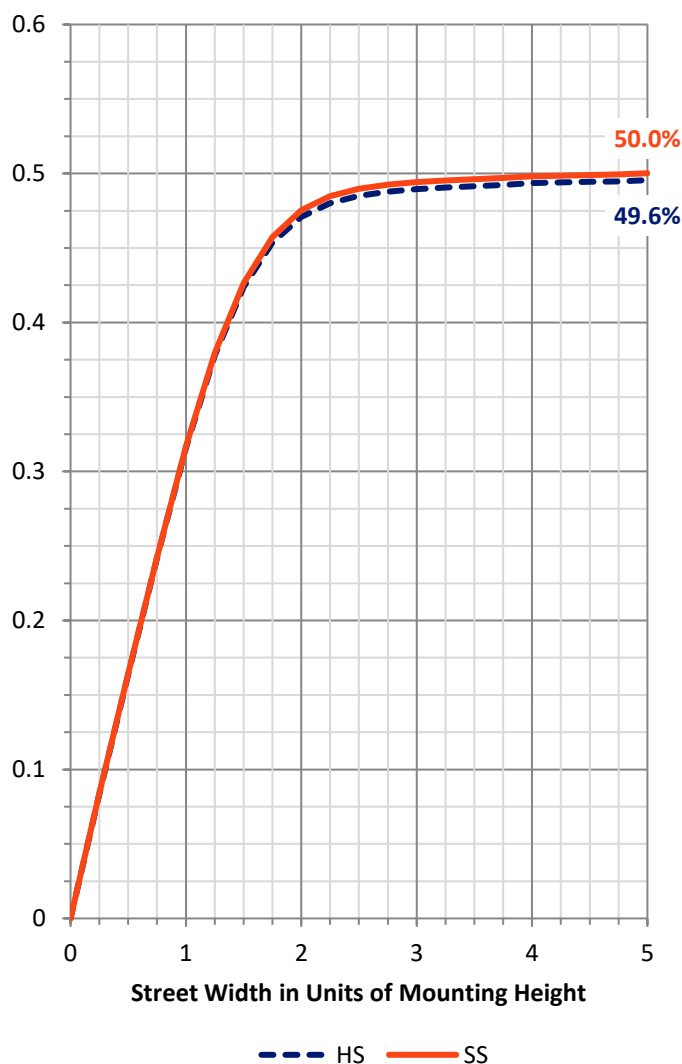
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	11095.2	0.0	11095.2
	% Fixture	49.8	0.0	49.8
Street Side	Lumens	11177.7	0.0	11177.7
	% Fixture	50.2	0.0	50.2
Total	Lumens	22273.0	0.0	22273.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	117.9	0.5
10°-20°	540.5	2.4
20°-30°	1168.6	5.2
30°-40°	2229.6	10.0
40°-50°	4050.4	18.2
50°-60°	5689.8	25.5
60°-70°	5432.6	24.4
70°-80°	2788.1	12.5
80°-90°	255.6	1.1
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°	22273.0	100.0
0°-180°	22273.0	100.0

Coefficient of Utilization



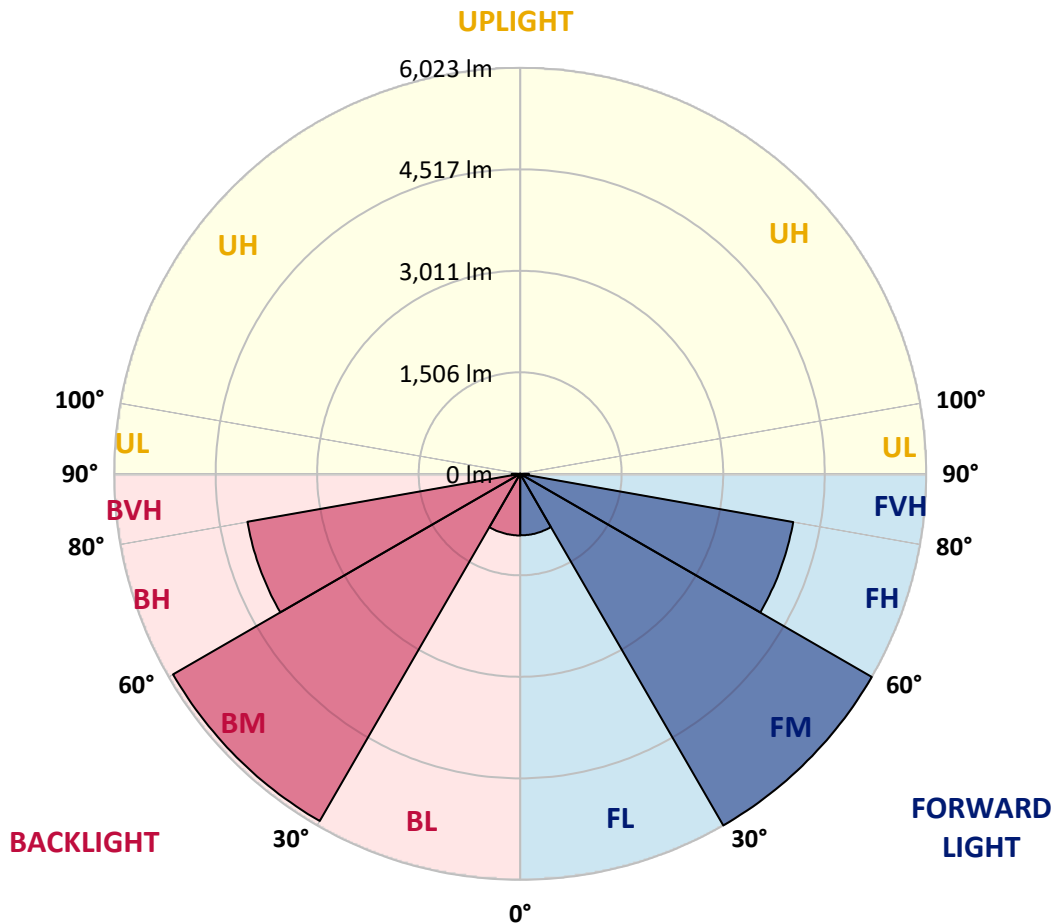
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	912.6	4.1			
FM (30°-60°)	6022.9	27.0			
FH (60°-80°)	4112.6	18.5			G2/5000
FVH (80°-90°)	129.7	0.6			G2/225
BL (0°-30°)	914.4	4.1	B2/1000		
BM (30°-60°)	5946.9	26.7	B4/8500		
BH (60°-80°)	4108.1	18.4	B4/5000		G4/5000
BVH (80°-90°)	125.9	0.6			G2/225
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B4-U0-G4

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	781.7	781.7	781.7	781.7	781.7	781.7	781.7	781.7	781.7	781.7	781.7
2.5°	946.9	911.7	867.5	893.7	904.5	923.5	920.7	911.7	872.9	937.9	945.1
5°	1185.2	1129.3	1108.5	1104.9	1110.3	1092.3	1150.9	1133.8	1165.4	1224.1	1237.6
7.5°	1349.5	1308.0	1263.8	1277.3	1221.3	1213.2	1289.0	1356.7	1373.9	1481.3	1488.5
10°	1427.2	1386.5	1398.3	1390.1	1383.8	1436.2	1471.4	1521.0	1592.3	1602.3	1617.6
12.5°	1493.1	1509.3	1560.8	1559.0	1643.8	1736.8	1723.2	1774.7	1786.4	1911.0	1873.1
15°	1660.1	1693.5	1689.8	1721.4	1758.4	1911.0	1911.9	1999.5	2079.8	2128.5	2115.9
17.5°	1904.7	1916.4	1867.7	1869.5	1976.9	2039.2	2108.7	2093.3	2302.8	2398.5	2404.8
20°	2050.9	2080.7	2024.7	1950.7	2141.2	2226.9	2265.8	2176.4	2400.3	2529.3	2529.3
22.5°	2306.4	2229.7	2144.8	2095.1	2263.1	2354.2	2349.7	2324.4	2443.6	2672.0	2650.3
25°	2447.2	2403.9	2361.4	2374.1	2458.9	2505.9	2568.2	2509.5	2621.4	2791.1	2719.8
27.5°	2714.4	2634.1	2425.5	2591.6	2591.6	2556.4	2688.2	2716.2	2643.1	2919.3	2972.6
30°	3016.8	2988.8	2693.6	2869.7	2815.5	2716.2	2969.0	2950.9	2828.1	3109.8	3085.4
32.5°	3303.0	3395.0	3115.2	3018.6	3099.8	3137.8	3005.1	3059.2	3082.7	3354.4	3342.7
35°	3741.7	3819.3	3448.3	3423.9	3288.5	3253.3	3354.4	3372.5	3374.3	3660.4	3608.1
37.5°	4500.8	4388.9	4022.4	3850.0	3865.3	3822.9	3842.8	3700.1	3720.0	4135.2	4161.4
40°	5056.0	4929.6	4521.6	4397.9	4094.6	4276.1	4115.4	4100.9	4061.2	4599.2	4584.8
42.5°	5668.9	5495.6	5044.2	4879.1	4556.8	4482.8	4408.8	4575.7	4564.9	5063.2	5173.3
45°	6132.0	5781.7	5546.1	5443.2	5250.1	5068.6	4998.2	5073.1	5038.8	5408.9	5601.2
47.5°	6424.5	6120.3	5849.4	5632.8	5447.8	5892.8	5536.2	5436.0	5366.5	5780.8	5965.9
50°	6657.4	6306.2	5986.7	5914.4	6060.7	6454.3	5891.9	5670.7	5755.6	6060.7	6312.5
52.5°	6720.5	6348.6	6061.6	6015.5	6410.9	6482.2	6391.1	6019.2	5996.6	6396.5	6700.7
55°	6527.4	6170.8	6034.5	6286.4	6723.3	6663.7	6802.7	6565.3	6405.5	6739.5	7122.2
57.5°	6030.0	5676.1	5643.6	6006.5	6557.2	7064.5	7133.1	6945.3	6735.9	7089.7	7541.1
60°	5213.1	4889.9	4972.0	5372.8	6203.3	6925.5	7290.1	7118.6	7053.6	7405.7	7929.3
62.5°	3941.2	3689.3	3908.7	4467.4	5557.0	6745.8	7506.8	7479.7	7385.8	7741.5	8272.3
65°	2513.1	2380.4	2604.3	3172.1	4554.1	6419.0	7610.6	7646.7	7733.4	8000.6	8537.7
67.5°	1460.6	1390.1	1526.5	1991.3	3243.4	5270.8	7417.4	7935.6	7980.7	8134.2	8711.9
70°	863.9	817.8	873.8	1118.4	1836.1	3590.9	6327.0	7809.2	8150.4	8256.9	8887.9
72.5°	659.0	615.6	591.3	661.7	958.7	1855.0	4277.9	6619.4	8014.1	8175.7	8813.9
75°	569.6	528.1	499.2	505.5	570.5	881.0	2319.0	4734.6	6828.9	7444.5	8141.4
77.5°	489.3	452.2	431.5	429.7	437.8	483.8	969.5	2567.3	4277.0	5351.2	5869.3
80°	391.8	362.9	358.4	358.4	346.6	343.0	482.0	976.7	1627.6	1930.0	1850.5
82.5°	286.2	257.3	286.2	282.5	264.5	250.0	306.9	422.5	501.9	396.3	313.2
85°	193.2	167.0	188.7	192.3	175.1	130.0	184.1	211.2	216.6	135.4	111.9
87.5°	67.7	65.9	106.5	93.0	75.8	44.2	67.7	73.1	76.7	47.8	32.5
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):

	91°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	781.7	781.7	781.7	781.7	781.7	781.7	781.7	781.7	781.7	781.7	781.7
2.5°	947.8	937.0	882.8	891.0	911.7	921.6	931.6	891.0	871.1	934.3	928.0
5°	1241.2	1201.5	1157.3	1150.9	1153.6	1114.8	1137.4	1127.5	1132.0	1172.6	1180.7
7.5°	1486.7	1438.9	1380.2	1334.2	1254.7	1191.6	1244.8	1271.9	1280.0	1352.2	1379.3
10°	1619.4	1578.8	1561.7	1475.0	1448.8	1440.7	1428.1	1384.7	1432.6	1415.4	1429.0
12.5°	1879.4	1871.3	1781.9	1725.0	1730.5	1745.8	1666.4	1623.0	1560.8	1658.2	1623.0
15°	2100.6	2135.8	2046.4	1942.6	1891.1	1917.3	1856.8	1793.7	1737.7	1767.5	1729.6
17.5°	2383.1	2382.2	2208.0	2097.0	2092.4	2090.6	2001.3	1862.3	1929.1	1908.3	1910.1
20°	2533.0	2508.6	2291.9	2163.8	2273.0	2234.2	2153.8	1975.1	2052.7	2078.0	2094.2
22.5°	2658.4	2644.9	2382.2	2288.3	2358.7	2359.6	2279.3	2185.4	2175.5	2254.0	2211.6
25°	2746.0	2800.2	2552.8	2530.2	2560.9	2530.2	2451.7	2390.3	2350.6	2468.0	2350.6
27.5°	2953.6	2876.9	2579.0	2707.2	2726.1	2571.8	2670.2	2597.9	2487.8	2633.2	2681.0
30°	3101.7	3146.8	2763.1	2956.3	2933.8	2791.1	2831.7	2829.0	2697.2	2980.7	2947.3
32.5°	3356.2	3302.0	3063.7	3048.4	3102.6	3096.2	3027.6	3061.0	3093.5	3299.3	3349.0
35°	3617.1	3674.9	3256.0	3359.8	3344.5	3247.0	3426.6	3405.9	3502.4	3924.9	3785.0
37.5°	4205.6	3930.3	3687.5	3674.0	3776.9	3792.2	3734.4	3825.6	4034.1	4359.1	4508.9
40°	4591.1	4465.6	4053.1	4069.3	3926.7	4172.2	4009.8	4303.1	4462.0	5009.9	4956.7
42.5°	5174.2	4868.2	4471.9	4526.1	4497.2	4379.0	4592.9	4743.7	4971.1	5389.1	5659.0
45°	5608.4	5188.7	5000.9	4967.5	4963.9	5169.7	5142.6	5383.7	5464.9	5779.0	6002.9
47.5°	5937.9	5581.3	5303.3	5341.2	5231.1	5818.8	5505.5	5580.4	5744.7	6040.8	6301.7
50°	6328.8	5931.6	5615.7	5709.5	5977.6	6203.3	5919.9	5791.7	5872.0	6221.4	6512.0
52.5°	6690.8	6272.8	5925.3	6003.8	6441.6	6338.7	6308.0	5983.9	5974.0	6254.8	6585.1
55°	7114.1	6642.9	6336.0	6585.1	6740.4	6613.1	6564.4	6169.9	5926.2	6082.3	6393.8
57.5°	7529.4	7009.4	6704.3	6755.8	6952.5	6826.2	6460.6	5853.1	5548.9	5579.5	5894.6
60°	7918.4	7346.1	7094.3	7044.6	7201.7	6706.1	6066.1	5272.6	4869.1	4795.1	5067.7
62.5°	8251.5	7627.8	7389.4	7254.0	7403.9	6710.6	5451.4	4341.0	3897.8	3646.9	3859.0
65°	8516.0	7861.6	7691.8	7621.4	7675.6	6302.6	4493.6	3187.4	2644.0	2366.0	2489.6
67.5°	8692.0	7992.4	7914.8	8006.9	7284.7	5249.2	3329.1	2040.1	1537.3	1385.6	1463.3
70°	8874.4	8108.0	8105.3	7792.0	6177.1	3618.9	1944.4	1176.2	894.6	835.9	884.6
72.5°	8813.0	7970.8	8011.4	6814.4	4280.6	1934.5	1026.4	665.3	605.7	626.5	669.8
75°	8161.2	7246.8	7050.9	4898.9	2428.2	899.1	591.3	503.7	500.1	531.7	574.1
77.5°	5919.9	5047.0	4528.8	2776.7	1040.8	486.6	435.1	420.7	420.7	445.9	483.8
80°	1951.6	1688.9	1760.3	1074.2	492.0	335.8	339.4	345.7	343.9	350.2	381.8
82.5°	320.5	332.2	513.6	438.7	297.0	229.3	256.4	269.0	272.6	243.7	277.1
85°	113.7	128.2	218.5	203.1	171.5	115.5	168.8	188.7	186.0	162.5	179.6
87.5°	35.2	45.1	79.4	61.4	51.5	31.6	63.2	74.0	93.0	37.9	34.3
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)