

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: P368034

Luminaire Tested: **MSA-SA3C-830-U-SL2**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368034
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-16)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA3C-830-U-SL2
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II SPILL LIGHT ELIMINATOR OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14371 lumens
Efficiency: N/A
Efficacy: 86.6 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Medium
BUG Rating: B3 - U0 - G3

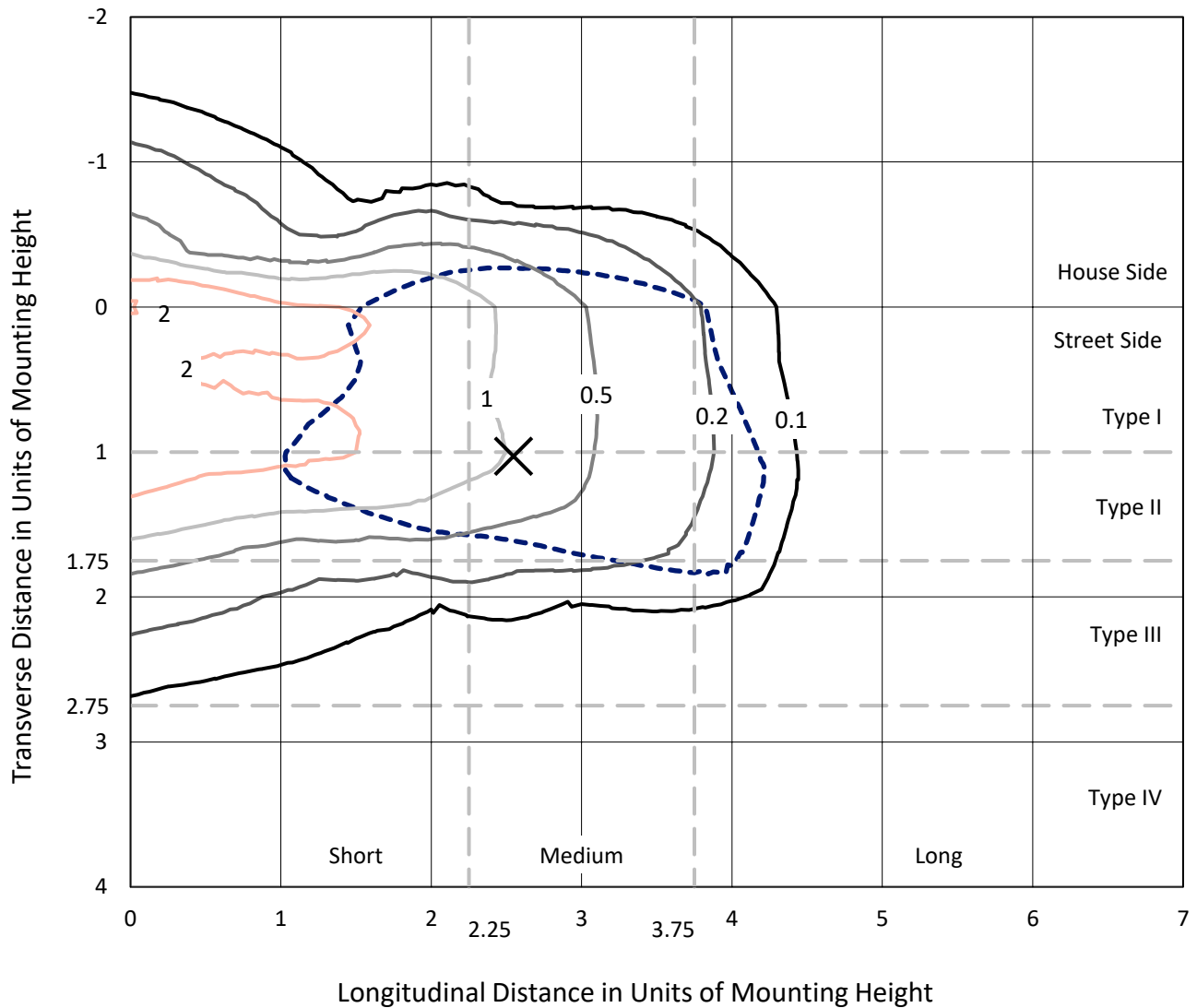
Input Watts (W): 166
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

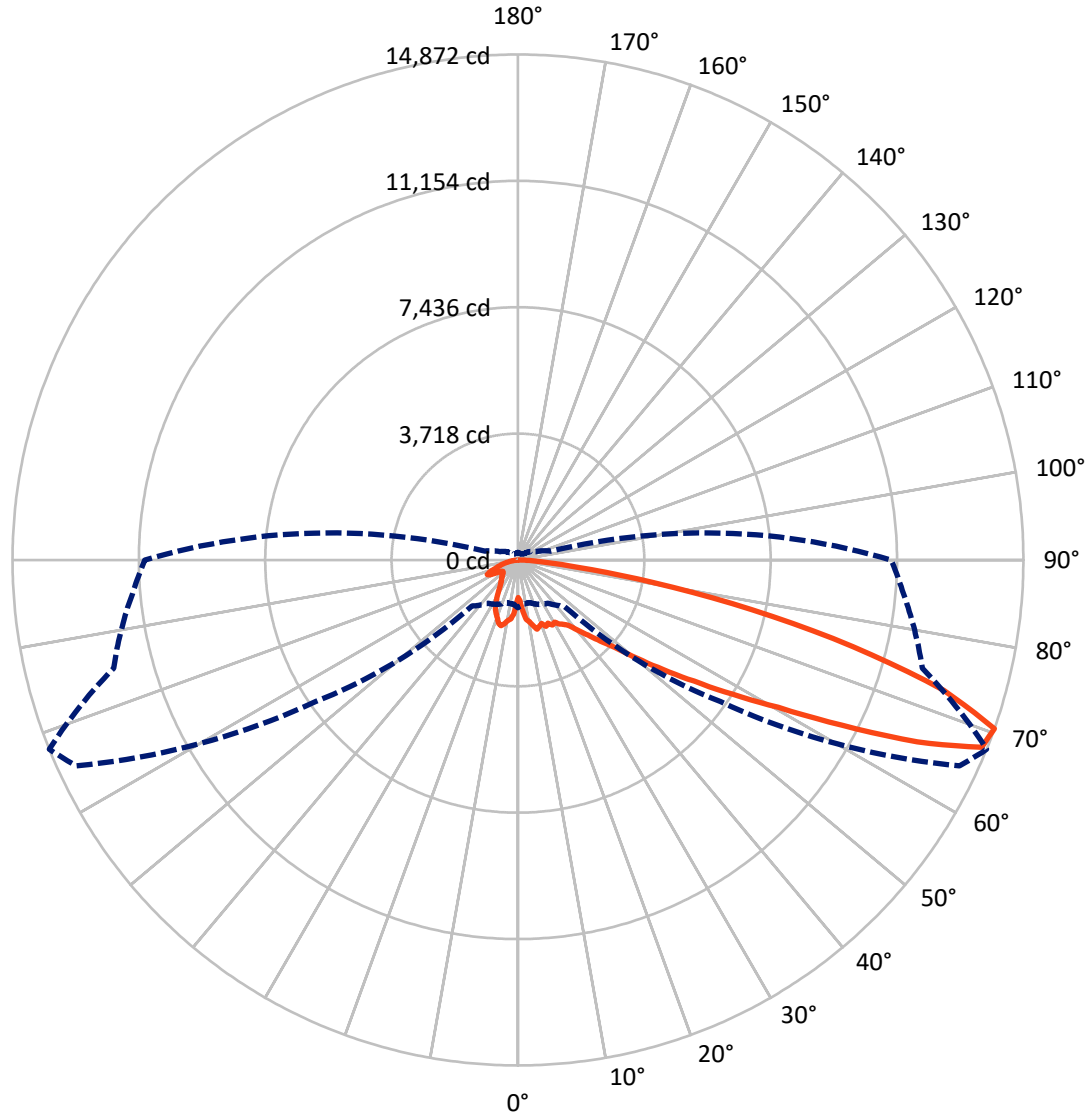
✕ Max cd
 - - - 1/2 Max cd



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

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Luminous Intensity Polar Plot



— Vertical Plane Through 68-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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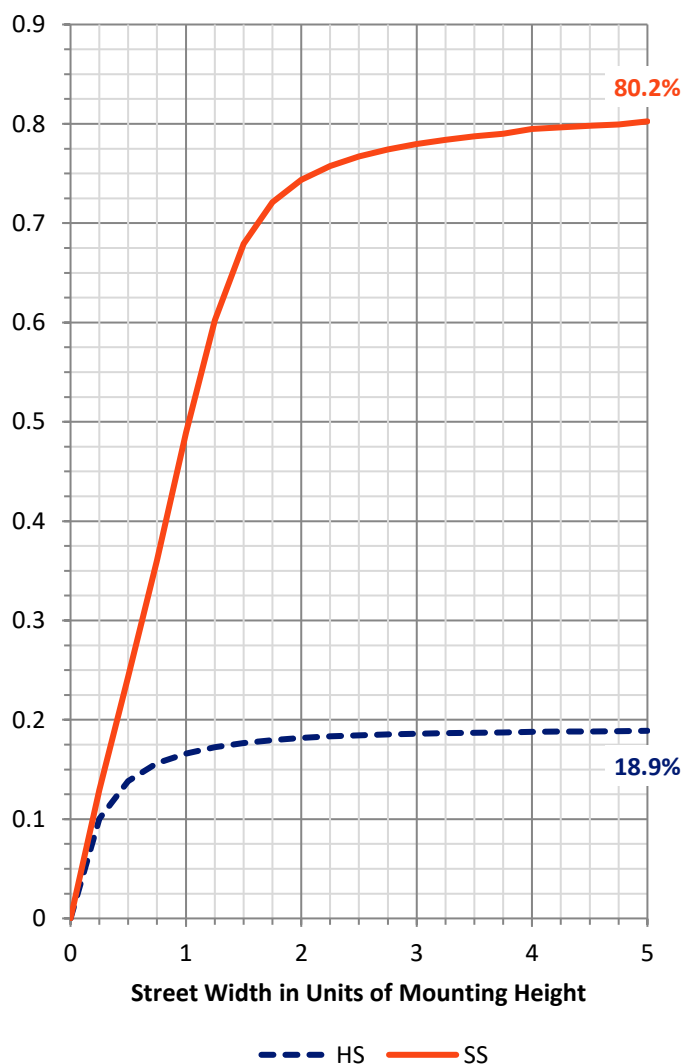
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2743.8	0.0	2743.8
	% Fixture	19.1	0.0	19.1
Street Side	Lumens	11627.2	0.0	11627.2
	% Fixture	80.9	0.0	80.9
Total	Lumens	14371.0	0.0	14371.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	147.1	1.0
10°-20°	479.6	3.3
20°-30°	729.6	5.1
30°-40°	1114.5	7.8
40°-50°	1916.3	13.3
50°-60°	3171.8	22.1
60°-70°	3910.4	27.2
70°-80°	2512.0	17.5
80°-90°	389.6	2.7
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°	14371.0	100.0
0°-180°	14371.0	100.0

Coefficient of Utilization



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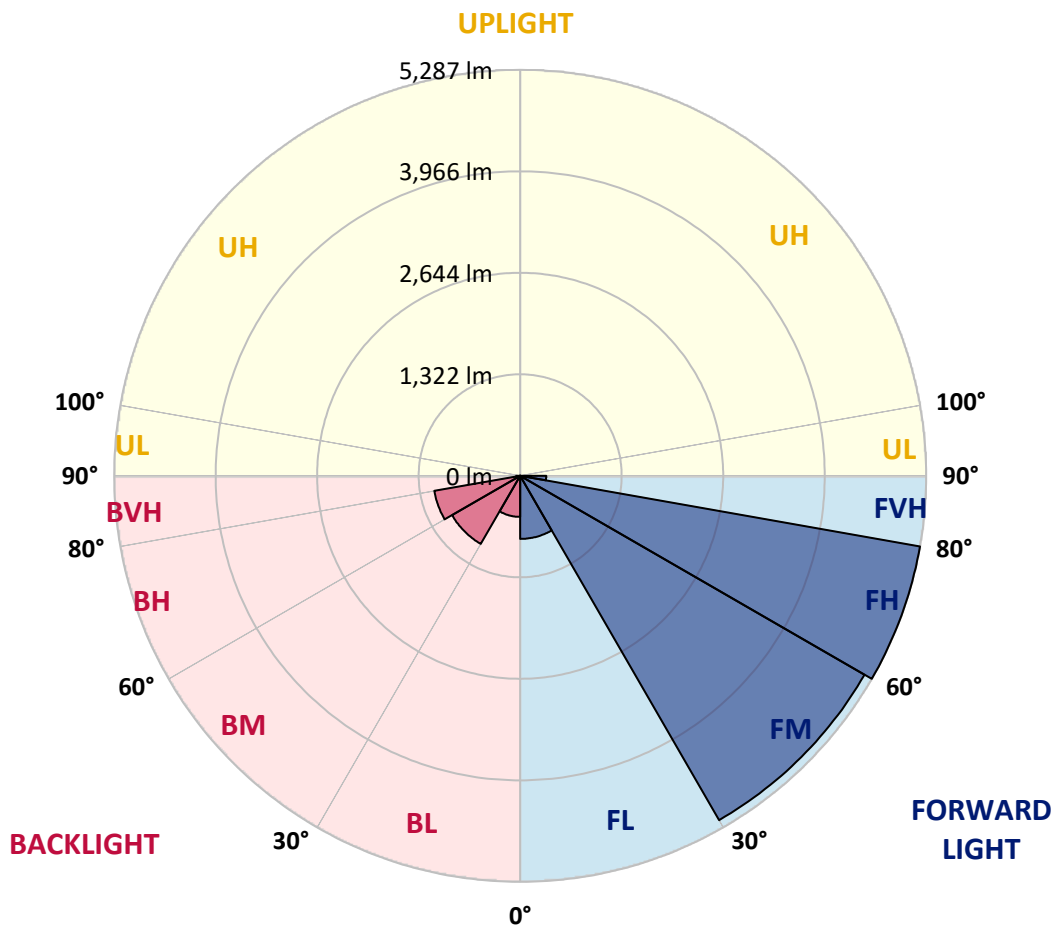
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	821.8	5.7			
FM (30°-60°)	5178.4	36.0			
FH (60°-80°)	5287.4	36.8			G3/7500
FVH (80°-90°)	339.6	2.4			G3/500
BL (0°-30°)	534.6	3.7	B2/1000		
BM (30°-60°)	1024.1	7.1	B2/2500		
BH (60°-80°)	1135.0	7.9	B3/2500		G3/2500
BVH (80°-90°)	50.0	0.3			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G3

Type III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	68°	75°	85°
0°	1101.9	1101.9	1101.9	1101.9	1101.9	1101.9	1101.9	1101.9	1101.9	1101.9	1101.9
2.5°	1266.1	1215.0	1163.2	1188.5	1228.8	1264.3	1257.1	1261.3	1212.5	1205.9	1334.0
5°	1491.6	1403.8	1402.0	1403.2	1406.8	1365.9	1465.8	1517.5	1528.9	1581.8	1707.5
7.5°	1569.8	1534.3	1498.2	1516.3	1470.6	1474.8	1597.5	1732.2	1764.1	1802.6	1974.6
10°	1553.6	1519.9	1530.7	1533.7	1542.1	1610.1	1688.9	1818.2	1845.3	1968.0	2012.5
12.5°	1556.0	1550.0	1600.5	1602.3	1692.5	1814.6	1845.9	1965.0	1975.8	2066.0	2251.9
15°	1638.4	1679.9	1651.6	1666.6	1684.1	1830.2	1875.4	2046.2	2111.1	2227.2	2366.7
17.5°	1799.0	1811.0	1726.2	1703.9	1761.1	1805.6	1908.4	1982.4	2050.4	2374.6	2567.0
20°	1836.3	1868.7	1767.7	1652.8	1773.7	1835.7	1907.2	1940.9	1993.8	2396.2	2669.3
22.5°	1996.2	1928.9	1806.8	1706.9	1746.6	1806.8	1858.5	1985.4	2124.4	2334.3	2771.5
25°	2087.1	2048.0	1939.1	1832.0	1798.4	1800.2	1900.0	2013.7	2061.8	2425.1	2792.0
27.5°	2306.6	2244.0	1999.3	1978.8	1851.9	1753.3	1906.6	2083.5	2167.7	2354.1	2891.8
30°	2581.5	2534.0	2212.8	2185.7	1992.0	1820.0	1990.8	2135.2	2123.2	2400.4	2961.0
32.5°	2804.0	2883.4	2559.2	2345.7	2208.0	2043.2	1964.4	2126.2	2245.9	2508.1	3078.3
35°	3121.6	3196.2	2829.3	2684.9	2386.0	2146.6	2149.0	2250.1	2324.0	2633.8	3209.4
37.5°	3671.3	3605.8	3310.4	3082.5	2891.2	2534.0	2426.9	2391.4	2451.0	2787.8	3466.2
40°	4067.7	4012.3	3664.7	3534.8	3162.5	2955.0	2661.5	2627.8	2733.0	2946.6	3676.1
42.5°	4537.4	4438.8	4115.2	4008.1	3619.0	3244.9	2949.0	2968.2	3019.3	3246.1	3960.0
45°	5015.6	4776.2	4592.8	4584.3	4324.5	3807.8	3410.3	3394.6	3396.4	3687.0	4278.8
47.5°	5395.1	5179.8	4969.9	4870.0	4738.9	4781.6	4080.3	3896.9	3841.5	4130.8	4757.0
50°	5651.9	5404.1	5166.5	5143.1	5493.1	5723.5	4709.4	4513.4	4547.6	4766.0	5394.5
52.5°	5657.3	5363.2	5115.4	5279.6	6104.2	6433.8	5793.3	5245.3	5354.8	5503.4	6226.3
55°	5264.0	4959.0	4797.8	5172.0	6343.0	7276.5	7316.2	6418.2	6291.9	6346.6	7220.5
57.5°	4434.6	4126.6	4032.8	4480.9	5890.1	8089.0	9155.4	7819.6	7449.1	7220.5	8239.4
60°	3338.1	3071.7	3013.3	3299.0	4883.3	7850.3	10644.6	9563.8	8809.0	8196.7	9261.3
62.5°	2503.3	2312.0	2224.2	2265.1	3379.0	7073.8	11622.6	11767.6	10698.8	9262.5	10259.7
65°	2034.1	1879.6	1801.4	1748.4	2101.5	5469.7	11445.8	13622.5	12906.1	10381.8	11036.8
67.5°	1699.1	1562.0	1525.9	1577.6	1661.2	3173.3	10062.4	14660.0	14708.7	11486.1	11490.9
70°	1410.4	1308.8	1295.5	1442.3	1552.4	1915.0	7268.0	14334.0	14871.7	12314.3	11384.4
72.5°	1089.8	1035.1	1033.3	1263.7	1542.1	1632.4	4328.1	12382.9	13105.2	12049.7	10342.7
75°	756.0	718.1	747.0	1038.7	1506.7	1655.8	2470.2	9645.0	10185.7	10253.7	8285.1
77.5°	520.3	488.4	519.7	751.2	1345.5	1695.5	1728.0	6973.9	7034.1	6875.9	4745.5
80°	362.1	339.8	363.9	531.7	1047.1	1678.1	1471.2	4390.7	4028.6	3068.7	1519.3
82.5°	224.3	217.7	244.2	378.9	737.4	1526.5	1394.2	2265.7	1729.8	846.9	542.5
85°	117.9	108.3	141.9	247.2	461.3	1198.1	1306.4	1033.9	667.6	300.7	217.7
87.5°	34.9	31.3	54.7	99.8	195.5	537.1	747.6	438.5	249.0	88.4	68.0
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°	1101.9	1101.9	1101.9	1101.9	1101.9	1101.9	1101.9	1101.9	1101.9	1101.9	1101.9
2.5°	1343.1	1336.4	1247.4	1258.9	1278.1	1282.9	1282.3	1249.8	1215.6	1311.2	1308.2
5°	1710.6	1651.0	1606.5	1596.9	1542.1	1487.4	1506.7	1500.0	1491.6	1534.9	1540.3
7.5°	1975.2	1892.8	1841.1	1708.1	1581.8	1472.4	1507.3	1518.1	1496.4	1574.6	1598.1
10°	2045.0	1980.0	1924.1	1753.3	1683.5	1619.7	1525.3	1417.6	1403.2	1358.1	1363.5
12.5°	2224.8	2215.8	2025.1	1874.8	1783.9	1657.0	1453.1	1322.6	1210.7	1216.2	1183.7
15°	2366.7	2371.6	2142.4	1931.9	1688.3	1494.6	1254.6	1092.3	977.4	954.5	931.1
17.5°	2557.4	2547.8	2152.0	1863.3	1554.8	1270.9	976.8	815.6	796.3	809.6	789.1
20°	2640.4	2555.6	2090.7	1693.1	1346.1	965.3	738.0	652.6	689.9	742.8	744.0
22.5°	2715.0	2570.0	2058.8	1556.0	1068.2	701.9	592.4	576.8	620.7	692.3	698.3
25°	2712.0	2636.8	2001.7	1417.6	828.2	547.9	514.9	526.3	578.6	653.2	657.4
27.5°	2848.5	2585.7	1853.1	1236.0	623.7	469.1	477.6	498.6	523.3	594.2	608.1
30°	2847.3	2680.7	1778.5	1015.3	501.0	430.0	451.7	469.7	490.2	555.1	563.0
32.5°	2914.7	2618.8	1733.4	789.7	449.3	420.4	425.8	443.9	473.3	517.3	522.7
35°	2995.9	2689.1	1589.1	627.3	430.0	412.0	416.2	426.4	453.5	493.8	499.2
37.5°	3256.3	2702.4	1531.9	528.7	428.8	408.4	407.8	413.2	443.9	480.6	496.8
40°	3358.0	2823.3	1365.3	493.8	424.6	408.4	400.0	403.0	428.2	475.2	487.8
42.5°	3601.5	2863.6	1242.0	481.8	424.6	401.2	387.9	392.8	422.2	463.7	483.6
45°	3852.4	2920.7	1095.3	479.4	424.0	400.6	375.3	386.1	410.2	445.1	466.7
47.5°	4209.6	3126.4	948.5	472.1	419.2	403.6	372.3	371.7	392.8	422.8	443.3
50°	4792.4	3447.6	834.8	463.1	419.8	401.2	366.3	357.9	371.7	398.2	418.0
52.5°	5603.8	3994.9	790.3	458.3	415.0	391.6	356.1	342.8	350.7	371.7	390.9
55°	6545.7	4734.1	834.2	458.3	405.4	376.5	341.6	326.0	330.2	344.6	363.3
57.5°	7646.4	5652.5	1046.5	451.7	393.4	358.5	324.2	306.1	307.3	320.0	336.8
60°	8795.8	6678.6	1522.3	446.3	384.9	338.6	303.7	285.1	283.3	295.3	310.4
62.5°	9947.0	7625.3	2022.7	458.9	382.5	321.8	282.1	263.4	262.8	273.7	286.3
65°	10862.4	8272.5	2147.2	510.0	398.2	302.5	259.8	242.4	241.2	250.2	264.0
67.5°	11311.7	8366.3	1631.2	573.8	431.2	284.5	238.2	221.9	220.7	230.4	242.4
70°	10979.1	7725.2	1006.8	580.4	429.4	263.4	215.9	202.1	199.7	209.9	218.9
72.5°	9748.5	6757.4	765.1	513.6	371.7	233.4	193.7	181.6	178.0	187.1	195.5
75°	7824.4	5365.0	612.9	414.4	292.9	196.7	171.4	160.0	155.8	164.2	171.4
77.5°	4557.9	3018.1	448.1	323.6	221.3	160.6	146.2	135.9	131.1	140.1	145.6
80°	1482.0	1005.6	281.5	232.2	161.8	125.7	118.5	111.3	106.5	112.5	114.3
82.5°	532.3	374.1	155.8	142.5	107.7	90.2	89.6	85.4	79.4	81.8	81.8
85°	235.8	170.8	92.6	76.4	64.4	48.1	56.5	53.5	47.5	46.3	44.5
87.5°	66.2	56.5	33.7	25.9	21.1	7.8	18.0	16.2	13.2	12.0	8.4
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)