

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: P368341

Luminaire Tested: **MSA-SA4B-730-U-SL2-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368341
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-17)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA4B-730-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: 14502 lumens
Efficiency: N/A
Efficacy: 84.8 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Short
BUG Rating: B2 - U0 - G3

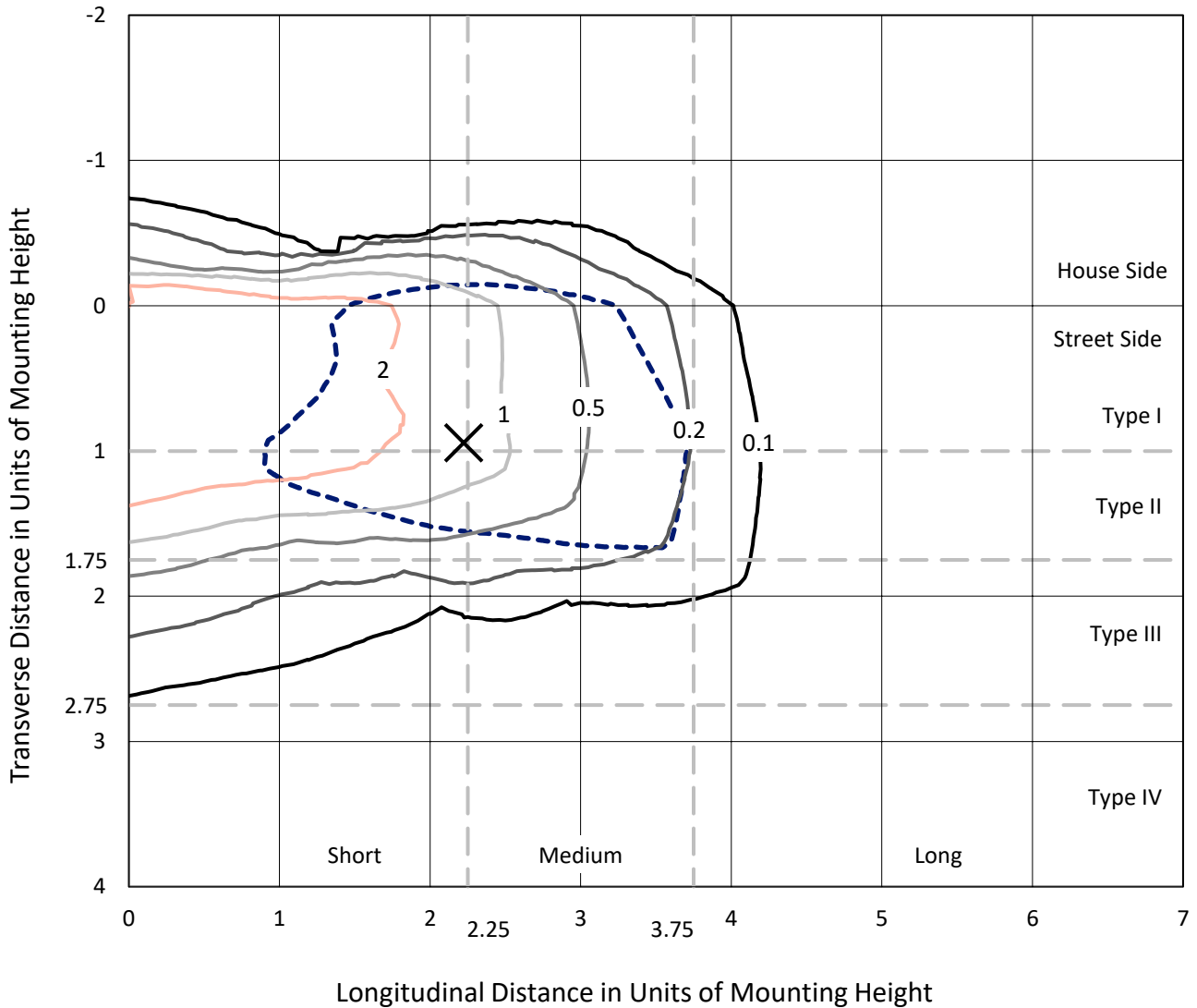
Input Watts (W): 171
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

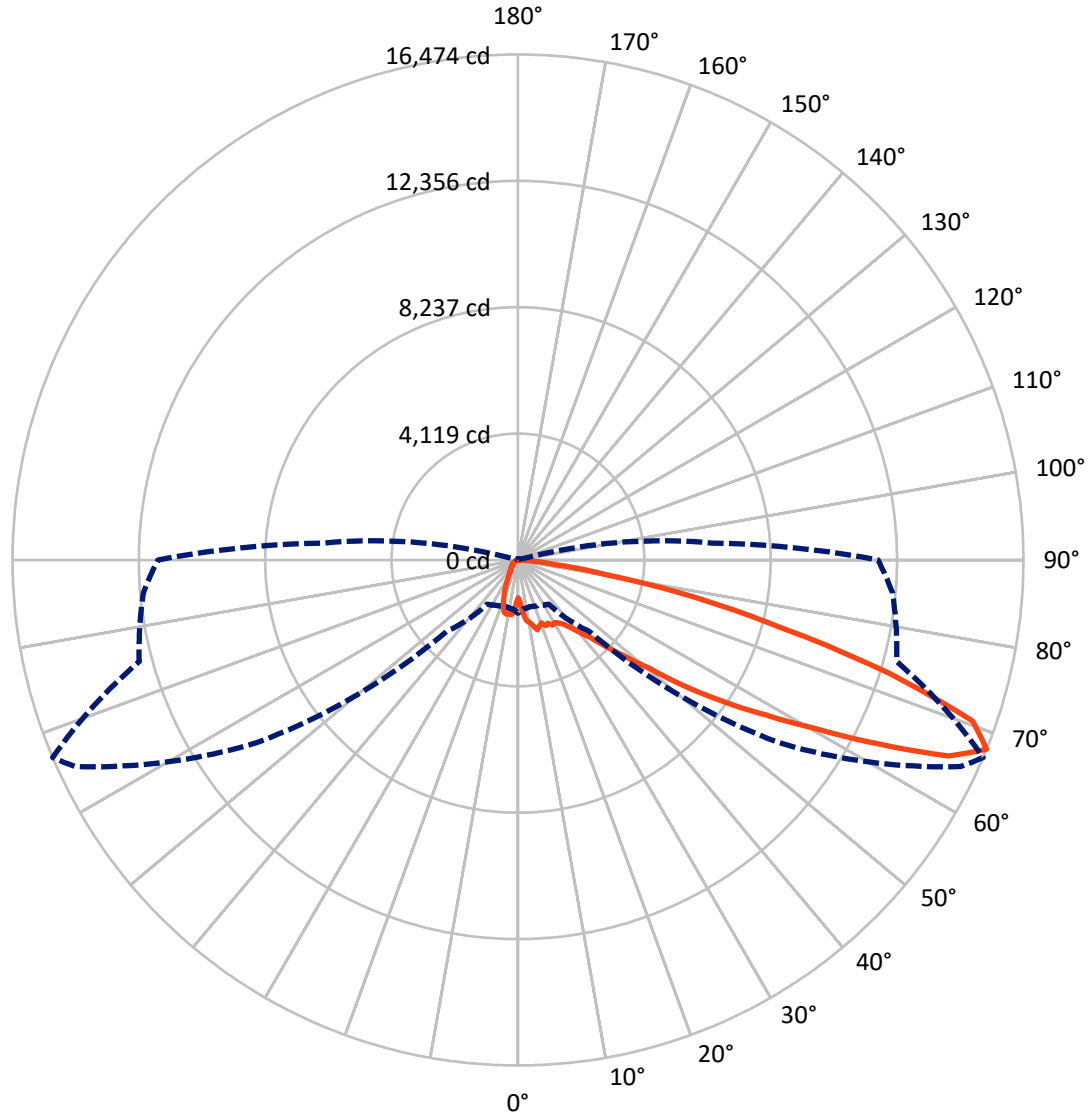
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.8 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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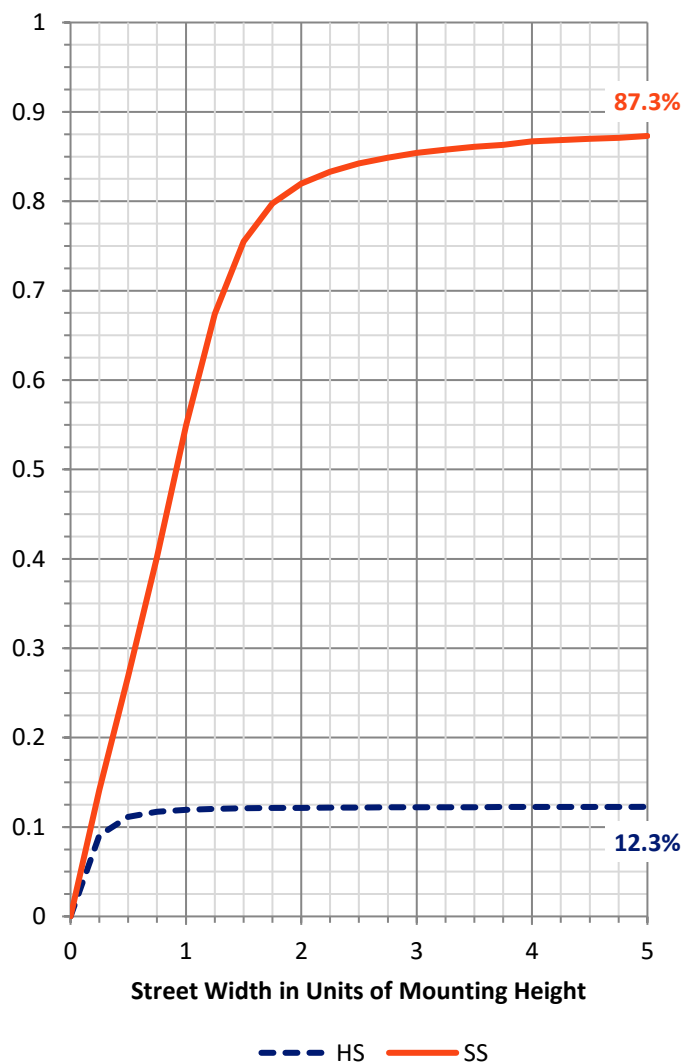
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1793.5	0.0	1793.5
	% Fixture	12.4	0.0	12.4
Street Side	Lumens	12708.5	0.0	12708.5
	% Fixture	87.6	0.0	87.6
Total	Lumens	14502.0	0.0	14502.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	155.0	1.1
10°-20°	458.7	3.2
20°-30°	719.0	5.0
30°-40°	1159.2	8.0
40°-50°	2130.1	14.7
50°-60°	3597.5	24.8
60°-70°	3977.2	27.4
70°-80°	2081.6	14.4
80°-90°	223.5	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°	14502.0	100.0
0°-180°	14502.0	100.0

Coefficient of Utilization



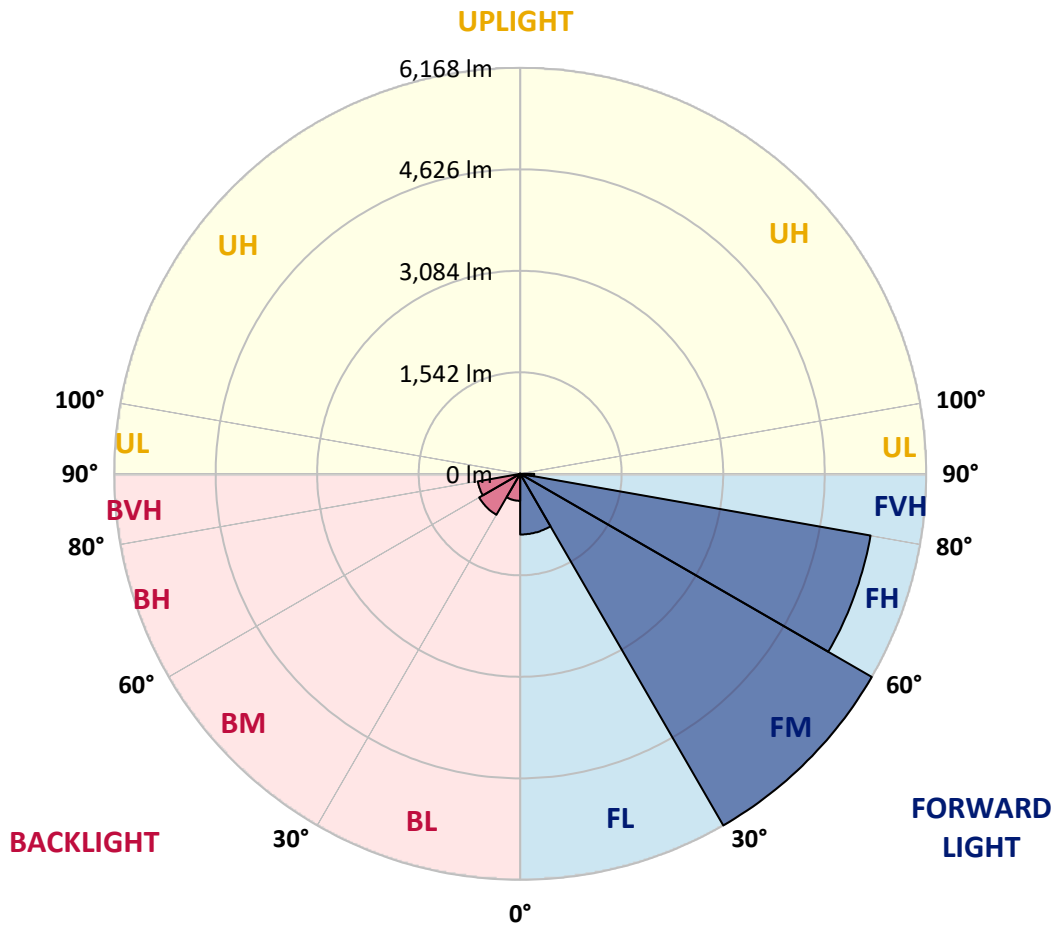
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	922.1	6.4			
FM (30°-60°)	6167.8	42.5			
FH (60°-80°)	5404.6	37.3			G3/7500
FVH (80°-90°)	214.0	1.5			G2/225
BL (0°-30°)	410.6	2.8	B1/500		
BM (30°-60°)	719.1	5.0	B1/1000		
BH (60°-80°)	654.2	4.5	B2/1000		G2/1000
BVH (80°-90°)	9.5	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-G3

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	67°	75°	85°
0°	1235.2	1235.2	1235.2	1235.2	1235.2	1235.2	1235.2	1235.2	1235.2	1235.2	1235.2
2.5°	1458.1	1408.8	1324.9	1349.2	1397.7	1438.2	1419.1	1381.6	1382.3	1344.0	1481.6
5°	1696.4	1630.2	1581.7	1598.6	1596.4	1594.9	1685.4	1720.0	1734.7	1797.9	1891.4
7.5°	1764.8	1741.3	1690.5	1706.0	1655.2	1658.9	1817.8	1967.9	1991.4	2030.4	2196.7
10°	1738.4	1692.7	1711.1	1711.1	1711.9	1794.3	1900.9	2044.4	2073.1	2223.1	2240.8
12.5°	1709.7	1711.9	1784.7	1771.5	1871.5	2019.4	2055.4	2216.5	2202.5	2332.8	2526.2
15°	1816.3	1872.2	1825.2	1843.5	1853.1	2026.7	2084.8	2298.9	2360.7	2525.5	2651.3
17.5°	1999.5	2006.9	1909.0	1882.5	1951.7	2001.0	2117.9	2220.9	2262.1	2694.7	2872.7
20°	2032.6	2079.7	1980.4	1827.4	1973.8	2041.4	2123.1	2172.4	2190.0	2746.9	2997.8
22.5°	2232.0	2179.7	2020.8	1904.6	1946.5	2020.1	2070.9	2219.5	2325.4	2648.4	3117.7
25°	2334.2	2320.3	2168.7	2069.4	2026.7	2020.8	2137.1	2249.6	2283.5	2750.6	3147.1
27.5°	2579.2	2547.6	2254.0	2241.5	2101.0	1977.4	2139.3	2341.6	2404.9	2654.2	3257.5
30°	2912.5	2900.7	2510.1	2502.0	2278.3	2056.2	2258.5	2398.2	2360.0	2703.5	3331.0
32.5°	3247.9	3343.5	2944.1	2716.0	2548.3	2345.3	2224.6	2380.6	2449.0	2823.4	3466.4
35°	3653.3	3722.4	3315.6	3150.1	2777.1	2480.6	2449.0	2549.0	2578.5	2966.2	3620.2
37.5°	4362.4	4258.0	3911.5	3629.7	3434.0	2964.0	2808.0	2728.5	2797.0	3159.6	3934.3
40°	4886.2	4820.0	4393.3	4224.9	3774.6	3499.5	3092.0	3017.7	3094.2	3358.3	4152.8
42.5°	5518.1	5380.6	4978.9	4864.9	4401.4	3871.0	3457.6	3483.3	3435.5	3750.4	4536.0
45°	6089.7	5779.3	5555.7	5581.4	5334.2	4617.7	4067.4	4054.9	4015.2	4318.3	4939.2
47.5°	6474.5	6203.0	5985.3	5913.9	5884.5	5930.8	4948.7	4726.6	4697.2	4914.9	5574.1
50°	6681.2	6384.0	6114.8	6129.5	6726.8	7176.3	5858.0	5542.4	5553.5	5780.8	6442.1
52.5°	6542.2	6206.0	5922.0	6197.9	7380.1	8006.9	7363.2	6608.4	6864.4	6806.3	7606.7
55°	5899.9	5607.9	5406.3	5899.9	7451.4	8900.7	9216.3	8212.8	8155.5	8023.0	8794.0
57.5°	4819.3	4567.7	4443.4	4964.2	6670.9	9620.9	11077.5	10026.2	9537.0	8982.3	9779.8
60°	3590.7	3405.3	3275.9	3551.0	5256.2	8921.3	12296.5	11735.2	11168.7	9907.1	10665.5
62.5°	2659.4	2508.6	2371.0	2396.0	3619.4	7672.9	12764.3	13545.6	13220.4	10883.3	11501.2
65°	2122.4	1984.8	1888.4	1833.3	2241.5	5772.7	12113.3	15029.4	15404.6	11802.8	12104.5
67.5°	1733.2	1617.0	1569.2	1632.4	1758.2	3290.6	10374.2	15929.9	16474.2	12778.3	12253.1
70°	1410.2	1314.6	1309.5	1480.1	1619.2	2006.1	7630.9	15308.2	15718.0	12944.6	11362.2
72.5°	982.8	940.9	1007.8	1249.9	1604.5	1670.7	4382.3	12668.0	12682.7	11432.8	9345.8
75°	556.2	549.5	655.5	996.8	1562.5	1653.8	2443.1	8952.2	8958.8	8646.9	6474.5
77.5°	306.0	286.2	381.8	673.9	1341.8	1615.5	1575.8	6112.6	5955.9	4811.9	2957.3
80°	141.2	133.2	206.7	431.8	981.4	1528.0	1263.1	3359.7	3029.4	1567.7	721.7
82.5°	58.1	55.2	94.9	277.3	620.2	1230.7	1064.5	1490.4	1196.2	297.9	222.9
85°	10.3	11.0	39.0	167.7	347.2	567.2	862.9	707.7	520.1	82.4	122.1
87.5°	0.0	0.0	8.1	40.5	83.9	155.2	350.2	197.9	136.1	24.3	36.0
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°	1235.2	1235.2	1235.2	1235.2	1235.2	1235.2	1235.2	1235.2	1235.2	1235.2	1235.2
2.5°	1508.8	1496.3	1369.8	1375.7	1384.5	1376.4	1374.9	1339.6	1307.3	1413.9	1412.5
5°	1908.3	1819.3	1731.7	1697.9	1625.1	1529.4	1530.2	1500.0	1469.1	1512.5	1512.5
7.5°	2193.0	2070.1	1959.0	1761.2	1568.4	1394.1	1378.6	1337.4	1290.3	1347.0	1358.0
10°	2259.2	2152.5	2009.1	1718.5	1536.0	1366.1	1179.3	1025.5	954.1	921.0	915.2
12.5°	2463.0	2383.5	2062.8	1741.3	1478.7	1191.0	885.0	702.5	578.2	568.7	555.4
15°	2599.1	2543.2	2115.7	1684.6	1235.9	856.3	556.2	426.7	376.7	372.2	365.6
17.5°	2810.2	2713.1	2065.0	1504.4	966.6	565.0	373.7	336.9	342.8	356.1	345.8
20°	2896.3	2706.5	1954.6	1243.3	679.0	378.9	324.4	304.6	320.0	332.5	326.6
22.5°	2984.5	2725.6	1856.8	1024.8	443.6	313.4	289.1	278.8	280.3	292.8	293.5
25°	2983.8	2778.6	1743.5	798.2	330.3	278.8	261.2	247.9	242.8	251.6	249.4
27.5°	3128.7	2717.5	1536.8	592.2	290.6	249.4	232.5	216.3	197.9	206.7	206.7
30°	3129.5	2816.8	1392.6	425.2	266.3	222.2	207.5	182.4	161.1	168.5	169.2
32.5°	3212.6	2730.7	1259.4	325.2	247.2	206.0	173.6	150.8	138.3	142.7	142.7
35°	3307.5	2804.3	1054.9	286.9	228.1	183.2	148.6	130.2	120.6	124.3	124.3
37.5°	3620.9	2788.9	912.9	267.0	215.5	165.5	135.4	114.8	110.3	112.6	115.5
40°	3734.2	2898.5	720.2	255.3	194.9	149.3	119.2	103.7	97.8	99.3	100.0
42.5°	4022.6	2922.8	575.3	245.7	176.6	129.5	105.9	94.9	87.5	87.5	89.7
45°	4341.1	2983.8	457.6	237.6	161.1	116.2	95.6	86.8	75.8	74.3	77.2
47.5°	4802.4	3217.8	373.0	221.4	142.7	108.1	88.3	75.0	66.2	63.3	66.2
50°	5574.1	3615.0	329.6	201.6	129.5	101.5	78.0	64.0	57.4	53.7	55.9
52.5°	6662.8	4301.4	306.8	183.2	117.7	91.2	69.9	55.9	49.3	46.3	47.8
55°	7872.2	5088.5	295.7	164.8	107.4	80.2	61.1	49.3	43.4	39.7	40.5
57.5°	8990.4	5828.6	284.7	147.1	97.1	71.4	53.7	43.4	37.5	33.8	34.6
60°	10092.4	6419.3	258.2	126.5	87.5	64.0	47.1	37.5	33.8	29.4	29.4
62.5°	11067.2	6772.4	220.0	109.6	78.7	56.6	41.9	33.8	30.9	26.5	26.5
65°	11730.7	6788.6	177.3	94.2	69.2	48.6	36.8	31.6	28.7	23.5	22.8
67.5°	11740.3	6347.2	142.0	83.9	61.1	42.7	33.1	30.2	26.5	22.1	20.6
70°	10508.1	5243.7	118.4	73.6	53.0	37.5	28.7	28.7	25.7	21.3	19.1
72.5°	8405.6	4007.1	99.3	64.0	47.1	32.4	26.5	27.2	25.0	21.3	19.1
75°	5649.8	2298.2	82.4	54.4	41.2	27.2	25.7	26.5	25.7	21.3	18.4
77.5°	2602.0	732.0	64.0	44.9	35.3	22.8	25.0	25.0	23.5	19.1	16.2
80°	586.3	180.2	46.3	33.1	28.7	16.9	22.8	20.6	18.4	13.2	9.6
82.5°	213.3	55.2	28.0	20.6	17.7	6.6	14.7	14.7	13.2	9.6	5.9
85°	122.1	28.7	15.4	13.2	9.6	2.9	8.1	8.8	7.4	6.6	2.9
87.5°	39.7	6.6	7.4	8.1	7.4	1.5	2.9	2.9	2.2	1.5	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)