

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: P368211

Luminaire Tested: **MSA-SA4A-730-U-SL3-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368211
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-19)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA4A-730-U-SL3-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11594 lumens
Efficiency: N/A
Efficacy: 89.9 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G2

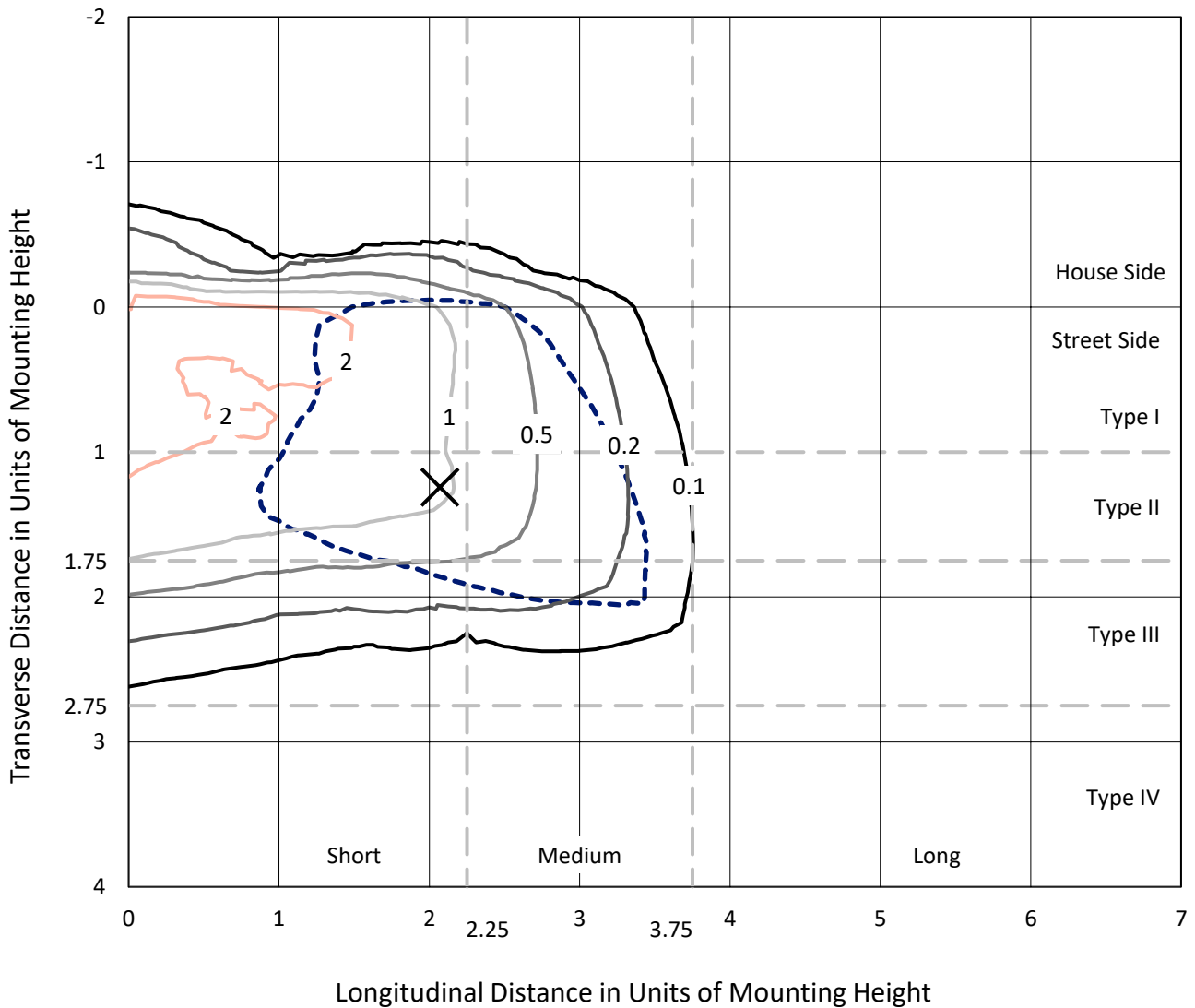
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

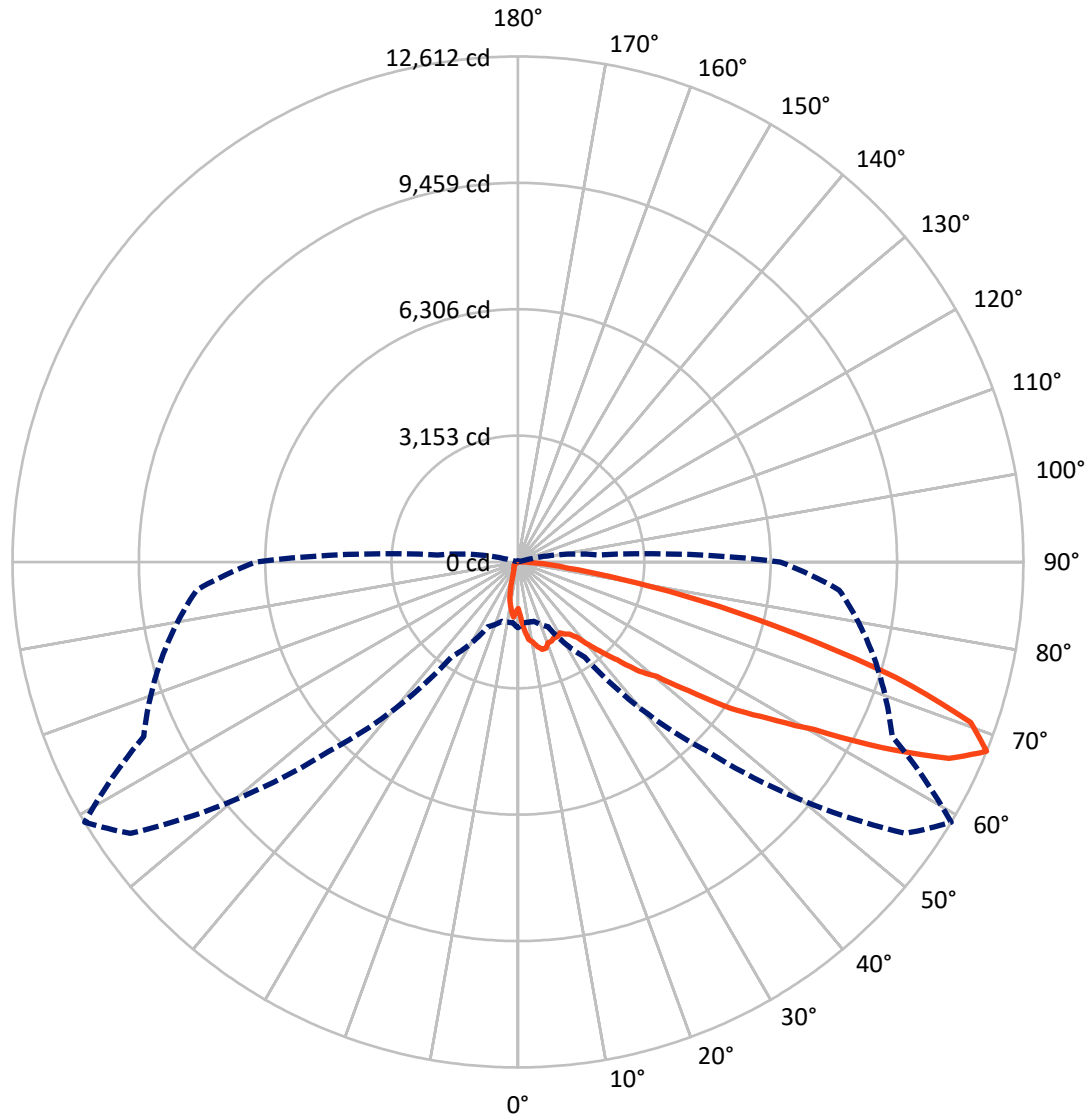
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.3 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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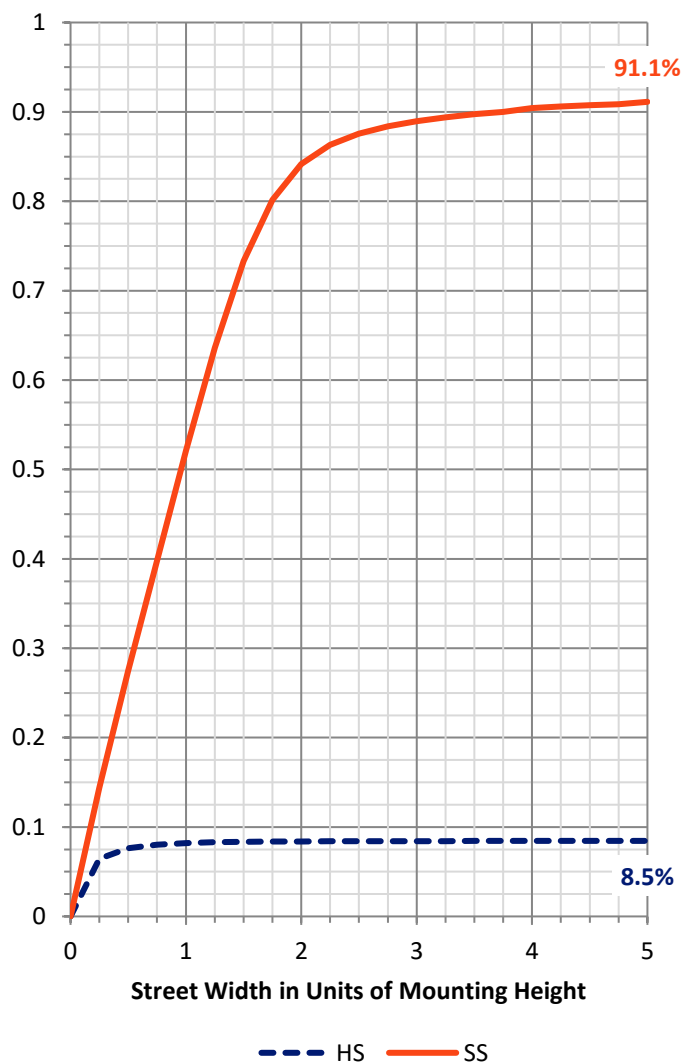
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	986.0	0.0	986.0
	% Fixture	8.5	0.0	8.5
Street Side	Lumens	10608.0	0.0	10608.0
	% Fixture	91.5	0.0	91.5
Total	Lumens	11594.0	0.0	11594.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	141.0	1.2
10°-20°	397.2	3.4
20°-30°	590.7	5.1
30°-40°	911.4	7.9
40°-50°	1626.5	14.0
50°-60°	2894.4	25.0
60°-70°	3370.9	29.1
70°-80°	1499.1	12.9
80°-90°	162.8	1.4
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°	11594.0	100.0
0°-180°	11594.0	100.0

Coefficient of Utilization



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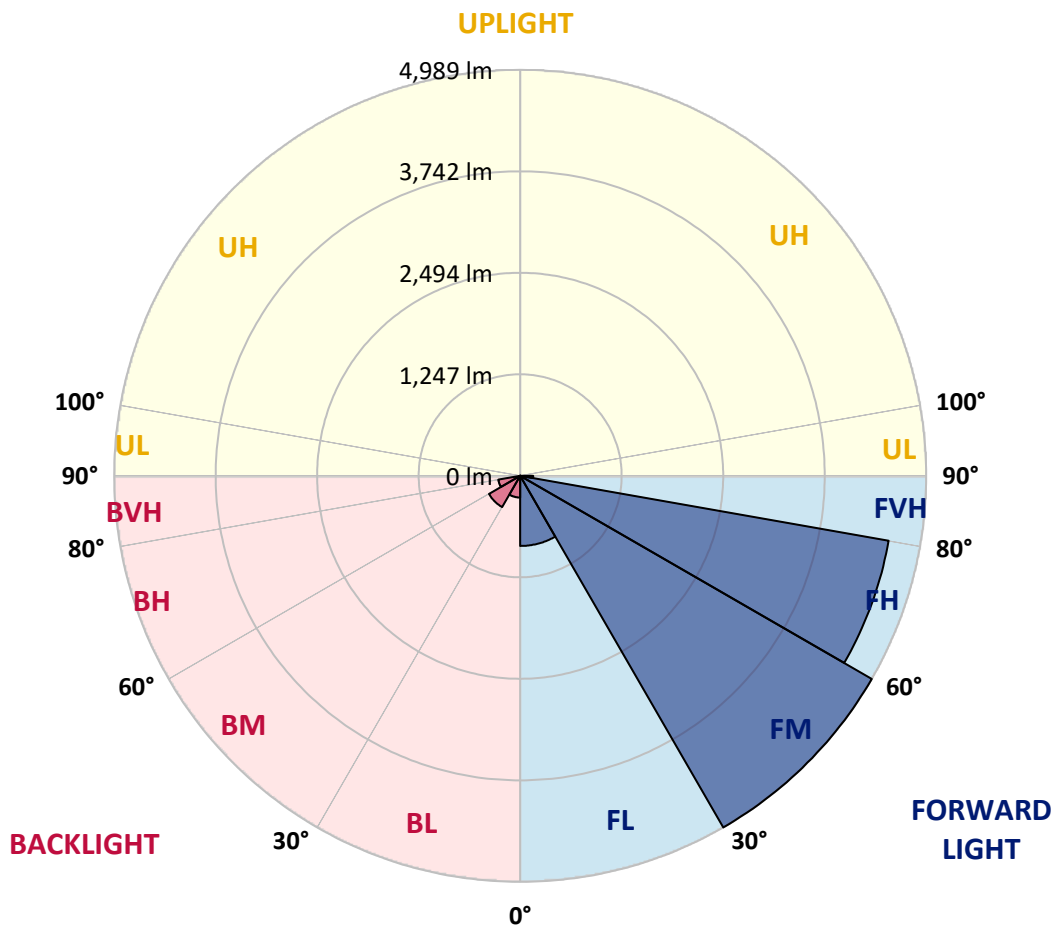
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	862.3	7.4			
FM (30°-60°)	4988.9	43.0			
FH (60°-80°)	4596.9	39.6			G2/5000
FVH (80°-90°)	159.9	1.4			G2/225
BL (0°-30°)	266.6	2.3	B1/500		
BM (30°-60°)	443.3	3.8	B1/1000		
BH (60°-80°)	273.1	2.4	B1/500		G1/500
BVH (80°-90°)	2.9	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 III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	1160.0	1160.0	1160.0	1160.0	1160.0	1160.0	1160.0	1160.0	1160.0	1160.0	1160.0
2.5°	1512.2	1455.3	1374.3	1398.4	1420.1	1440.6	1406.6	1387.2	1377.8	1294.5	1398.9
5°	1856.8	1785.8	1748.8	1739.4	1716.0	1663.7	1750.6	1711.8	1724.8	1741.2	1775.2
7.5°	1961.9	1929.6	1876.2	1896.2	1806.9	1799.3	1919.7	1953.1	1997.2	1967.2	2008.3
10°	1907.9	1852.2	1877.4	1870.4	1866.8	1945.5	2030.0	2031.8	2097.5	2129.2	1990.1
12.5°	1801.1	1807.5	1897.9	1890.9	2008.3	2165.6	2185.0	2164.5	2271.9	2216.7	2195.6
15°	1872.1	1924.9	1875.0	1892.1	1933.8	2130.4	2199.1	2262.5	2364.1	2396.9	2254.3
17.5°	1957.8	1963.1	1872.1	1851.0	1956.1	2047.6	2209.7	2261.9	2271.9	2560.1	2386.4
20°	1911.4	1956.6	1848.0	1714.8	1878.0	2002.4	2166.8	2150.4	2217.3	2608.3	2416.3
22.5°	2034.7	1970.2	1831.0	1730.6	1785.8	1899.1	2038.2	2145.7	2246.1	2493.2	2455.1
25°	2046.5	2023.0	1899.1	1809.9	1800.5	1829.3	2023.0	2092.3	2249.6	2596.5	2422.2
27.5°	2178.6	2151.5	1897.9	1906.7	1818.7	1730.0	1949.0	2111.6	2313.6	2533.7	2492.0
30°	2348.8	2351.1	2024.2	2051.8	1926.1	1783.5	2009.5	2054.1	2357.0	2634.1	2543.7
32.5°	2521.4	2592.4	2273.7	2127.5	2088.1	1986.0	1934.3	2140.4	2309.5	2805.5	2672.9
35°	2783.8	2831.9	2479.1	2348.2	2193.8	2077.6	2138.6	2212.6	2480.3	3032.7	2842.5
37.5°	3228.2	3141.3	2847.8	2620.0	2583.0	2411.6	2442.1	2375.8	2654.7	3300.4	3178.3
40°	3478.3	3399.6	3094.4	2983.4	2747.4	2773.8	2677.5	2716.3	2907.7	3579.3	3484.2
42.5°	3738.9	3663.8	3396.1	3317.4	3092.6	2983.4	2940.0	3079.1	3295.7	4043.6	3922.7
45°	4000.8	3810.0	3696.7	3736.0	3635.0	3419.0	3368.5	3492.4	3719.6	4614.2	4385.3
47.5°	4221.5	4060.6	3975.5	3957.3	3918.0	4218.0	4012.5	4067.1	4167.5	5119.1	4961.8
50°	4619.5	4461.0	4327.8	4290.8	4482.2	4907.8	4590.8	4485.1	4685.9	5729.1	5629.8
52.5°	5194.2	4992.3	4780.4	4781.0	5142.0	5375.6	5525.9	5340.4	5378.0	6400.1	6356.0
55°	5656.3	5399.7	5224.2	5362.7	5901.1	6032.0	6605.5	6442.9	6394.2	7022.3	6968.3
57.5°	5719.7	5412.0	5328.7	5571.7	6308.5	7144.4	7761.4	7355.2	7280.6	7543.0	7650.5
60°	5127.9	4801.5	4864.3	5255.3	6441.1	7822.5	8822.8	8491.1	8017.4	8153.0	8227.0
62.5°	3824.7	3564.0	3740.1	4257.9	5929.8	8276.9	10051.5	10205.3	8872.1	8610.9	8595.0
65°	2481.5	2318.3	2433.9	2858.4	4487.4	8225.2	11149.3	11816.2	9545.5	8984.3	8710.7
67.5°	1641.4	1517.5	1534.0	1785.2	2901.8	6689.5	11805.6	12611.7	10302.8	9196.2	8047.9
70°	1223.4	1126.0	1131.8	1268.0	1722.4	4411.7	10890.4	11984.1	10579.3	8461.8	6495.7
72.5°	882.3	817.2	871.8	1023.2	1372.5	2332.9	8117.2	9869.5	9225.0	6674.2	4376.5
75°	611.1	568.3	657.5	855.9	1252.8	1448.3	5363.9	7104.5	6465.8	4187.4	1978.4
77.5°	338.7	325.8	454.4	697.4	1137.1	1187.0	3285.7	4668.2	3586.3	1501.1	470.8
80°	147.9	143.2	220.1	523.7	955.7	1072.5	1849.8	2588.3	1410.7	267.7	152.0
82.5°	63.4	61.1	93.9	315.2	694.5	897.0	1140.6	1245.7	485.5	82.8	86.3
85°	11.2	12.3	37.6	166.1	422.7	455.6	826.0	737.3	244.2	39.3	61.6
87.5°	0.0	0.0	5.9	32.3	79.3	130.3	358.1	258.3	46.4	12.9	10.6
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°	1160.0	1160.0	1160.0	1160.0	1160.0	1160.0	1160.0	1160.0	1160.0	1160.0	1160.0
2.5°	1413.6	1380.7	1255.7	1239.9	1222.8	1197.6	1188.2	1134.2	1127.1	1196.4	1196.4
5°	1759.4	1642.0	1522.8	1428.9	1344.9	1228.7	1195.8	1161.8	1134.2	1127.1	1148.9
7.5°	1942.0	1798.7	1611.5	1372.5	1178.8	1010.3	939.9	890.6	835.4	851.8	860.6
10°	1932.0	1779.9	1541.0	1234.0	1019.1	833.0	654.0	549.5	491.4	462.6	459.1
12.5°	2030.0	1886.8	1493.5	1123.6	849.5	592.3	411.5	337.0	294.1	294.7	291.2
15°	2087.0	1930.8	1438.3	983.9	598.2	381.0	285.3	268.9	263.0	269.5	265.9
17.5°	2187.4	1977.2	1313.2	775.5	411.5	287.7	262.4	256.0	263.6	277.1	273.6
20°	2179.7	1896.8	1135.4	546.5	304.1	258.9	248.3	238.3	254.2	268.3	265.9
22.5°	2172.7	1818.1	968.1	403.3	254.2	236.0	227.2	223.1	231.3	247.7	251.3
25°	2110.5	1779.4	798.4	302.9	230.1	214.3	210.2	206.6	209.6	223.1	222.5
27.5°	2186.8	1681.3	616.4	254.2	213.1	194.3	190.8	184.9	179.1	190.8	192.6
30°	2170.9	1694.8	483.1	223.7	196.1	170.8	172.0	159.7	149.1	159.7	159.7
32.5°	2228.5	1596.2	386.9	203.1	179.1	160.9	146.2	133.3	125.6	132.1	133.3
35°	2312.4	1600.3	302.9	190.2	164.4	143.2	125.6	112.7	105.7	108.6	110.4
37.5°	2593.6	1572.1	253.0	180.2	159.1	132.7	114.5	97.5	92.8	96.3	98.0
40°	2776.8	1647.3	223.1	174.9	145.6	122.1	98.0	85.7	81.6	83.4	86.3
42.5°	3121.9	1689.0	208.4	169.1	133.3	104.5	83.9	76.9	71.0	73.4	75.7
45°	3491.2	1760.0	197.2	162.6	123.9	91.6	74.0	68.1	60.5	61.1	63.4
47.5°	3945.0	1929.1	184.3	151.5	111.0	83.4	65.7	56.9	49.9	49.3	52.2
50°	4554.4	2155.1	172.6	137.4	102.7	76.3	57.5	46.4	40.5	38.7	41.1
52.5°	5204.8	2447.4	160.3	127.4	92.8	66.9	49.3	37.6	32.3	31.1	32.9
55°	5849.4	2728.0	148.5	120.9	82.2	57.5	41.7	31.1	26.4	25.2	26.4
57.5°	6583.8	3031.5	133.3	108.0	72.2	49.9	34.6	25.8	21.7	20.5	21.1
60°	7136.8	3138.4	120.3	93.9	62.8	44.0	29.4	20.5	17.6	16.4	17.0
62.5°	7399.2	2964.0	108.0	81.6	55.2	38.2	24.7	17.0	14.7	13.5	13.5
65°	7331.1	2577.8	95.7	69.9	47.6	31.7	19.4	14.7	12.9	11.2	10.6
67.5°	6544.5	2017.1	81.6	58.7	39.9	25.8	16.4	14.1	11.7	10.6	8.8
70°	5190.1	1460.6	66.3	48.7	33.5	21.1	12.9	12.9	11.2	10.6	8.2
72.5°	3402.0	919.3	54.0	39.3	27.6	16.4	10.0	11.7	10.6	10.6	7.6
75°	1474.1	328.7	43.4	31.7	22.9	11.2	8.8	10.6	11.2	10.6	8.8
77.5°	345.2	102.1	34.0	25.2	18.8	7.6	8.8	10.6	11.2	10.0	7.6
80°	129.7	43.4	22.3	16.4	14.7	4.7	7.6	6.5	5.9	4.1	1.2
82.5°	78.7	18.2	11.7	8.2	7.0	1.2	3.5	2.3	1.2	1.2	0.0
85°	55.8	8.8	6.5	5.9	3.5	0.0	0.6	0.0	0.0	0.6	0.0
87.5°	7.6	2.3	2.9	2.9	2.3	0.0	0.0	0.0	0.0	0.0	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)