

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: P368566

Luminaire Tested: **MSA-SA4C-830-U-SL4**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368566
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-20)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA4C-830-U-SL4
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV SPILL LIGHT ELIMINATOR OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 18625 lumens
Efficiency: N/A
Efficacy: 82.8 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G4

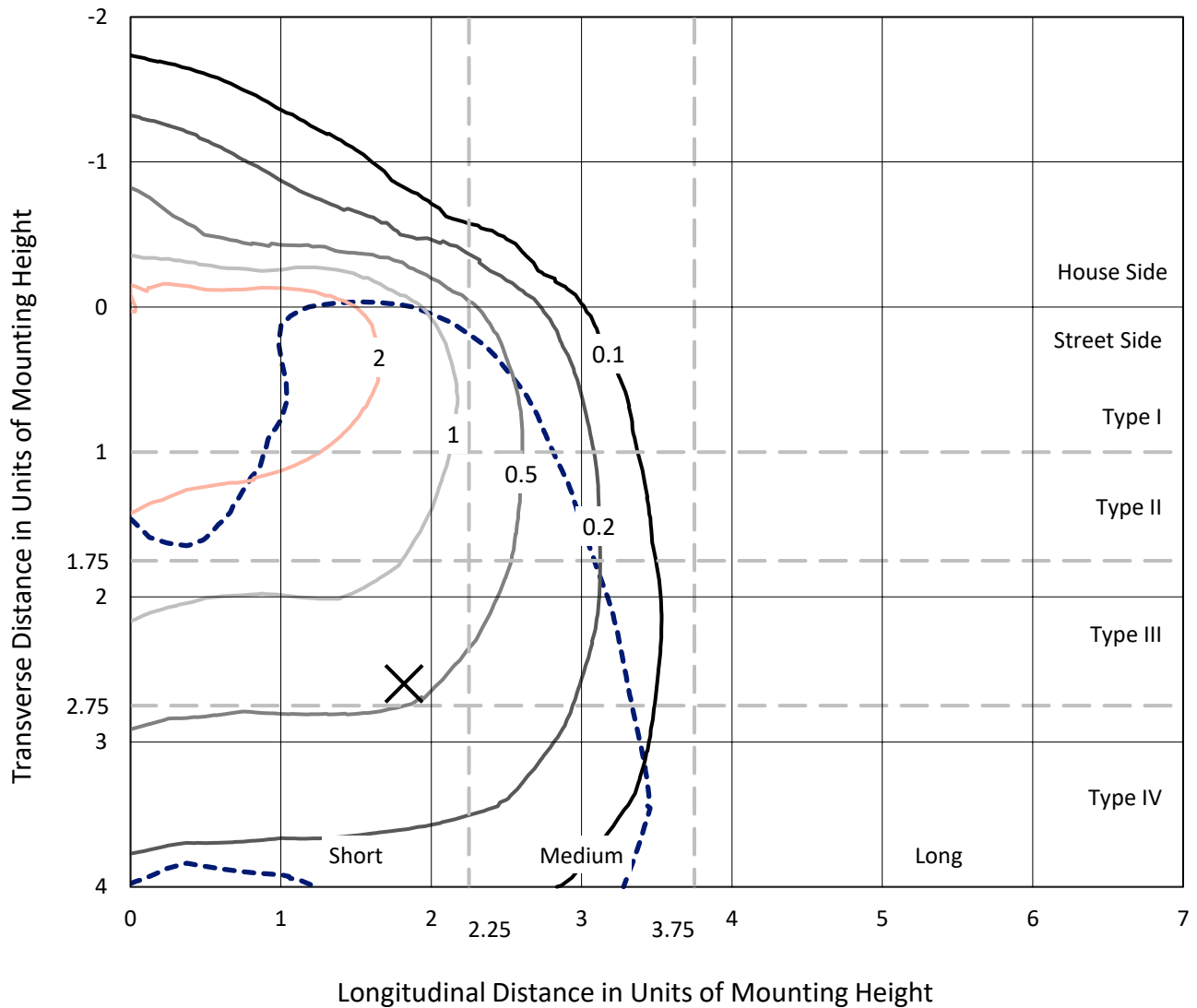
Input Watts (W): 225
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P368566
 CATALOG NUMBER: MSA-SA4C-830-U-SL4

Iso-Footcandle Lines of Horizontal Illumination

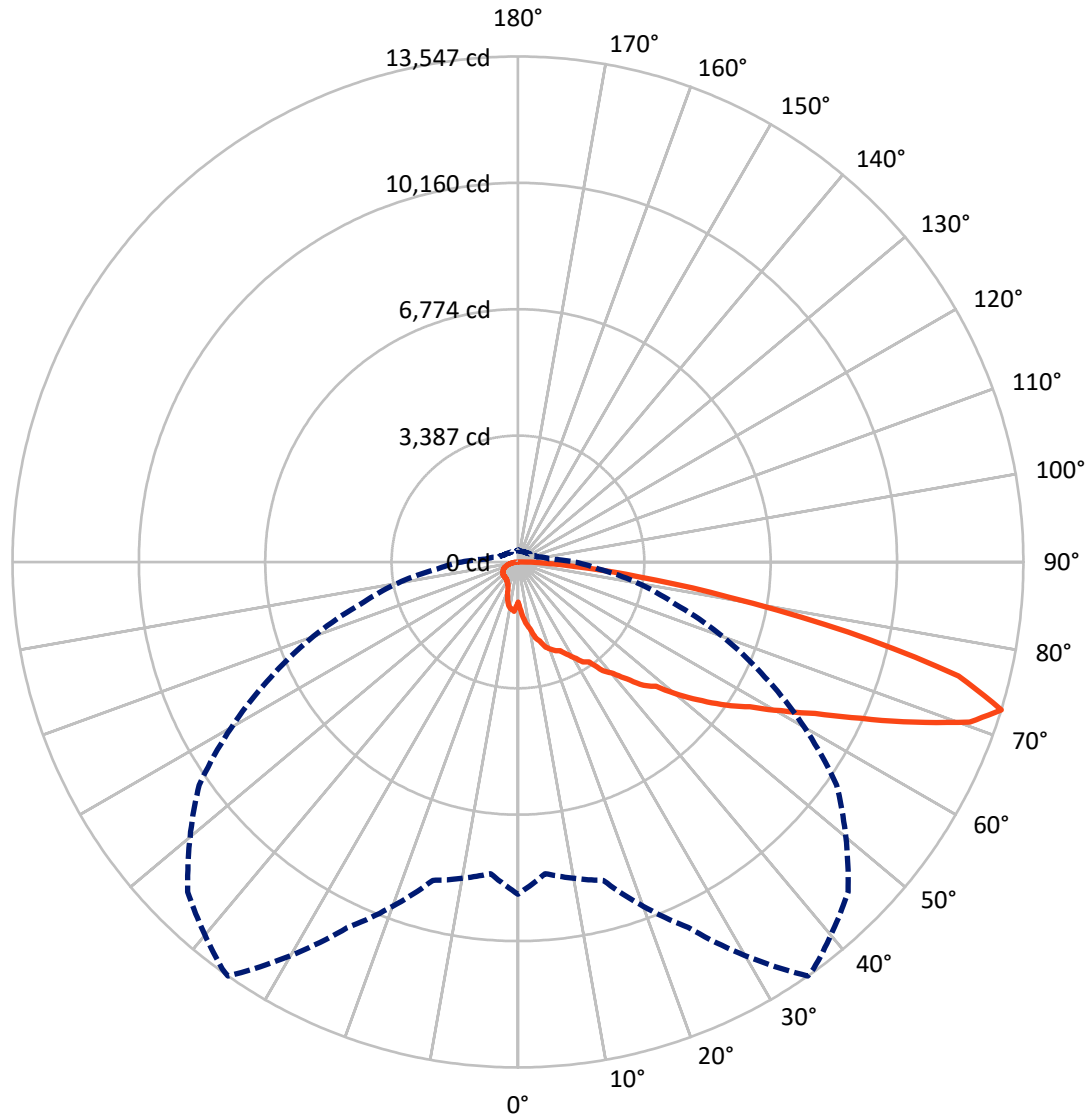
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.7 fc
 Type IV - Short - N/A

REPORT NUMBER: P368566
CATALOG NUMBER: MSA-SA4C-830-U-SL4

Luminous Intensity Polar Plot



— Vertical Plane Through 35-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical

REPORT NUMBER: P368566
 CATALOG NUMBER: MSA-SA4C-830-U-SL4

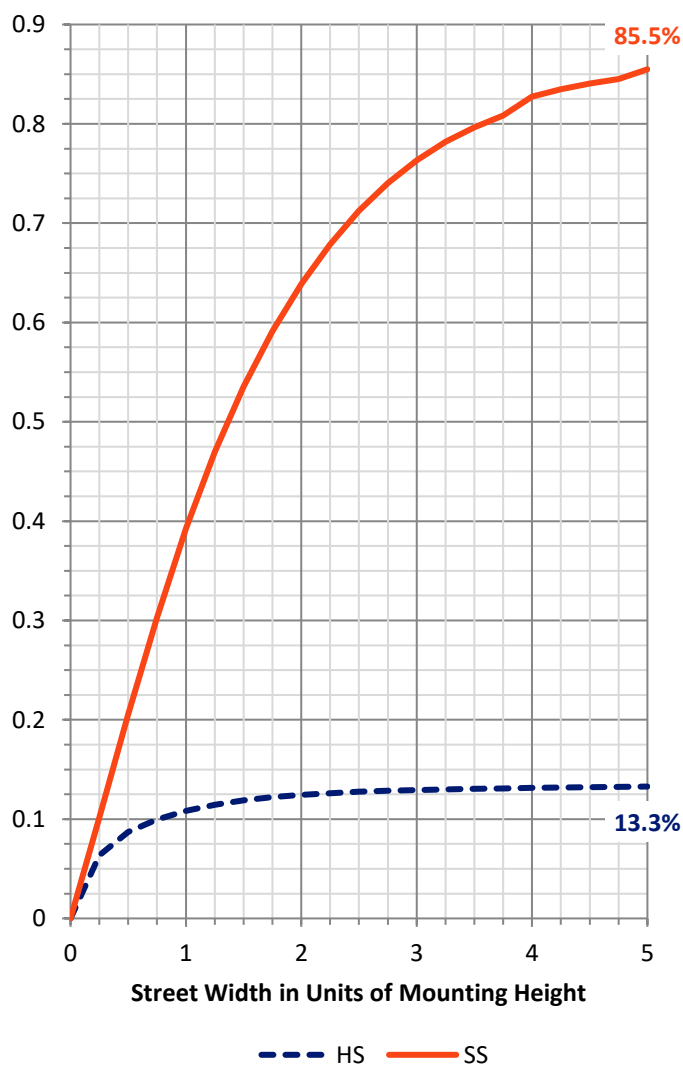
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2499.4	0.0	2499.4
	% Fixture	13.4	0.0	13.4
Street Side	Lumens	16125.6	0.0	16125.6
	% Fixture	86.6	0.0	86.6
Total	Lumens	18625.0	0.0	18625.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	143.1	0.8
10°-20°	503.9	2.7
20°-30°	875.6	4.7
30°-40°	1463.4	7.9
40°-50°	2539.8	13.6
50°-60°	3839.6	20.6
60°-70°	4974.1	26.7
70°-80°	3670.4	19.7
80°-90°	615.2	3.3
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°	18625.0	100.0
0°-180°	18625.0	100.0

Coefficient of Utilization



REPORT NUMBER: P368566

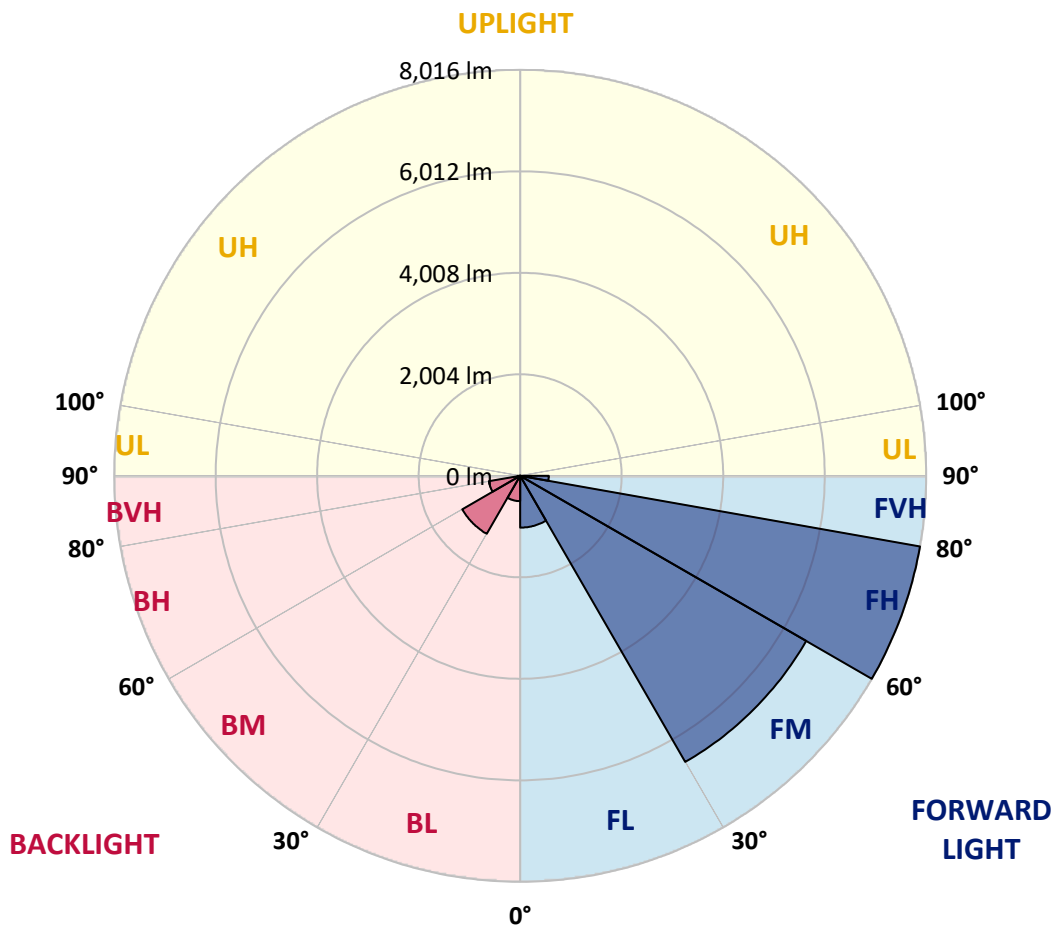
CATALOG NUMBER: MSA-SA4C-830-U-SL4

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1022.9	5.5			
FM (30°-60°)	6521.8	35.0			
FH (60°-80°)	8016.0	43.0			G4/12000
FVH (80°-90°)	564.8	3.0			G4/750
BL (0°-30°)	499.6	2.7	B1/500		
BM (30°-60°)	1321.0	7.1	B2/2500		
BH (60°-80°)	628.5	3.4	B2/1000		G2/1000
BVH (80°-90°)	50.4	0.3			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G4

Type IV Short





REPORT NUMBER: P368566
 CATALOG NUMBER: MSA-SA4C-830-U-SL4

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	1076.3	1076.3	1076.3	1076.3	1076.3	1076.3	1076.3	1076.3	1076.3	1076.3	1076.3
2.5°	1342.7	1278.3	1222.6	1220.2	1271.9	1291.8	1283.8	1266.3	1245.7	1201.9	1297.3
5°	1682.1	1589.9	1572.4	1551.7	1504.8	1517.5	1441.2	1499.3	1517.5	1559.7	1623.3
7.5°	1882.4	1828.4	1786.2	1768.7	1687.7	1678.1	1621.7	1704.3	1739.3	1733.8	1828.4
10°	1961.1	1911.8	1915.0	1857.8	1831.5	1842.7	1849.0	1850.6	1872.1	1889.6	1841.9
12.5°	2001.7	2020.7	2090.7	2051.7	2085.1	2098.6	2165.4	2097.0	2099.4	2009.6	2058.9
15°	2206.0	2253.7	2213.1	2211.5	2201.2	2223.4	2280.7	2234.6	2270.3	2241.7	2178.1
17.5°	2452.4	2466.7	2388.8	2357.0	2398.3	2391.2	2376.9	2384.0	2295.0	2460.3	2382.4
20°	2527.9	2584.3	2481.8	2357.0	2493.7	2512.0	2508.8	2477.8	2325.2	2563.7	2488.2
22.5°	2747.3	2671.0	2589.9	2510.4	2580.4	2590.7	2573.2	2499.3	2448.4	2539.0	2598.7
25°	2846.7	2828.4	2725.0	2715.5	2638.4	2601.8	2632.0	2610.6	2560.5	2721.9	2655.9
27.5°	3074.0	3052.6	2814.9	2912.7	2800.6	2791.0	2631.2	2702.8	2752.9	2740.9	2839.5
30°	3331.6	3356.2	3008.8	3106.6	2977.0	2959.6	2799.0	2889.6	2923.8	2934.9	3058.1
32.5°	3617.8	3685.3	3340.3	3260.0	3190.9	3202.8	3066.9	2901.5	3034.3	3294.2	3347.5
35°	3927.8	3955.6	3593.9	3473.1	3292.6	3279.9	3282.3	3303.0	3437.3	3733.8	3775.2
37.5°	4500.9	4372.2	4055.0	3748.9	3688.5	3570.1	3650.4	3714.0	3848.3	4303.0	4476.3
40°	4853.9	4758.5	4275.2	4097.9	3931.0	3942.1	4092.3	4091.5	4408.7	4877.7	5142.5
42.5°	5180.6	5076.5	4621.0	4442.9	4284.7	4323.7	4366.6	4442.1	5050.2	5806.2	5927.1
45°	5443.7	5215.6	4888.1	4848.3	4718.0	4666.3	4848.3	4969.2	5817.4	6557.4	6627.4
47.5°	5622.6	5435.0	5114.6	5079.7	4983.5	5109.9	5606.7	5684.6	6412.0	7311.8	7306.3
50°	5894.5	5637.7	5348.3	5330.1	5601.1	5668.7	6274.5	6266.5	6990.7	7938.3	7807.1
52.5°	6207.7	5884.1	5570.1	5766.5	6179.9	6213.2	6738.7	6952.5	7622.7	8542.4	8199.8
55°	6567.8	6206.1	5902.4	6164.7	6780.0	6681.5	7213.3	7735.5	8413.6	9179.2	8483.6
57.5°	7013.7	6574.9	6329.3	6728.4	7327.7	7415.2	7892.9	8550.4	9050.4	9575.0	8690.3
60°	7484.3	6969.2	6744.3	7124.2	8094.9	8195.0	8662.4	9227.6	9764.2	9947.9	8651.3
62.5°	7933.5	7376.2	7172.7	7641.7	8945.4	9193.5	9538.5	9898.6	10358.0	10038.5	8179.9
65°	8433.5	7875.5	7747.5	8451.0	10098.9	10345.3	10796.1	10687.9	10561.6	9717.3	7400.1
67.5°	8962.9	8396.1	8420.0	9389.8	11459.0	11501.2	12193.6	11474.9	10322.3	8866.7	6090.8
70°	9247.5	8667.2	8912.9	10390.6	12843.0	12782.6	12924.1	11686.4	9346.9	7009.0	4198.1
72.5°	8902.5	8385.0	8834.9	10812.0	13547.3	13482.2	12513.9	10431.2	7307.9	4358.6	2176.5
75°	7537.6	7038.4	7726.8	9637.8	12195.9	12256.4	10649.8	7757.0	4183.8	1752.8	903.8
77.5°	5121.8	4864.2	5454.1	7183.9	9059.1	9268.2	7901.7	4535.9	1756.8	725.8	546.9
80°	2706.8	2584.3	3020.0	4138.5	5736.3	5892.1	4646.4	2259.2	899.9	469.8	390.3
82.5°	1470.6	1419.0	1652.7	2128.1	3259.2	3395.2	2409.5	1500.8	606.5	294.1	238.5
85°	988.1	968.2	1123.2	1143.1	1541.4	1585.9	1262.4	1155.8	364.1	143.9	157.4
87.5°	494.5	474.6	591.4	522.3	588.3	589.0	578.7	737.7	92.2	47.7	28.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P368566

CATALOG NUMBER: MSA-SA4C-830-U-SL4

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1076.3	1076.3	1076.3	1076.3	1076.3	1076.3	1076.3	1076.3	1076.3	1076.3	1076.3
2.5°	1298.9	1271.1	1174.9	1174.1	1188.4	1178.9	1186.0	1147.1	1130.4	1206.7	1202.7
5°	1614.5	1531.1	1450.8	1422.9	1390.3	1319.6	1323.6	1324.4	1312.4	1357.8	1360.9
7.5°	1799.7	1699.6	1625.6	1477.8	1361.7	1271.1	1283.0	1296.5	1283.0	1343.4	1365.7
10°	1826.8	1747.3	1659.0	1494.5	1417.4	1335.5	1252.8	1179.7	1170.9	1143.1	1151.9
12.5°	1987.3	1921.4	1736.9	1556.5	1466.7	1341.1	1190.0	1106.6	1036.6	1048.5	1026.3
15°	2119.3	2072.4	1851.4	1615.3	1400.7	1244.9	1084.3	969.8	907.0	899.9	877.6
17.5°	2298.2	2231.4	1861.7	1574.8	1315.6	1128.8	947.6	818.0	791.0	779.8	768.7
20°	2384.0	2264.0	1824.4	1447.6	1216.3	990.5	812.4	701.1	693.2	713.1	709.1
22.5°	2458.7	2291.0	1791.0	1370.5	1061.2	850.6	720.2	647.1	638.3	663.8	668.5
25°	2502.5	2368.1	1754.4	1291.8	965.1	746.4	651.1	609.7	611.3	644.7	640.7
27.5°	2699.6	2395.1	1662.2	1198.8	854.6	669.3	617.7	596.2	587.5	633.6	637.5
30°	2823.6	2571.6	1641.5	1100.2	772.7	612.9	587.5	578.7	577.1	632.8	636.7
32.5°	3054.2	2630.5	1651.1	992.9	698.8	595.4	565.2	564.4	580.3	633.6	639.9
35°	3373.7	2878.5	1605.0	931.7	658.2	568.4	547.7	554.1	581.1	639.1	647.9
37.5°	3997.0	3112.2	1619.3	874.4	644.7	559.6	542.9	546.9	590.6	653.4	677.3
40°	4490.6	3535.9	1597.0	845.8	626.4	558.0	532.6	548.5	589.8	661.4	682.9
42.5°	5206.1	3873.7	1599.4	817.2	625.6	551.7	531.0	550.1	588.3	654.2	683.6
45°	5819.7	4176.6	1633.6	800.5	617.7	562.0	528.6	552.5	577.9	628.8	661.4
47.5°	6322.9	4514.5	1668.6	784.6	614.5	571.6	526.2	535.8	560.4	600.2	629.6
50°	6733.1	4752.1	1713.1	781.4	614.5	566.8	519.9	519.1	539.8	571.6	599.4
52.5°	7052.7	4919.9	1743.3	785.4	614.5	548.5	511.9	505.6	518.3	541.4	569.2
55°	7284.0	4971.5	1718.7	795.7	613.7	531.8	497.6	492.1	498.4	514.3	540.6
57.5°	7377.0	4835.6	1571.6	777.4	613.7	519.9	480.1	473.8	480.1	492.1	518.3
60°	7144.1	4398.4	1359.3	730.5	601.8	504.0	460.3	456.3	465.8	476.2	501.6
62.5°	6559.8	3817.3	1132.8	674.9	577.1	490.5	441.2	442.0	457.1	471.4	496.8
65°	5652.0	3114.6	944.4	618.5	546.1	469.0	421.3	426.9	448.3	467.4	492.9
67.5°	4447.7	2307.7	794.9	563.6	502.4	434.0	399.1	400.6	415.8	434.0	458.7
70°	2973.1	1468.3	653.4	499.2	445.2	388.7	364.9	359.3	355.3	371.2	392.7
72.5°	1508.0	867.3	536.6	426.9	383.2	339.4	321.2	306.8	295.7	305.3	322.0
75°	790.2	606.5	433.2	354.5	316.4	288.6	275.0	256.0	248.0	253.6	265.5
77.5°	558.8	474.6	350.6	280.6	257.6	228.9	231.3	211.5	205.1	208.3	221.0
80°	429.3	376.0	269.5	212.2	198.7	170.9	178.9	166.9	159.0	157.4	166.9
82.5°	292.5	283.0	191.6	148.7	139.1	119.2	130.4	125.6	115.3	108.9	113.7
85°	197.1	187.6	116.9	85.9	81.9	62.0	79.5	76.3	67.6	58.0	58.8
87.5°	34.2	62.8	33.4	21.5	19.9	7.2	18.3	17.5	15.9	7.9	6.4
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)