

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: P368342

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

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368342
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-SA4B-730-U-SL2
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) 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: 17577 lumens
Efficiency: N/A
Efficacy: 102.8 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Medium
BUG Rating: B3 - U0 - G3

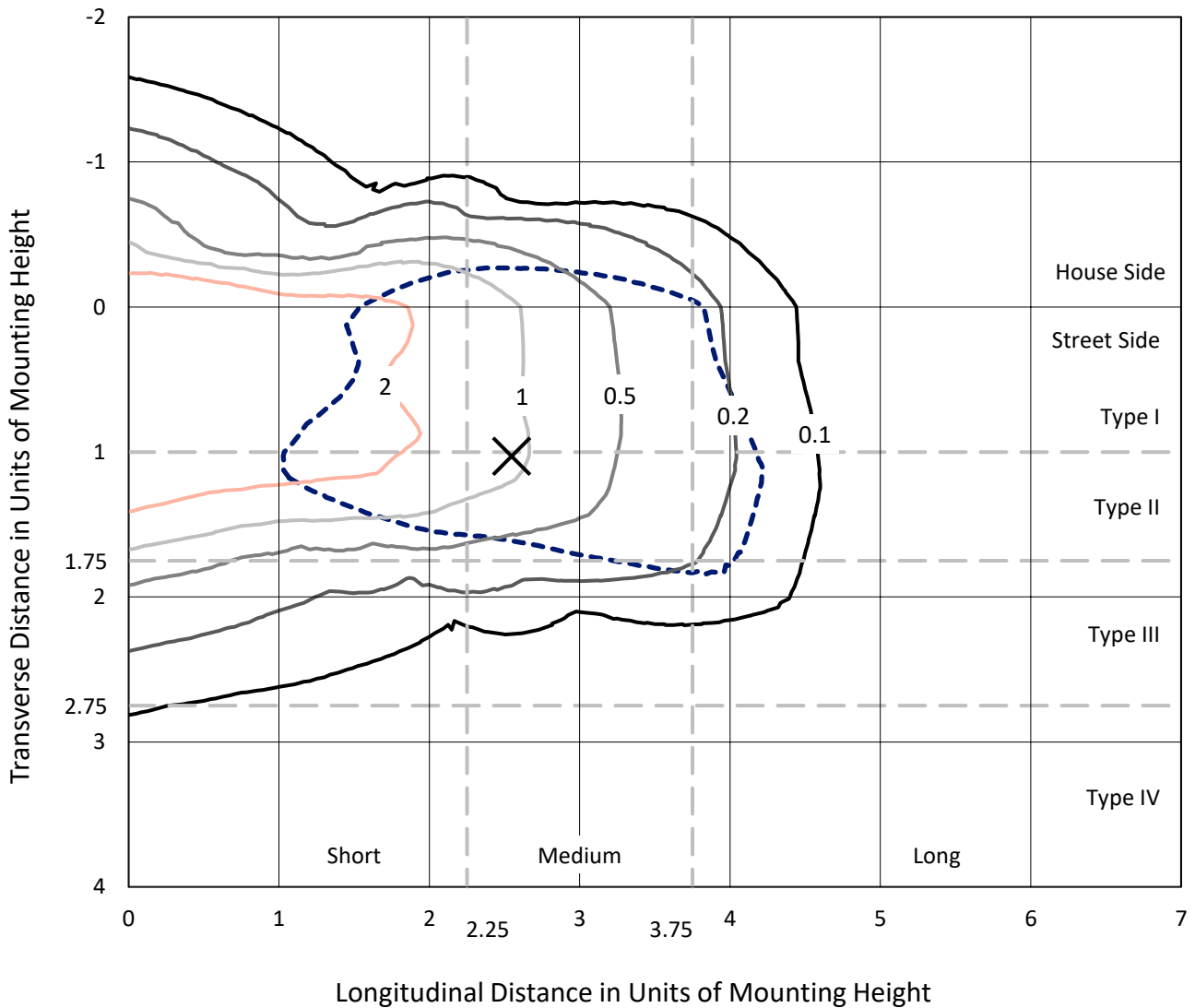
Input Watts (W): 171
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

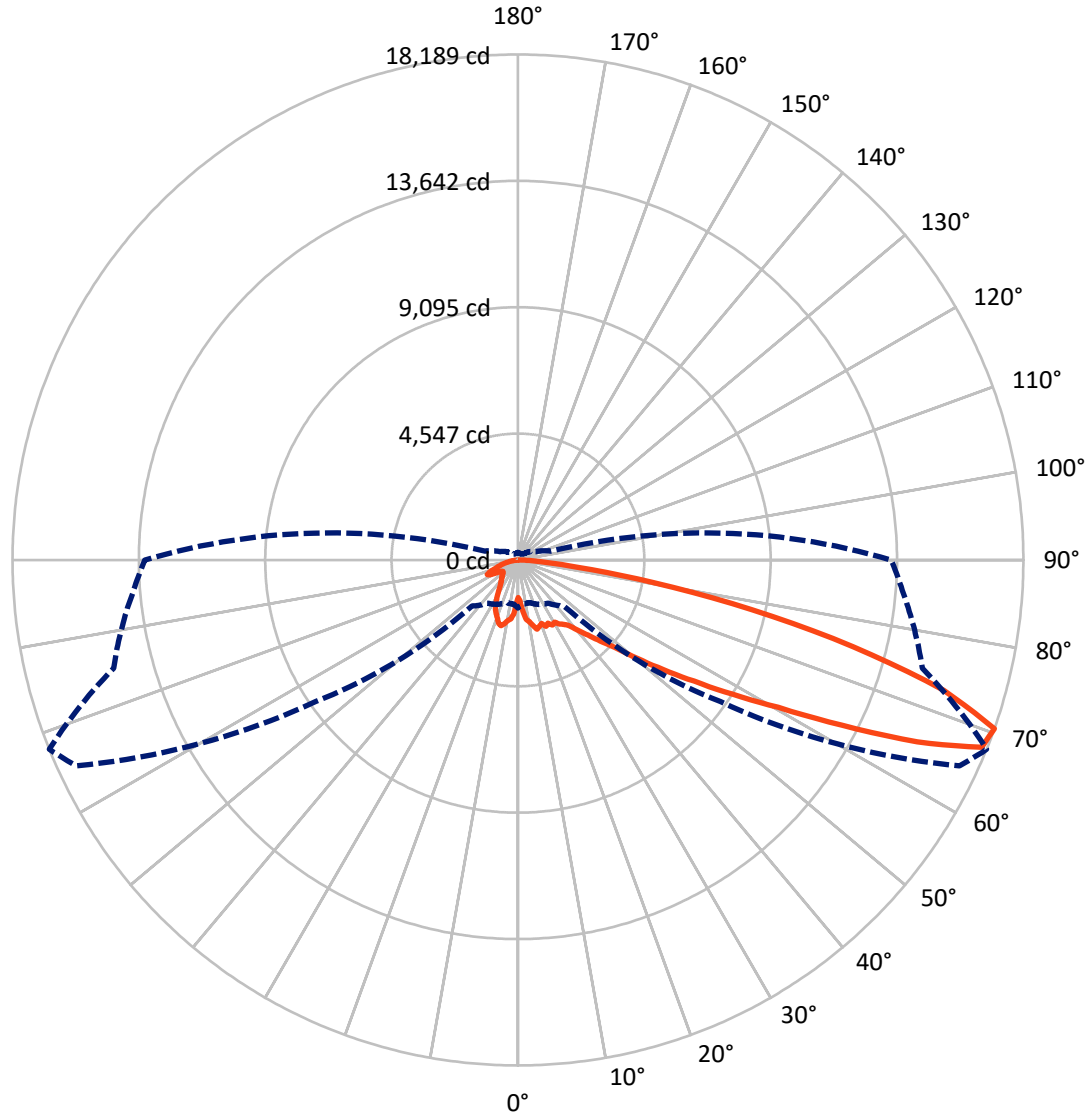
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.3 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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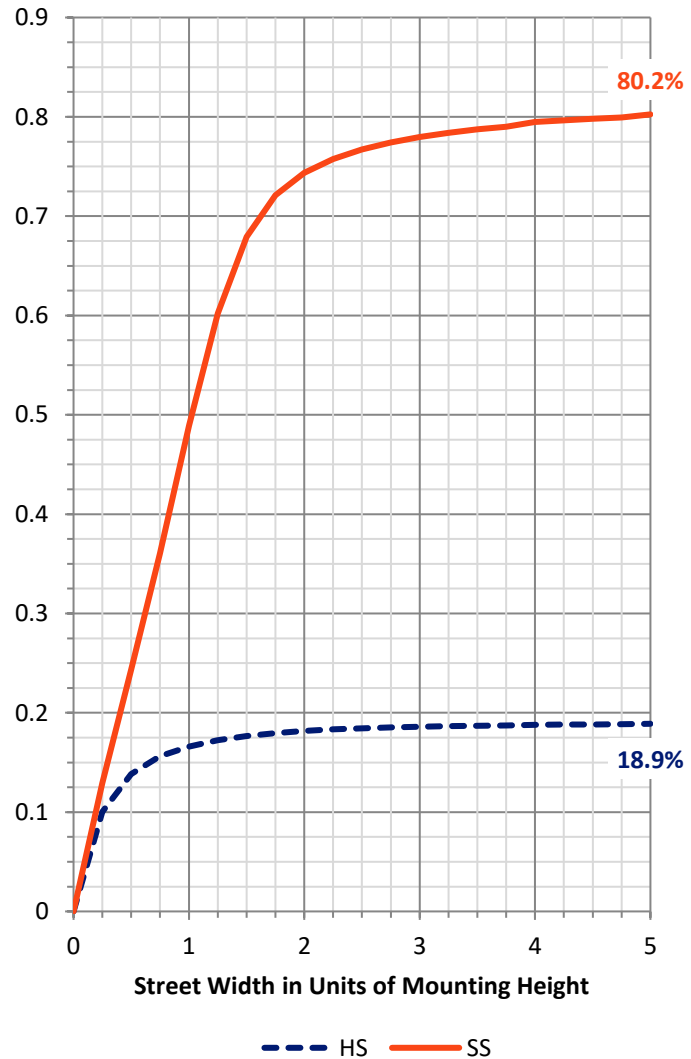
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3355.9	0.0	3355.9
	% Fixture	19.1	0.0	19.1
Street Side	Lumens	14221.1	0.0	14221.1
	% Fixture	80.9	0.0	80.9
Total	Lumens	17577.0	0.0	17577.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	180.0	1.0
10°-20°	586.6	3.3
20°-30°	892.4	5.1
30°-40°	1363.1	7.8
40°-50°	2343.8	13.3
50°-60°	3879.4	22.1
60°-70°	4782.8	27.2
70°-80°	3072.4	17.5
80°-90°	476.6	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°	17577.0	100.0
0°-180°	17577.0	100.0

Coefficient of Utilization



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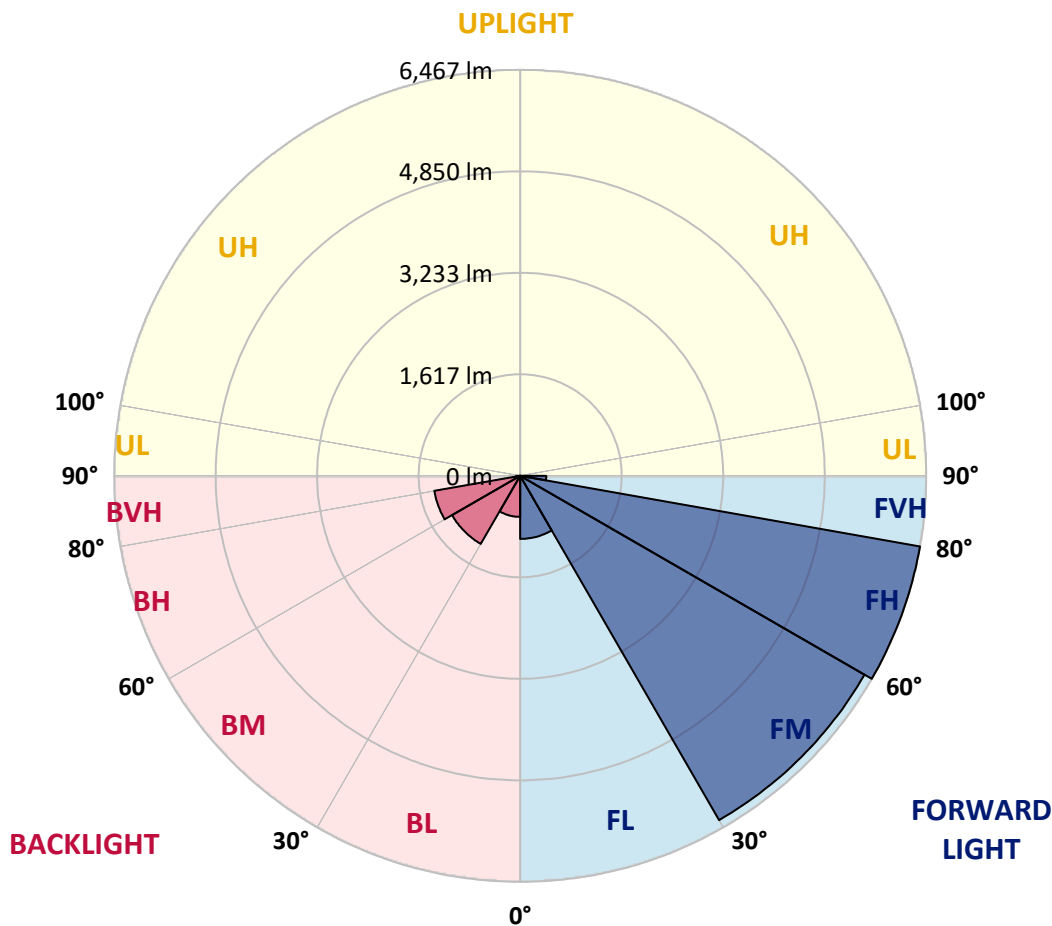
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1005.1	5.7			
FM (30°-60°)	6333.7	36.0			
FH (60°-80°)	6467.0	36.8			G3/7500
FVH (80°-90°)	415.4	2.4			G3/500
BL (0°-30°)	653.9	3.7	B2/1000		
BM (30°-60°)	1252.6	7.1	B2/2500		
BH (60°-80°)	1388.2	7.9	B3/2500		G3/2500
BVH (80°-90°)	61.2	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°	1347.7	1347.7	1347.7	1347.7	1347.7	1347.7	1347.7	1347.7	1347.7	1347.7	1347.7
2.5°	1548.5	1486.0	1422.7	1453.6	1502.9	1546.3	1537.5	1542.6	1483.0	1475.0	1631.6
5°	1824.4	1717.0	1714.8	1716.2	1720.7	1670.6	1792.8	1856.0	1870.0	1934.7	2088.5
7.5°	1920.0	1876.6	1832.5	1854.5	1798.6	1803.8	1953.9	2118.6	2157.6	2204.7	2415.1
10°	1900.2	1859.0	1872.2	1875.9	1886.2	1969.3	2065.7	2223.8	2256.9	2407.0	2461.4
12.5°	1903.1	1895.7	1957.5	1959.7	2070.1	2219.4	2257.7	2403.3	2416.6	2526.9	2754.2
15°	2003.9	2054.6	2020.1	2038.5	2059.8	2238.5	2293.7	2502.6	2582.1	2724.1	2894.7
17.5°	2200.3	2215.0	2111.3	2084.1	2154.0	2208.4	2334.2	2424.7	2507.8	2904.3	3139.7
20°	2245.9	2285.6	2162.0	2021.5	2169.4	2245.2	2332.7	2373.9	2438.6	2930.8	3264.8
22.5°	2441.6	2359.2	2209.9	2087.7	2136.3	2209.9	2273.1	2428.3	2598.3	2855.0	3389.8
25°	2552.7	2504.9	2371.7	2240.8	2199.6	2201.8	2323.9	2462.9	2521.8	2966.1	3414.8
27.5°	2821.2	2744.7	2445.3	2420.3	2265.0	2144.4	2332.0	2548.3	2651.2	2879.3	3537.0
30°	3157.4	3099.2	2706.4	2673.3	2436.4	2226.0	2435.0	2611.5	2596.8	2935.9	3621.6
32.5°	3429.5	3526.7	3130.1	2869.0	2700.5	2499.0	2402.6	2600.5	2746.9	3067.6	3765.0
35°	3818.0	3909.2	3460.4	3283.9	2918.3	2625.5	2628.4	2752.0	2842.5	3221.4	3925.4
37.5°	4490.3	4410.2	4049.0	3770.2	3536.2	3099.2	2968.3	2924.9	2997.7	3409.7	4239.5
40°	4975.1	4907.4	4482.2	4323.4	3868.0	3614.2	3255.2	3214.0	3342.7	3603.9	4496.2
42.5°	5549.7	5429.0	5033.2	4902.3	4426.3	3968.8	3606.8	3630.4	3692.9	3970.2	4843.4
45°	6134.5	5841.7	5617.3	5607.0	5289.2	4657.3	4171.1	4151.9	4154.2	4509.5	5233.3
47.5°	6598.7	6335.3	6078.6	5956.5	5796.1	5848.3	4990.6	4766.2	4698.5	5052.4	5818.2
50°	6912.8	6609.7	6319.1	6290.5	6718.6	7000.3	5760.1	5520.2	5562.2	5829.2	6597.9
52.5°	6919.4	6559.7	6256.6	6457.4	7466.0	7869.1	7085.7	6415.5	6549.4	6731.1	7615.3
55°	6438.3	6065.3	5868.2	6325.8	7758.1	8899.8	8948.3	7850.0	7695.5	7762.5	8831.3
57.5°	5423.9	5047.2	4932.5	5480.5	7204.1	9893.6	11197.9	9564.0	9110.9	8831.3	10077.5
60°	4082.8	3756.9	3685.6	4035.0	5972.7	9601.6	13019.3	11697.4	10774.2	10025.3	11327.4
62.5°	3061.7	2827.8	2720.4	2770.4	4132.8	8651.9	14215.5	14392.8	13085.5	11328.8	12548.5
65°	2487.9	2298.9	2203.2	2138.5	2570.3	6689.9	13999.2	16661.5	15785.3	12697.9	13499.0
67.5°	2078.2	1910.5	1866.3	1929.6	2031.8	3881.2	12307.2	17930.5	17990.1	14048.5	14054.4
70°	1725.1	1600.8	1584.6	1764.1	1898.7	2342.3	8889.5	17531.8	18189.4	15061.5	13924.2
72.5°	1333.0	1266.0	1263.8	1545.6	1886.2	1996.5	5293.7	15145.3	16028.8	14737.8	12650.1
75°	924.7	878.4	913.7	1270.4	1842.8	2025.2	3021.3	11796.7	12458.0	12541.2	10133.4
77.5°	636.3	597.3	635.6	918.8	1645.6	2073.8	2113.5	8529.7	8603.3	8409.8	5804.2
80°	442.9	415.6	445.1	650.3	1280.7	2052.4	1799.4	5370.2	4927.3	3753.2	1858.2
82.5°	274.4	266.3	298.7	463.5	901.9	1867.1	1705.2	2771.2	2115.7	1035.8	663.5
85°	144.2	132.4	173.6	302.3	564.2	1465.4	1597.8	1264.6	816.6	367.8	266.3
87.5°	42.7	38.3	66.9	122.1	239.1	656.9	914.4	536.3	304.6	108.1	83.1
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°	1347.7	1347.7	1347.7	1347.7	1347.7	1347.7	1347.7	1347.7	1347.7	1347.7	1347.7
2.5°	1642.7	1634.6	1525.7	1539.7	1563.2	1569.1	1568.4	1528.7	1486.7	1603.7	1600.0
5°	2092.2	2019.3	1964.9	1953.1	1886.2	1819.2	1842.8	1834.7	1824.4	1877.4	1884.0
7.5°	2415.8	2315.1	2251.8	2089.2	1934.7	1800.8	1843.5	1856.8	1830.3	1925.9	1954.6
10°	2501.2	2421.7	2353.3	2144.4	2059.1	1981.1	1865.6	1733.9	1716.2	1661.1	1667.7
12.5°	2721.1	2710.1	2476.9	2293.0	2181.9	2026.7	1777.3	1617.7	1480.8	1487.5	1447.7
15°	2894.7	2900.6	2620.3	2362.9	2064.9	1828.1	1534.5	1335.9	1195.4	1167.5	1138.8
17.5°	3127.9	3116.2	2632.1	2279.0	1901.6	1554.4	1194.7	997.5	974.0	990.2	965.2
20°	3229.5	3125.7	2557.1	2070.8	1646.4	1180.7	902.6	798.2	843.8	908.5	910.0
22.5°	3320.7	3143.4	2518.1	1903.1	1306.5	858.5	724.6	705.5	759.2	846.7	854.1
25°	3317.0	3225.0	2448.2	1733.9	1013.0	670.2	629.7	643.7	707.7	798.9	804.1
27.5°	3484.0	3162.5	2266.5	1511.7	762.9	573.8	584.1	609.8	640.0	726.8	743.7
30°	3482.5	3278.7	2175.3	1241.8	612.8	526.0	552.5	574.5	599.5	679.0	688.6
32.5°	3564.9	3203.0	2120.1	965.9	549.5	514.2	520.8	542.9	578.9	632.6	639.3
35°	3664.2	3289.0	1943.6	767.3	526.0	503.9	509.1	521.6	554.7	604.0	610.6
37.5°	3982.8	3305.2	1873.7	646.6	524.5	499.5	498.8	505.4	542.9	587.8	607.6
40°	4107.1	3453.1	1669.9	604.0	519.4	499.5	489.2	492.9	523.8	581.2	596.6
42.5°	4405.0	3502.4	1519.1	589.2	519.4	490.7	474.5	480.4	516.4	567.2	591.5
45°	4711.8	3572.3	1339.6	586.3	518.6	489.9	459.0	472.3	501.7	544.4	570.9
47.5°	5148.7	3823.9	1160.1	577.5	512.7	493.6	455.4	454.6	480.4	517.2	542.2
50°	5861.6	4216.7	1021.1	566.4	513.5	490.7	448.0	437.7	454.6	487.0	511.3
52.5°	6853.9	4886.1	966.6	560.6	507.6	478.9	435.5	419.3	428.9	454.6	478.2
55°	8006.0	5790.2	1020.3	560.6	495.8	460.5	417.8	398.7	403.9	421.5	444.3
57.5°	9352.2	6913.5	1280.0	552.5	481.1	438.4	396.5	374.4	375.9	391.4	412.0
60°	10758.0	8168.5	1861.9	545.8	470.8	414.2	371.5	348.7	346.5	361.2	379.6
62.5°	12166.0	9326.4	2474.0	561.3	467.9	393.6	345.0	322.2	321.5	334.7	350.2
65°	13285.6	10118.0	2626.2	623.8	487.0	370.0	317.8	296.5	295.0	306.0	322.9
67.5°	13835.2	10232.7	1995.1	701.8	527.5	348.0	291.3	271.5	270.0	281.7	296.5
70°	13428.4	9448.5	1231.5	709.9	525.2	322.2	264.1	247.2	244.2	256.7	267.8
72.5°	11923.2	8264.9	935.7	628.2	454.6	285.4	236.9	222.2	217.7	228.8	239.1
75°	9569.9	6561.9	749.6	506.9	358.3	240.6	209.7	195.7	190.5	200.8	209.7
77.5°	5574.7	3691.4	548.1	395.8	270.7	196.4	178.8	166.3	160.4	171.4	178.0
80°	1812.6	1230.0	344.3	284.0	197.9	153.7	144.9	136.1	130.2	137.6	139.8
82.5°	651.0	457.6	190.5	174.3	131.7	110.3	109.6	104.5	97.1	100.0	100.0
85°	288.4	208.9	113.3	93.4	78.7	58.9	69.2	65.5	58.1	56.6	54.4
87.5°	80.9	69.2	41.2	31.6	25.7	9.6	22.1	19.9	16.2	14.7	10.3
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)