

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: P368078

Luminaire Tested: **MSA-SA3D-730-U-SL2**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368078
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-SA3D-730-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: 18008 lumens
Efficiency: N/A
Efficacy: 93.8 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Medium
BUG Rating: B3 - U0 - G3

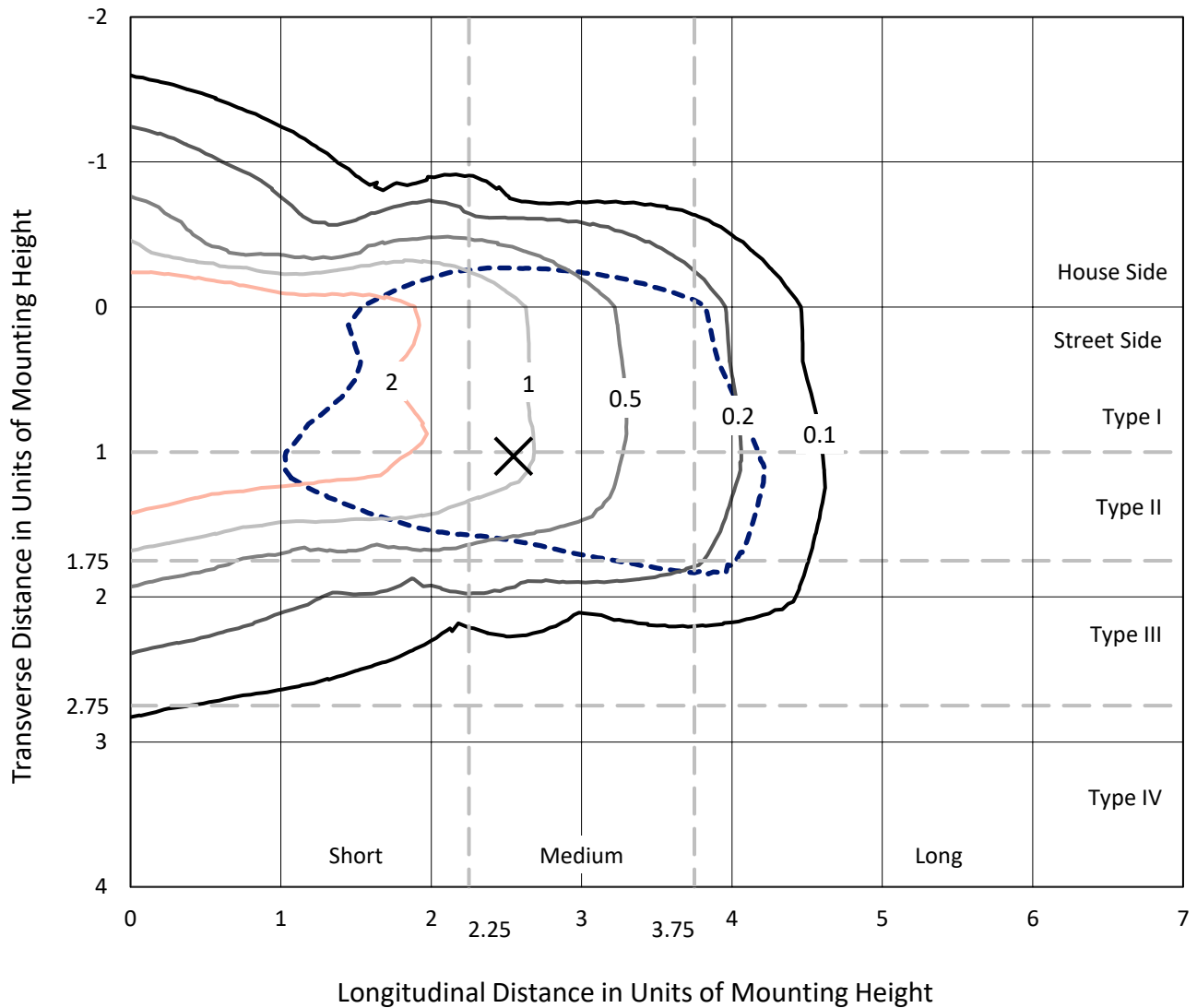
Input Watts (W): 192
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

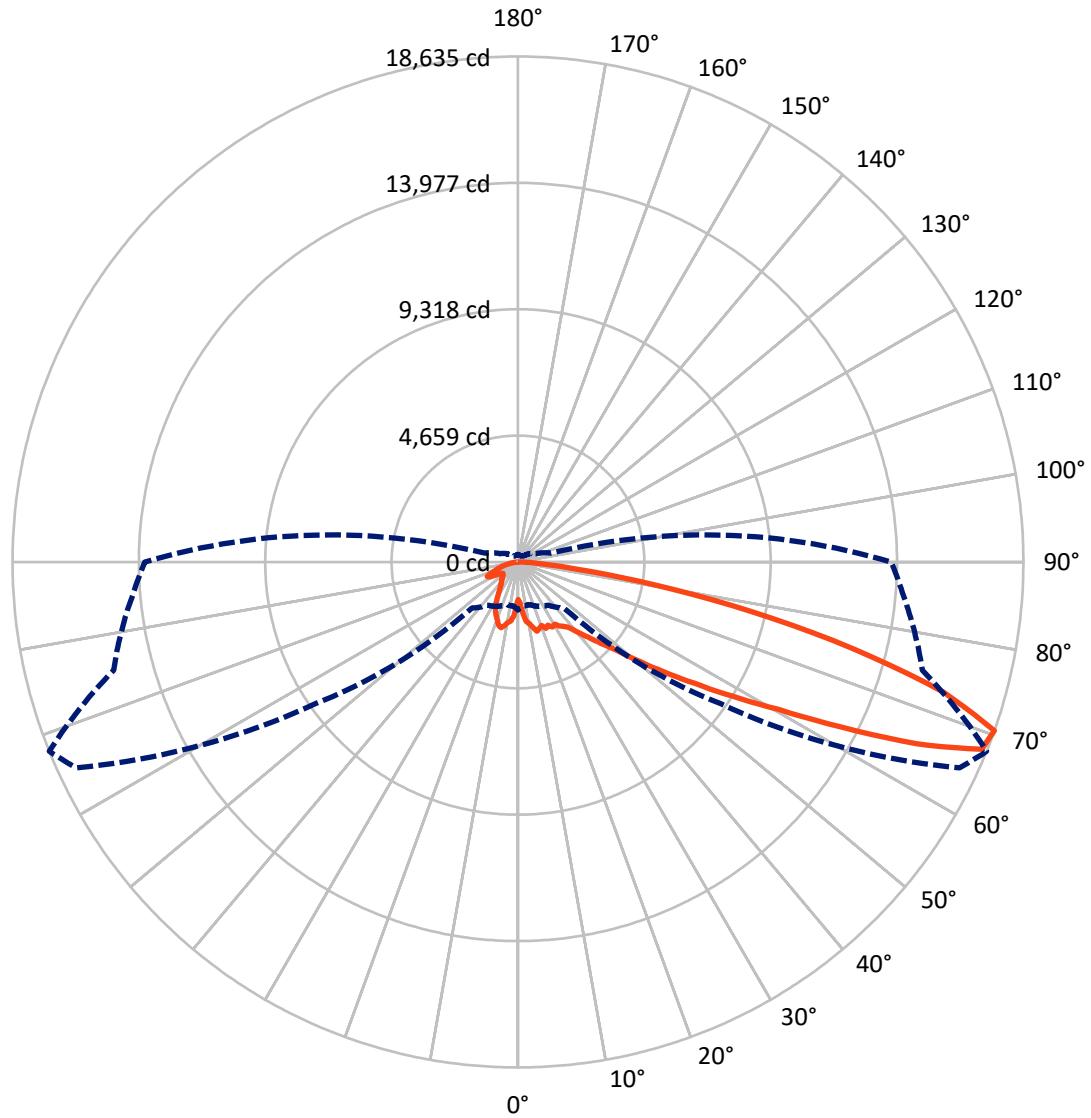
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.4 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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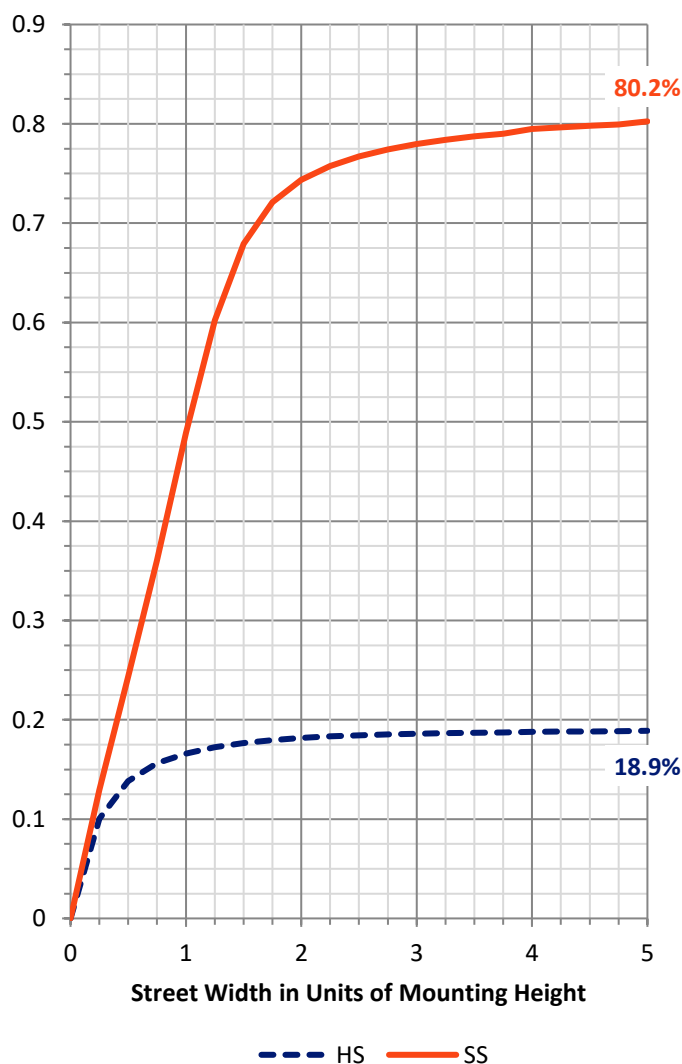
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3438.2	0.0	3438.2
	% Fixture	19.1	0.0	19.1
Street Side	Lumens	14569.8	0.0	14569.8
	% Fixture	80.9	0.0	80.9
Total	Lumens	18008.0	0.0	18008.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	184.4	1.0
10°-20°	601.0	3.3
20°-30°	914.3	5.1
30°-40°	1396.5	7.8
40°-50°	2401.2	13.3
50°-60°	3974.5	22.1
60°-70°	4900.1	27.2
70°-80°	3147.7	17.5
80°-90°	488.2	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°	18008.0	100.0
0°-180°	18008.0	100.0

Coefficient of Utilization



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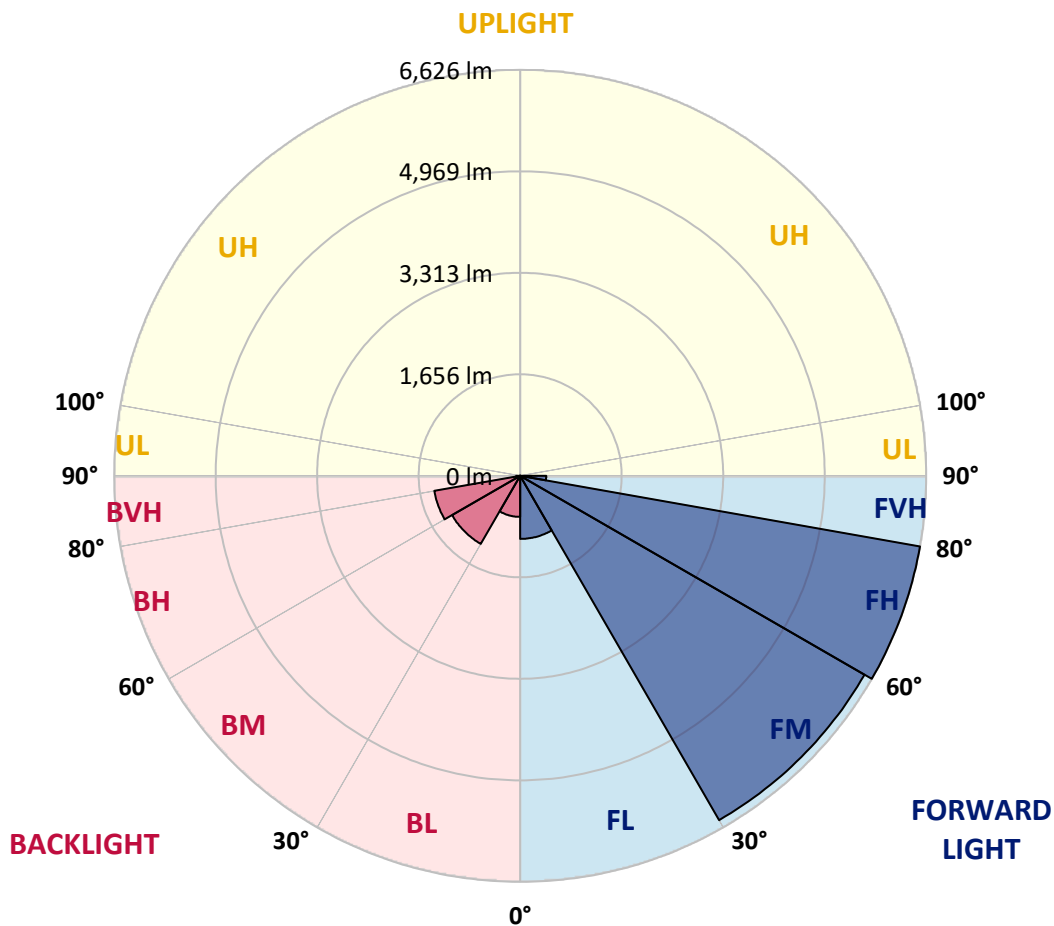
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1029.7	5.7			
FM (30°-60°)	6489.0	36.0			
FH (60°-80°)	6625.5	36.8			G3/7500
FVH (80°-90°)	425.6	2.4			G3/500
BL (0°-30°)	670.0	3.7	B2/1000		
BM (30°-60°)	1283.3	7.1	B2/2500		
BH (60°-80°)	1422.2	7.9	B3/2500		G3/2500
BVH (80°-90°)	62.7	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°	1380.7	1380.7	1380.7	1380.7	1380.7	1380.7	1380.7	1380.7	1380.7	1380.7	1380.7
2.5°	1586.5	1522.4	1457.6	1489.3	1539.8	1584.2	1575.2	1580.5	1519.4	1511.1	1671.7
5°	1869.1	1759.1	1756.8	1758.3	1762.9	1711.6	1836.7	1901.5	1915.8	1982.2	2139.7
7.5°	1967.1	1922.6	1877.4	1900.0	1842.7	1848.0	2001.8	2170.6	2210.5	2258.8	2474.3
10°	1946.7	1904.5	1918.1	1921.9	1932.4	2017.6	2116.3	2278.4	2312.3	2466.0	2521.8
12.5°	1949.8	1942.2	2005.5	2007.8	2120.8	2273.8	2313.0	2462.3	2475.8	2588.9	2821.8
15°	2053.0	2105.0	2069.6	2088.4	2110.3	2293.4	2350.0	2564.0	2645.4	2790.9	2965.7
17.5°	2254.2	2269.3	2163.1	2135.2	2206.8	2262.5	2391.4	2484.1	2569.3	2975.5	3216.7
20°	2301.0	2341.7	2215.1	2071.1	2222.6	2300.2	2389.9	2432.1	2498.4	3002.7	3344.8
22.5°	2501.5	2417.0	2264.0	2138.9	2188.7	2264.0	2328.9	2487.9	2662.0	2925.0	3472.9
25°	2615.3	2566.3	2429.9	2295.7	2253.5	2255.8	2380.9	2523.3	2583.6	3038.8	3498.6
27.5°	2890.4	2812.0	2505.2	2479.6	2320.6	2197.0	2389.2	2610.7	2716.3	2949.9	3623.7
30°	3234.8	3175.2	2772.8	2738.9	2496.2	2280.6	2494.7	2675.6	2660.5	3007.9	3710.4
32.5°	3513.6	3613.1	3206.9	2939.3	2766.8	2560.2	2461.5	2664.2	2814.2	3142.8	3857.3
35°	3911.6	4005.0	3545.3	3364.4	2989.8	2689.9	2692.9	2819.5	2912.2	3300.4	4021.6
37.5°	4600.4	4518.3	4148.2	3862.6	3622.9	3175.2	3041.1	2996.6	3071.2	3493.3	4343.4
40°	5097.1	5027.8	4592.2	4429.4	3962.8	3702.8	3335.0	3292.8	3424.7	3692.3	4606.5
42.5°	5685.7	5562.1	5156.7	5022.5	4534.9	4066.1	3695.3	3719.4	3783.5	4067.6	4962.2
45°	6284.9	5985.0	5755.1	5744.5	5418.9	4771.5	4273.4	4253.8	4256.0	4620.0	5361.7
47.5°	6760.5	6490.7	6227.6	6102.5	5938.2	5991.7	5112.9	4883.1	4813.7	5176.3	5960.8
50°	7082.3	6771.8	6474.1	6444.7	6883.3	7172.0	5901.3	5655.6	5698.6	5972.1	6759.7
52.5°	7089.1	6720.5	6410.0	6615.8	7649.1	8062.1	7259.4	6572.8	6710.0	6896.1	7802.1
55°	6596.2	6214.1	6012.1	6480.9	7948.3	9118.0	9167.7	8042.5	7884.2	7952.8	9047.9
57.5°	5556.9	5171.0	5053.4	5614.9	7380.8	10136.2	11472.5	9798.6	9334.3	9047.9	10324.6
60°	4182.9	3849.0	3775.9	4133.9	6119.1	9837.0	13338.6	11984.2	11038.4	10271.1	11605.1
62.5°	3136.8	2897.1	2787.1	2838.3	4234.2	8864.0	14564.1	14745.7	13406.4	11606.6	12856.2
65°	2548.9	2355.2	2257.3	2190.9	2633.3	6853.9	14342.5	17070.0	16172.4	13009.2	13830.0
67.5°	2129.1	1957.3	1912.1	1976.9	2081.7	3976.4	12609.0	18370.1	18431.2	14393.0	14399.0
70°	1767.4	1640.0	1623.4	1807.3	1945.2	2399.7	9107.4	17961.6	18635.4	15430.8	14265.6
72.5°	1365.7	1297.1	1294.8	1583.5	1932.4	2045.5	5423.5	15516.7	16421.9	15099.2	12960.2
75°	947.4	899.9	936.1	1301.6	1888.0	2074.9	3095.4	12086.0	12763.5	12848.7	10381.9
77.5°	651.9	612.0	651.2	941.3	1686.0	2124.6	2165.3	8738.9	8814.3	8616.0	5946.5
80°	453.7	425.8	456.0	666.3	1312.2	2102.8	1843.5	5501.8	5048.1	3845.3	1903.8
82.5°	281.1	272.8	306.0	474.8	924.0	1912.8	1747.0	2839.1	2167.6	1061.2	679.8
85°	147.7	135.7	177.9	309.8	578.1	1501.3	1637.0	1295.6	836.6	376.8	272.8
87.5°	43.7	39.2	68.6	125.1	244.9	673.0	936.8	549.4	312.0	110.8	85.2
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°	1380.7	1380.7	1380.7	1380.7	1380.7	1380.7	1380.7	1380.7	1380.7	1380.7	1380.7
2.5°	1683.0	1674.7	1563.1	1577.4	1601.6	1607.6	1606.8	1566.1	1523.2	1643.0	1639.2
5°	2143.5	2068.8	2013.1	2001.0	1932.4	1863.8	1888.0	1879.7	1869.1	1923.4	1930.2
7.5°	2475.1	2371.8	2307.0	2140.4	1982.2	1845.0	1888.7	1902.3	1875.1	1973.1	2002.5
10°	2562.5	2481.1	2411.0	2197.0	2109.5	2029.7	1911.3	1776.4	1758.3	1701.8	1708.6
12.5°	2787.9	2776.5	2537.6	2349.2	2235.4	2076.4	1820.9	1657.3	1517.2	1523.9	1483.2
15°	2965.7	2971.8	2684.6	2420.8	2115.6	1872.9	1572.2	1368.7	1224.7	1196.1	1166.7
17.5°	3204.6	3192.6	2696.7	2334.9	1948.3	1592.5	1224.0	1022.0	997.9	1014.4	988.8
20°	3308.6	3202.4	2619.8	2121.6	1686.7	1209.7	924.8	817.7	864.5	930.8	932.3
22.5°	3402.1	3220.5	2579.8	1949.8	1338.5	879.5	742.4	722.8	777.8	867.5	875.0
25°	3398.3	3304.1	2508.2	1776.4	1037.8	686.6	645.1	659.5	725.0	818.5	823.8
27.5°	3569.4	3240.1	2322.1	1548.8	781.6	587.9	598.4	624.8	655.7	744.6	762.0
30°	3567.9	3359.1	2228.6	1272.2	627.8	538.9	566.0	588.6	614.2	695.6	705.4
32.5°	3652.3	3281.5	2172.1	989.6	563.0	526.8	533.6	556.2	593.1	648.2	654.9
35°	3754.1	3369.7	1991.2	786.1	538.9	516.3	521.5	534.4	568.3	618.8	625.6
37.5°	4080.4	3386.3	1919.6	662.5	537.4	511.7	511.0	517.8	556.2	602.2	622.5
40°	4207.8	3537.8	1710.8	618.8	532.1	511.7	501.2	505.0	536.6	595.4	611.2
42.5°	4513.0	3588.3	1556.3	603.7	532.1	502.7	486.1	492.2	529.1	581.1	606.0
45°	4827.3	3659.9	1372.4	600.7	531.3	501.9	470.3	483.9	514.0	557.7	584.9
47.5°	5275.0	3917.6	1188.5	591.6	525.3	505.7	466.5	465.8	492.2	529.8	555.5
50°	6005.3	4320.1	1046.1	580.3	526.1	502.7	459.0	448.4	465.8	498.9	523.8
52.5°	7022.0	5005.9	990.3	574.3	520.0	490.6	446.2	429.6	439.4	465.8	489.9
55°	8202.3	5932.2	1045.4	574.3	508.0	471.8	428.1	408.5	413.8	431.9	455.2
57.5°	9581.5	7083.1	1311.4	566.0	492.9	449.2	406.2	383.6	385.1	401.0	422.1
60°	11021.8	8368.8	1907.6	559.2	482.4	424.3	380.6	357.2	355.0	370.1	388.9
62.5°	12464.3	9555.1	2534.6	575.1	479.3	403.2	353.5	330.1	329.4	342.9	358.8
65°	13611.4	10366.1	2690.6	639.1	498.9	379.1	325.6	303.7	302.2	313.5	330.9
67.5°	14174.4	10483.7	2044.0	719.0	540.4	356.5	298.5	278.1	276.6	288.7	303.7
70°	13757.6	9680.2	1261.7	727.3	538.1	330.1	270.6	253.2	250.2	263.0	274.3
72.5°	12215.6	8467.6	958.7	643.6	465.8	292.4	242.7	227.6	223.1	234.4	244.9
75°	9804.6	6722.8	768.0	519.3	367.0	246.5	214.8	200.5	195.2	205.8	214.8
77.5°	5711.4	3782.0	561.5	405.5	277.4	201.2	183.1	170.3	164.3	175.6	182.4
80°	1857.1	1260.1	352.7	290.9	202.7	157.5	148.5	139.4	133.4	140.9	143.2
82.5°	667.0	468.8	195.2	178.6	134.9	113.1	112.3	107.0	99.5	102.5	102.5
85°	295.4	214.0	116.1	95.7	80.6	60.3	70.8	67.1	59.5	58.0	55.8
87.5°	82.9	70.8	42.2	32.4	26.4	9.8	22.6	20.3	16.6	15.1	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

(END OF REPORT)