

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: P368144

Luminaire Tested: **MSA-SA3D-760-U-SL2**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368144
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-760-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: 19773 lumens
Efficiency: N/A
Efficacy: 103.0 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Medium
BUG Rating: B3 - U0 - G3

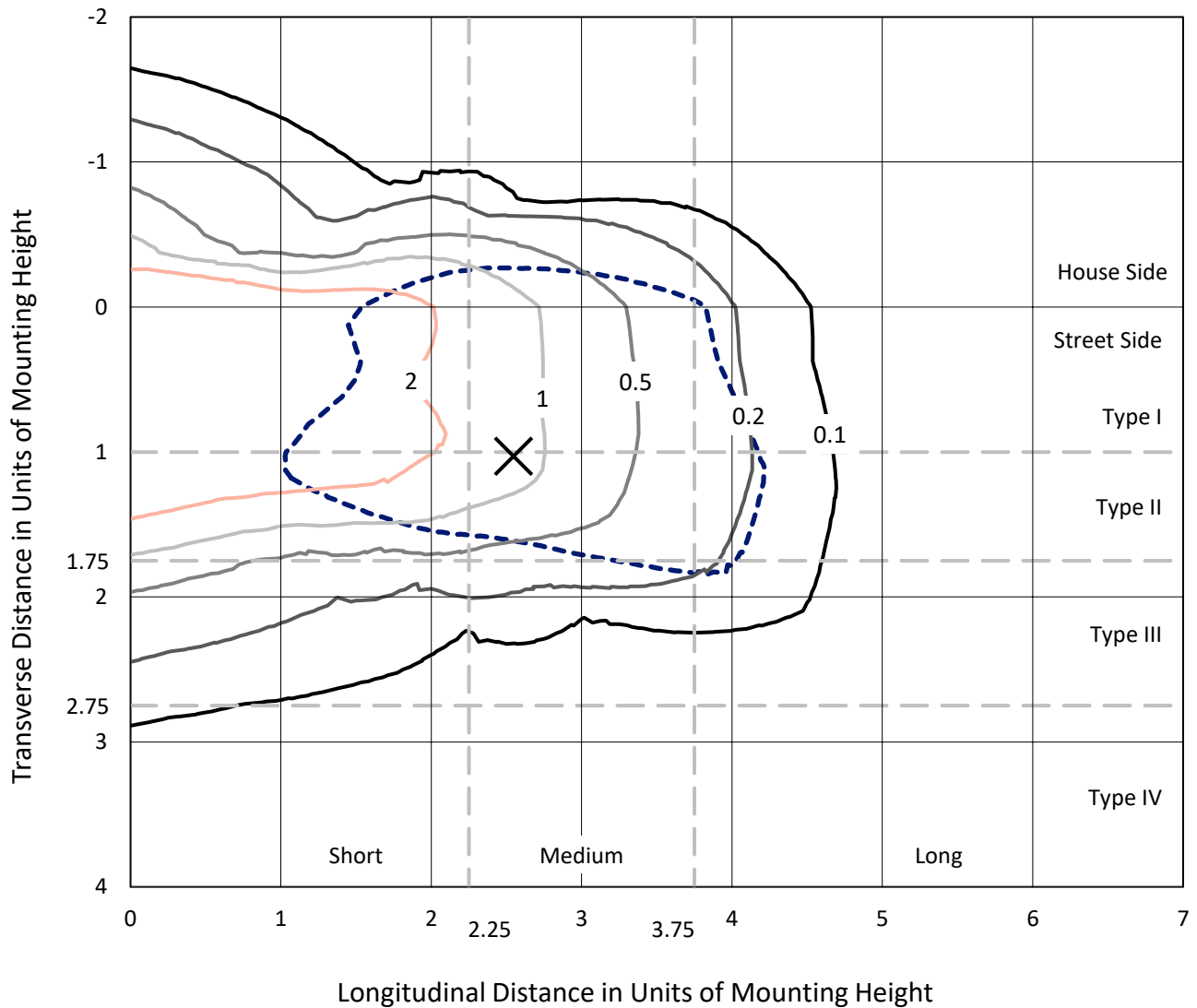
Input Watts (W): 192
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

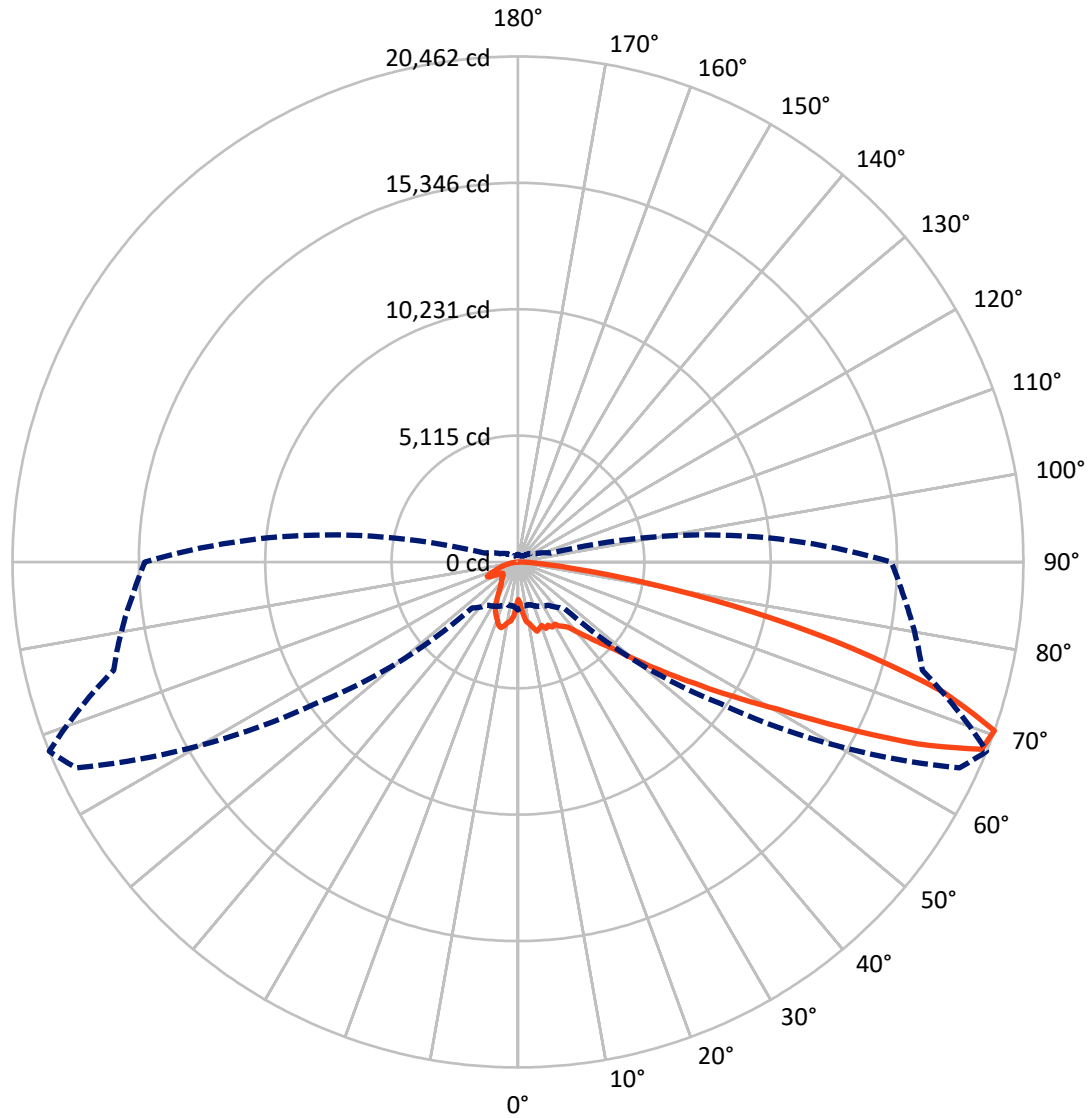
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.8 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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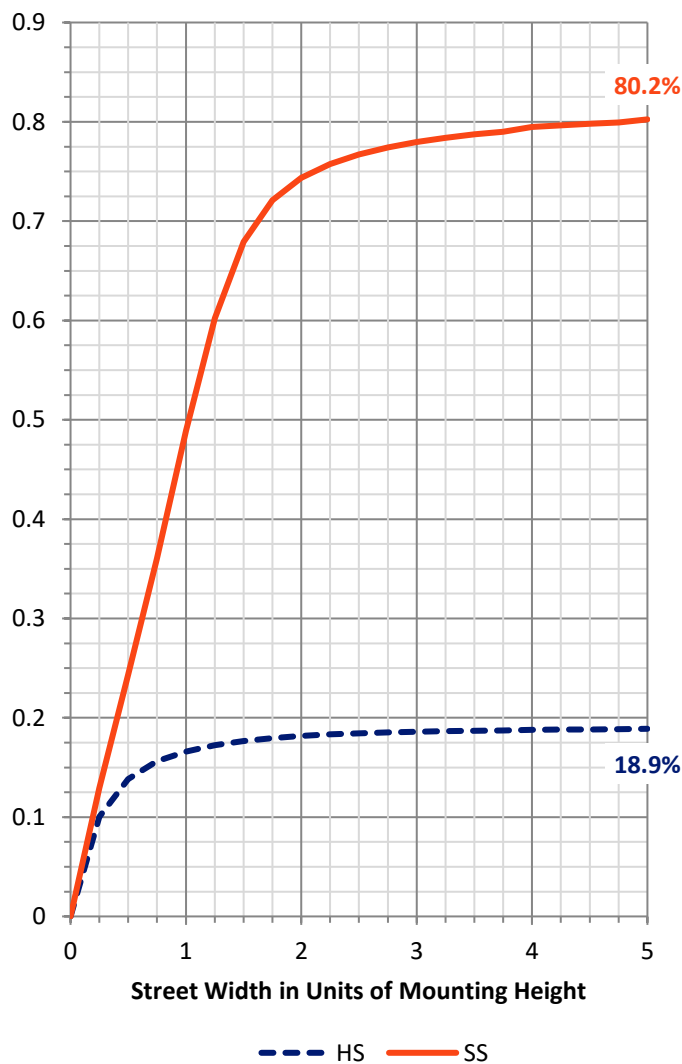
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3775.1	0.0	3775.1
	% Fixture	19.1	0.0	19.1
Street Side	Lumens	15997.9	0.0	15997.9
	% Fixture	80.9	0.0	80.9
Total	Lumens	19773.0	0.0	19773.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	202.5	1.0
10°-20°	659.9	3.3
20°-30°	1003.9	5.1
30°-40°	1533.4	7.8
40°-50°	2636.6	13.3
50°-60°	4364.1	22.1
60°-70°	5380.3	27.2
70°-80°	3456.2	17.5
80°-90°	536.1	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°	19773.0	100.0
0°-180°	19773.0	100.0

Coefficient of Utilization



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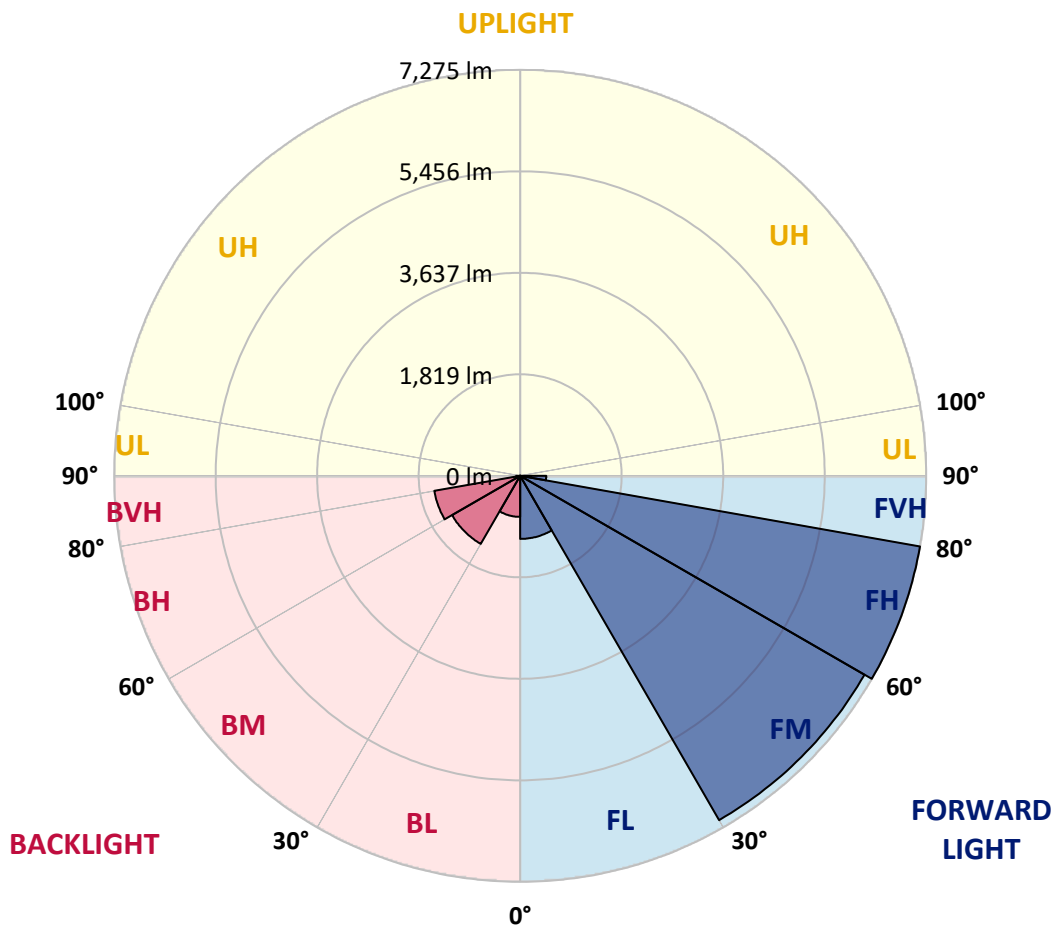
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1130.7	5.7			
FM (30°-60°)	7125.0	36.0			
FH (60°-80°)	7274.9	36.8			G3/7500
FVH (80°-90°)	467.3	2.4			G3/500
BL (0°-30°)	735.6	3.7	B2/1000		
BM (30°-60°)	1409.1	7.1	B2/2500		
BH (60°-80°)	1561.6	7.9	B3/2500		G3/2500
BVH (80°-90°)	68.8	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°	1516.1	1516.1	1516.1	1516.1	1516.1	1516.1	1516.1	1516.1	1516.1	1516.1	1516.1
2.5°	1742.0	1671.6	1600.5	1635.2	1690.7	1739.5	1729.6	1735.4	1668.3	1659.2	1835.5
5°	2052.3	1931.5	1929.0	1930.7	1935.6	1879.4	2016.7	2087.9	2103.6	2176.4	2349.4
7.5°	2159.9	2111.1	2061.4	2086.2	2023.4	2029.1	2198.0	2383.3	2427.2	2480.2	2716.8
10°	2137.6	2091.2	2106.1	2110.2	2121.8	2215.3	2323.8	2501.7	2538.9	2707.7	2769.0
12.5°	2140.9	2132.6	2202.1	2204.6	2328.7	2496.7	2539.7	2703.6	2718.5	2842.6	3098.3
15°	2254.2	2311.3	2272.4	2293.1	2317.1	2518.2	2580.3	2815.3	2904.7	3064.4	3256.4
17.5°	2475.2	2491.7	2375.1	2344.4	2423.1	2484.3	2625.8	2727.6	2821.1	3267.2	3532.0
20°	2526.5	2571.2	2432.2	2274.1	2440.4	2525.7	2624.2	2670.5	2743.3	3296.9	3672.7
22.5°	2746.6	2653.9	2486.0	2348.6	2403.2	2486.0	2557.1	2731.7	2922.9	3211.7	3813.3
25°	2871.6	2817.8	2668.0	2520.7	2474.4	2476.8	2614.2	2770.6	2836.8	3336.7	3841.5
27.5°	3173.6	3087.6	2750.8	2722.6	2548.0	2412.3	2623.3	2866.6	2982.5	3239.0	3978.8
30°	3551.8	3486.5	3044.5	3007.3	2740.8	2504.2	2739.2	2937.8	2921.2	3302.7	4074.0
32.5°	3858.0	3967.3	3521.2	3227.4	3037.9	2811.2	2702.8	2925.4	3090.1	3450.9	4235.4
35°	4295.0	4397.6	3892.8	3694.2	3282.9	2953.5	2956.8	3095.9	3197.6	3623.8	4415.8
37.5°	5051.3	4961.1	4554.8	4241.2	3978.0	3486.5	3339.2	3290.3	3372.3	3835.7	4769.2
40°	5596.7	5520.6	5042.2	4863.5	4351.2	4065.7	3661.9	3615.6	3760.4	4054.2	5058.0
42.5°	6243.0	6107.3	5662.1	5514.8	4979.3	4464.6	4057.5	4083.9	4154.3	4466.3	5448.6
45°	6900.9	6571.6	6319.1	6307.6	5950.1	5239.2	4692.2	4670.7	4673.2	5072.9	5887.2
47.5°	7423.1	7126.8	6838.0	6700.6	6520.2	6579.0	5614.1	5361.7	5285.5	5683.6	6545.1
50°	7776.5	7435.5	7108.6	7076.4	7558.0	7874.9	6479.7	6209.9	6257.1	6557.5	7422.3
52.5°	7783.9	7379.2	7038.3	7264.2	8398.8	8852.3	7970.9	7217.0	7367.7	7572.1	8566.8
55°	7242.7	6823.1	6601.3	7116.1	8727.3	10011.7	10066.3	8830.8	8657.0	8732.3	9934.7
57.5°	6101.5	5677.8	5548.7	6165.2	8104.2	11129.7	12596.9	10758.9	10249.2	9934.7	11336.6
60°	4592.9	4226.3	4146.0	4539.1	6718.9	10801.1	14645.9	13158.8	12120.3	11277.8	12742.6
62.5°	3444.3	3181.1	3060.3	3116.5	4649.2	9732.8	15991.5	16191.0	14720.4	12744.2	14116.3
65°	2798.8	2586.1	2478.5	2405.7	2891.4	7525.7	15748.2	18743.1	17757.5	14284.3	15185.5
67.5°	2337.8	2149.1	2099.5	2170.7	2285.7	4366.1	13844.9	20170.6	20237.7	15803.7	15810.3
70°	1940.6	1800.7	1782.5	1984.5	2135.9	2634.9	10000.1	19722.1	20461.9	16943.2	15663.8
72.5°	1499.5	1424.2	1421.7	1738.7	2121.8	2246.0	5955.0	17037.5	18031.4	16579.1	14230.5
75°	1040.2	988.1	1027.8	1429.2	2073.0	2278.2	3398.7	13270.5	14014.5	14108.0	11399.5
77.5°	715.8	672.0	715.0	1033.6	1851.2	2332.9	2377.5	9595.4	9678.2	9460.5	6529.3
80°	498.2	467.6	500.7	731.6	1440.8	2308.9	2024.2	6041.1	5542.9	4222.1	2090.4
82.5°	308.7	299.6	336.0	521.4	1014.6	2100.3	1918.3	3117.4	2380.0	1165.2	746.4
85°	162.2	149.0	195.3	340.1	634.7	1648.5	1797.4	1422.6	918.6	413.8	299.6
87.5°	48.0	43.0	75.3	137.4	269.0	739.0	1028.6	603.3	342.6	121.6	93.5
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°	1516.1	1516.1	1516.1	1516.1	1516.1	1516.1	1516.1	1516.1	1516.1	1516.1	1516.1
2.5°	1847.9	1838.8	1716.3	1732.1	1758.5	1765.2	1764.3	1719.6	1672.5	1804.1	1799.9
5°	2353.5	2271.6	2210.4	2197.1	2121.8	2046.5	2073.0	2063.9	2052.3	2111.9	2119.3
7.5°	2717.7	2604.3	2533.1	2350.2	2176.4	2025.8	2073.8	2088.7	2058.9	2166.5	2198.8
10°	2813.7	2724.3	2647.3	2412.3	2316.3	2228.6	2098.7	1950.5	1930.7	1868.6	1876.0
12.5°	3061.1	3048.7	2786.4	2579.5	2454.5	2279.9	1999.4	1819.8	1665.9	1673.3	1628.6
15°	3256.4	3263.0	2947.7	2658.1	2322.9	2056.5	1726.3	1502.8	1344.8	1313.3	1281.0
17.5°	3518.7	3505.5	2961.0	2563.7	2139.2	1748.6	1343.9	1122.2	1095.7	1113.9	1085.7
20°	3632.9	3516.2	2876.6	2329.5	1852.1	1328.2	1015.4	897.9	949.2	1022.0	1023.7
22.5°	3735.5	3536.1	2832.7	2140.9	1469.7	965.7	815.1	793.6	854.0	952.5	960.8
25°	3731.4	3628.0	2754.1	1950.5	1139.5	753.9	708.4	724.1	796.1	898.7	904.5
27.5°	3919.3	3557.6	2549.7	1700.6	858.2	645.5	657.1	686.0	720.0	817.6	836.6
30°	3917.6	3688.4	2447.1	1396.9	689.3	591.7	621.5	646.3	674.5	763.8	774.6
32.5°	4010.3	3603.1	2385.0	1086.6	618.2	578.5	585.9	610.7	651.3	711.7	719.1
35°	4122.0	3700.0	2186.4	863.1	591.7	566.9	572.7	586.7	624.0	679.4	686.9
37.5°	4480.3	3718.2	2107.8	727.4	590.0	561.9	561.1	568.5	610.7	661.2	683.6
40°	4620.2	3884.5	1878.5	679.4	584.2	561.9	550.3	554.5	589.2	653.8	671.1
42.5°	4955.4	3940.0	1708.9	662.9	584.2	552.0	533.8	540.4	580.9	638.0	665.3
45°	5300.4	4018.6	1507.0	659.6	583.4	551.1	516.4	531.3	564.4	612.4	642.2
47.5°	5792.0	4301.6	1305.0	649.6	576.8	555.3	512.3	511.4	540.4	581.8	609.9
50°	6593.9	4743.5	1148.6	637.2	577.6	552.0	504.0	492.4	511.4	547.8	575.1
52.5°	7710.3	5496.6	1087.4	630.6	571.0	538.7	489.9	471.7	482.5	511.4	537.9
55°	9006.2	6513.6	1147.8	630.6	557.8	518.0	470.0	448.5	454.3	474.2	499.8
57.5°	10520.6	7777.3	1439.9	621.5	541.2	493.2	446.0	421.2	422.9	440.3	463.4
60°	12102.0	9189.1	2094.5	614.0	529.6	465.9	417.9	392.3	389.8	406.3	427.0
62.5°	13686.0	10491.6	2783.0	631.4	526.3	442.7	388.1	362.5	361.6	376.5	393.9
65°	14945.5	11382.1	2954.3	701.8	547.8	416.3	357.5	333.5	331.8	344.3	363.3
67.5°	15563.7	11511.2	2244.3	789.5	593.4	391.4	327.7	305.4	303.7	317.0	333.5
70°	15106.0	10629.0	1385.3	798.6	590.9	362.5	297.1	278.1	274.7	288.8	301.2
72.5°	13412.9	9297.5	1052.6	706.7	511.4	321.1	266.5	249.9	245.0	257.4	269.0
75°	10765.6	7381.7	843.3	570.2	403.0	270.6	235.9	220.1	214.3	225.9	235.9
77.5°	6271.2	4152.6	616.5	445.2	304.5	221.0	201.1	187.0	180.4	192.8	200.3
80°	2039.1	1383.7	387.3	319.4	222.6	173.0	163.0	153.1	146.5	154.8	157.2
82.5°	732.4	514.7	214.3	196.1	148.1	124.1	123.3	117.5	109.2	112.5	112.5
85°	324.4	235.0	127.4	105.1	88.5	66.2	77.8	73.7	65.4	63.7	61.2
87.5°	91.0	77.8	46.3	35.6	29.0	10.8	24.8	22.3	18.2	16.6	11.6
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)