

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: P368320

Luminaire Tested: **MSA-SA4B-727-U-SL2**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368320
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-727-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: 16141 lumens
Efficiency: N/A
Efficacy: 94.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Medium
BUG Rating: B3 - U0 - G3

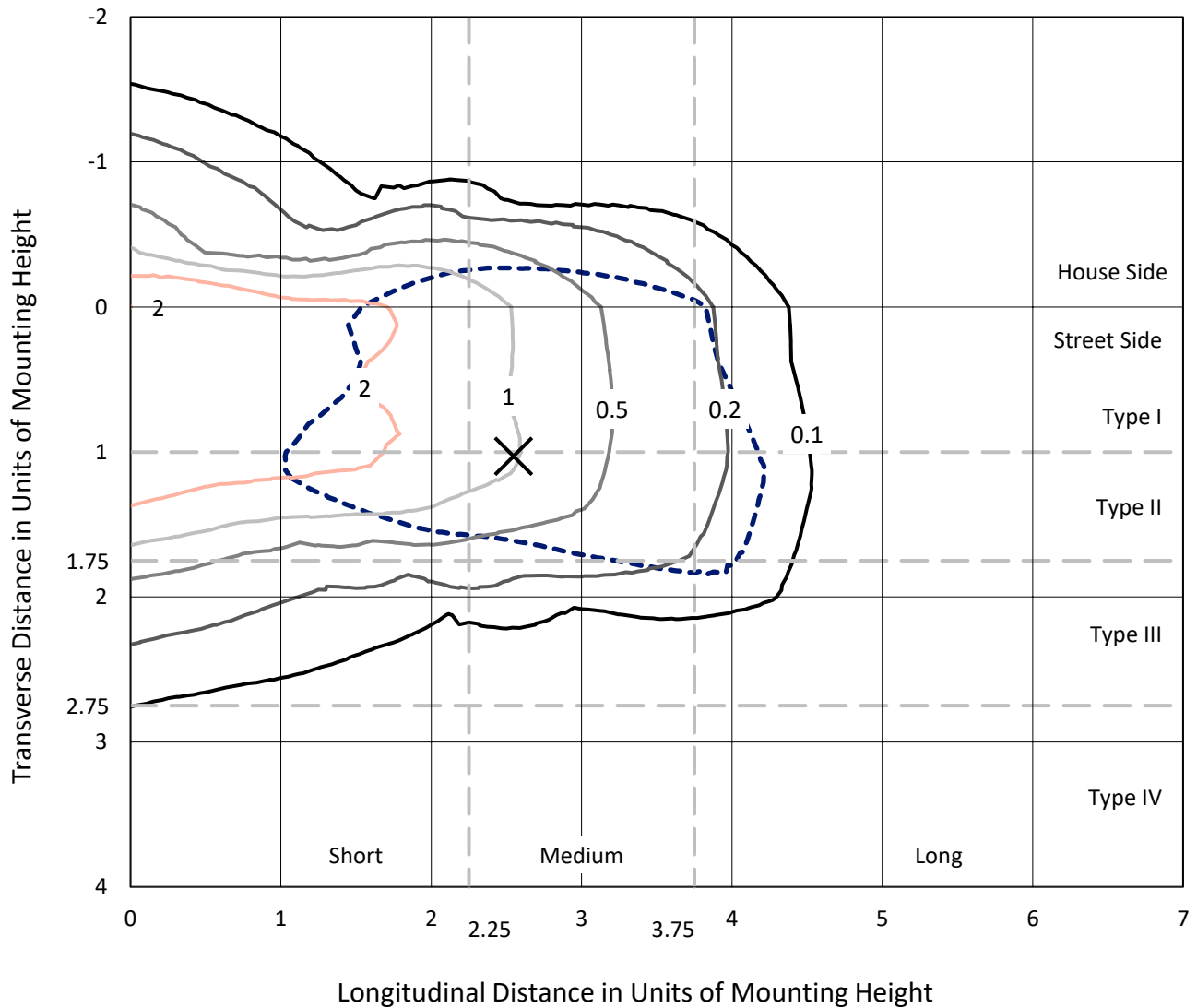
Input Watts (W): 171
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P368320
 CATALOG NUMBER: MSA-SA4B-727-U-SL2

Iso-Footcandle Lines of Horizontal Illumination

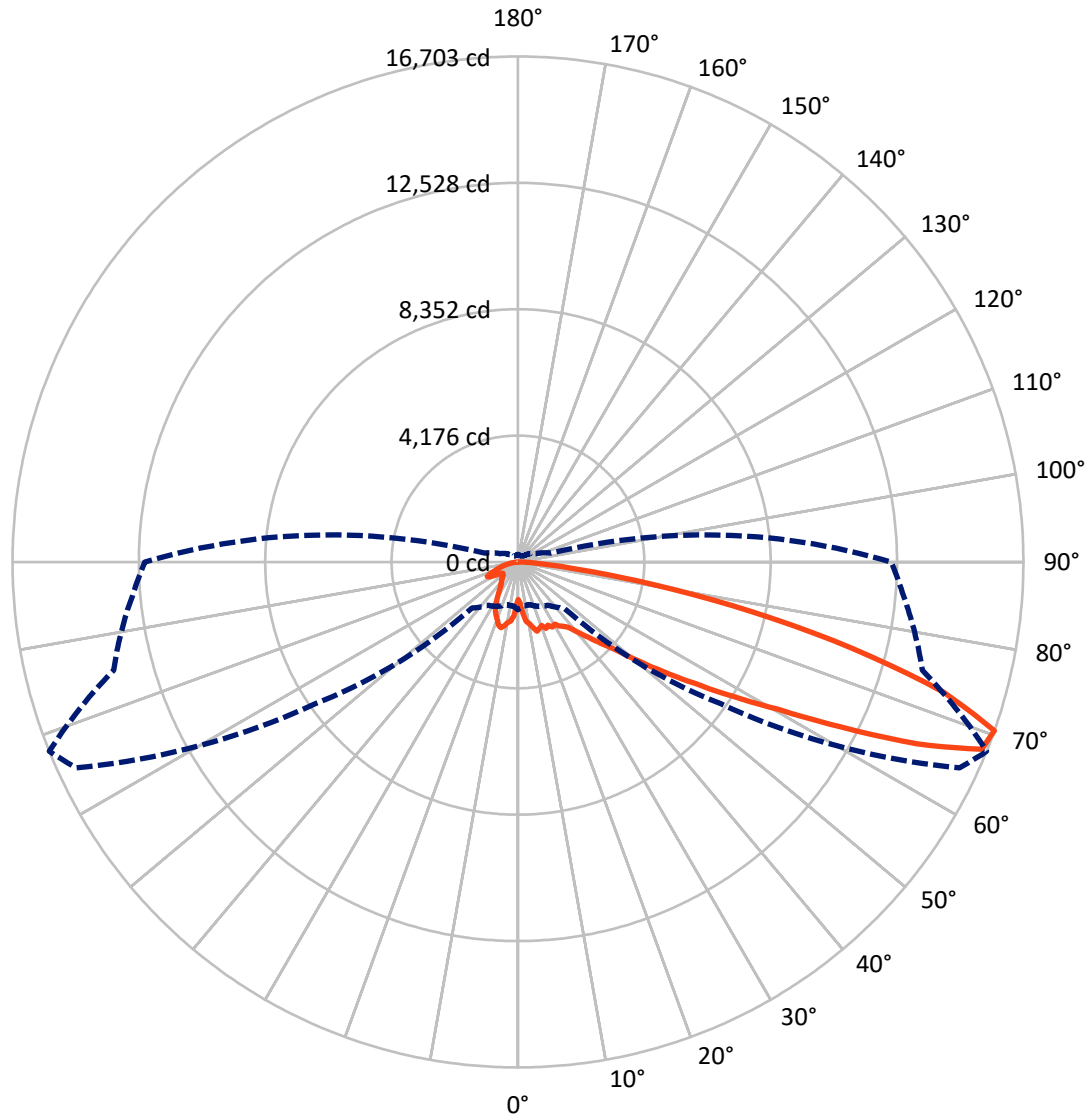
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.9 fc
 Type III - Medium - N/A

REPORT NUMBER: P368320
CATALOG NUMBER: MSA-SA4B-727-U-SL2

Luminous Intensity Polar Plot



— Vertical Plane Through 68-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

REPORT NUMBER: P368320

CATALOG NUMBER: MSA-SA4B-727-U-SL2

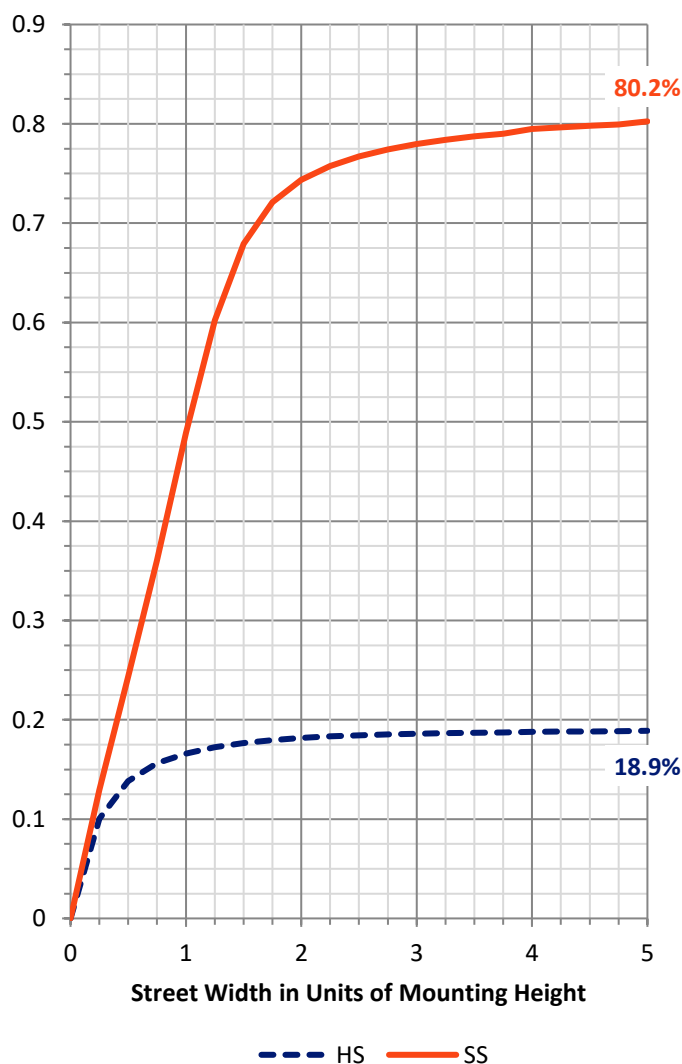
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3081.7	0.0	3081.7
	% Fixture	19.1	0.0	19.1
Street Side	Lumens	13059.3	0.0	13059.3
	% Fixture	80.9	0.0	80.9
Total	Lumens	16141.0	0.0	16141.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	165.3	1.0
10°-20°	538.7	3.3
20°-30°	819.5	5.1
30°-40°	1251.7	7.8
40°-50°	2152.3	13.3
50°-60°	3562.5	22.1
60°-70°	4392.0	27.2
70°-80°	2821.4	17.5
80°-90°	437.6	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°	16141.0	100.0
0°-180°	16141.0	100.0

Coefficient of Utilization



REPORT NUMBER: P368320

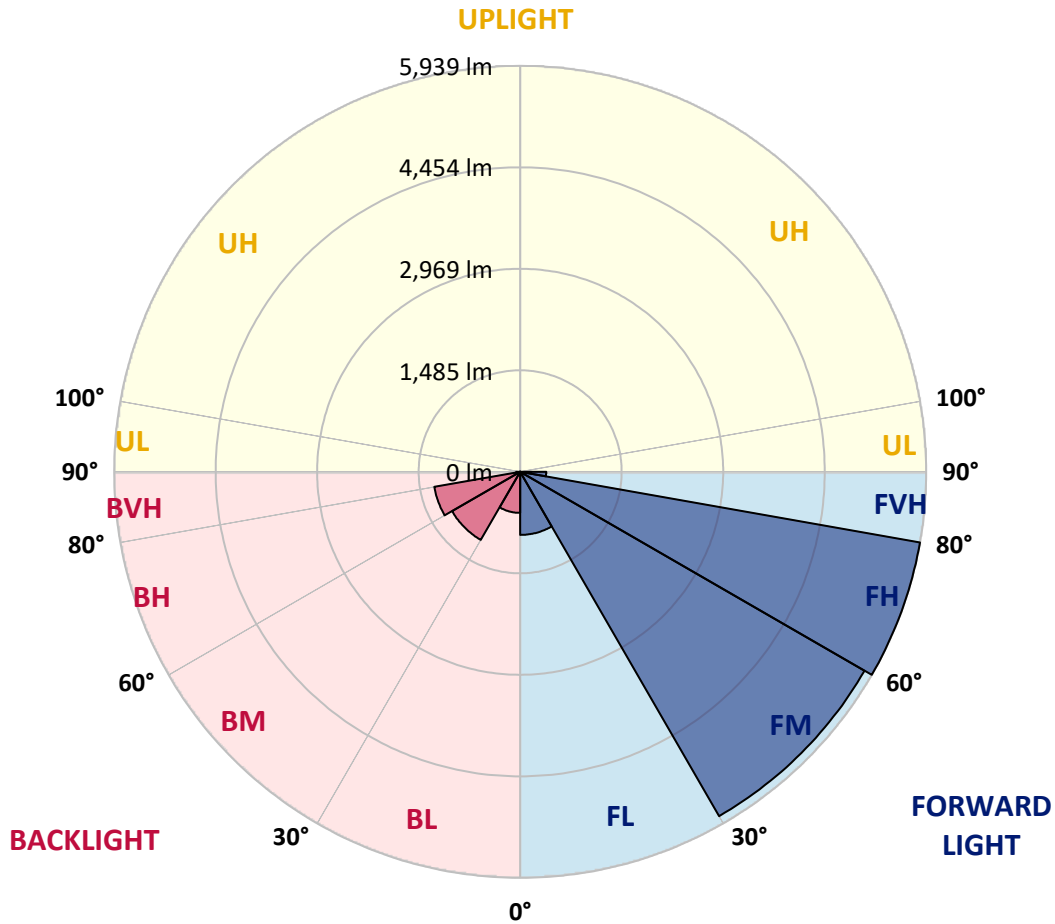
CATALOG NUMBER: MSA-SA4B-727-U-SL2

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	923.0	5.7			
FM (30°-60°)	5816.2	36.0			
FH (60°-80°)	5938.6	36.8			G3/7500
FVH (80°-90°)	381.5	2.4			G3/500
BL (0°-30°)	600.5	3.7	B2/1000		
BM (30°-60°)	1150.3	7.1	B2/2500		
BH (60°-80°)	1274.8	7.9	B3/2500		G3/2500
BVH (80°-90°)	56.2	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





REPORT NUMBER: P368320

CATALOG NUMBER: MSA-SA4B-727-U-SL2

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	68°	75°	85°
0°	1237.6	1237.6	1237.6	1237.6	1237.6	1237.6	1237.6	1237.6	1237.6	1237.6	1237.6
2.5°	1422.0	1364.6	1306.5	1334.9	1380.1	1420.0	1411.9	1416.6	1361.9	1354.5	1498.3
5°	1675.3	1576.7	1574.7	1576.0	1580.1	1534.1	1646.3	1704.4	1717.2	1776.7	1917.9
7.5°	1763.2	1723.3	1682.8	1703.0	1651.7	1656.4	1794.2	1945.6	1981.4	2024.6	2217.8
10°	1744.9	1707.1	1719.2	1722.6	1732.1	1808.4	1896.9	2042.2	2072.6	2210.4	2260.4
12.5°	1747.6	1740.9	1797.6	1799.6	1901.0	2038.1	2073.2	2207.0	2219.1	2320.5	2529.2
15°	1840.2	1886.8	1855.0	1871.9	1891.5	2055.7	2106.3	2298.2	2371.1	2501.5	2658.2
17.5°	2020.5	2034.0	1938.8	1913.8	1978.0	2028.0	2143.5	2226.6	2302.9	2667.0	2883.2
20°	2062.4	2098.9	1985.4	1856.4	1992.2	2061.7	2142.1	2180.0	2239.4	2691.3	2998.0
22.5°	2242.1	2166.5	2029.3	1917.2	1961.8	2029.3	2087.4	2230.0	2386.0	2621.8	3112.9
25°	2344.1	2300.2	2177.9	2057.7	2019.9	2021.9	2134.0	2261.7	2315.7	2723.8	3135.9
27.5°	2590.7	2520.4	2245.5	2222.5	2080.0	1969.2	2141.5	2340.1	2434.6	2644.1	3248.0
30°	2899.4	2846.0	2485.3	2454.9	2237.4	2044.2	2236.0	2398.2	2384.7	2696.1	3325.7
32.5°	3149.4	3238.5	2874.4	2634.6	2479.9	2294.8	2206.3	2388.0	2522.5	2817.0	3457.4
35°	3506.0	3589.8	3177.7	3015.6	2679.9	2411.0	2413.7	2527.2	2610.3	2958.2	3604.7
37.5°	4123.5	4049.9	3718.2	3462.1	3247.3	2846.0	2725.8	2685.9	2752.8	3131.1	3893.1
40°	4568.7	4506.5	4116.1	3970.1	3552.0	3318.9	2989.3	2951.4	3069.6	3309.5	4128.9
42.5°	5096.3	4985.5	4622.0	4501.8	4064.7	3644.5	3312.2	3333.8	3391.2	3645.9	4447.7
45°	5633.3	5364.5	5158.4	5149.0	4857.1	4276.8	3830.3	3812.7	3814.8	4141.1	4805.8
47.5°	6059.6	5817.7	5582.0	5469.8	5322.6	5370.5	4582.9	4376.8	4314.7	4639.6	5342.8
50°	6348.0	6069.7	5802.9	5776.5	6169.7	6428.4	5289.5	5069.2	5107.8	5353.0	6058.9
52.5°	6354.1	6023.8	5745.5	5929.9	6856.0	7226.2	6506.8	5891.4	6014.3	6181.2	6993.2
55°	5912.3	5569.8	5388.8	5809.0	7124.2	8172.7	8217.3	7208.7	7066.8	7128.3	8109.8
57.5°	4980.7	4634.9	4529.5	5032.8	6615.6	9085.3	10283.1	8782.7	8366.6	8109.8	9254.2
60°	3749.2	3450.0	3384.5	3705.3	5484.7	8817.1	11955.7	10741.7	9893.9	9206.2	10402.0
62.5°	2811.6	2596.8	2498.1	2544.1	3795.2	7945.0	13054.1	13216.9	12016.5	10403.3	11523.3
65°	2284.7	2111.1	2023.2	1963.8	2360.3	6143.4	12855.5	15300.3	14495.7	11660.5	12396.1
67.5°	1908.4	1754.4	1713.8	1771.9	1865.8	3564.1	11301.8	16465.6	16520.3	12900.8	12906.2
70°	1584.1	1470.0	1455.1	1619.9	1743.6	2150.9	8163.2	16099.4	16703.4	13831.0	12786.6
72.5°	1224.1	1162.6	1160.6	1419.3	1732.1	1833.4	4861.2	13908.0	14719.3	13533.8	11616.6
75°	849.2	806.6	839.0	1166.7	1692.2	1859.8	2774.4	10832.9	11440.3	11516.6	9305.6
77.5°	584.3	548.5	583.7	843.7	1511.2	1904.3	1940.8	7832.9	7900.4	7722.8	5330.0
80°	406.7	381.7	408.7	597.2	1176.1	1884.8	1652.4	4931.4	4524.8	3446.6	1706.4
82.5°	252.0	244.5	274.3	425.6	828.2	1714.5	1565.9	2544.8	1942.9	951.2	609.3
85°	132.4	121.6	159.4	277.6	518.1	1345.7	1467.3	1161.3	749.8	337.8	244.5
87.5°	39.2	35.1	61.5	112.1	219.6	603.3	839.7	492.5	279.7	99.3	76.3
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: P368320
 CATALOG NUMBER: MSA-SA4B-727-U-SL2

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1237.6	1237.6	1237.6	1237.6	1237.6	1237.6	1237.6	1237.6	1237.6	1237.6	1237.6
2.5°	1508.5	1501.0	1401.1	1413.9	1435.5	1440.9	1440.2	1403.8	1365.3	1472.7	1469.3
5°	1921.2	1854.4	1804.4	1793.6	1732.1	1670.6	1692.2	1684.8	1675.3	1724.0	1730.1
7.5°	2218.5	2125.9	2067.8	1918.5	1776.7	1653.7	1692.9	1705.1	1680.7	1768.6	1794.9
10°	2296.8	2223.9	2161.0	1969.2	1890.8	1819.2	1713.2	1592.2	1576.0	1525.4	1531.4
12.5°	2498.8	2488.7	2274.5	2105.7	2003.6	1861.1	1632.1	1485.5	1359.9	1365.9	1329.5
15°	2658.2	2663.7	2406.3	2169.8	1896.2	1678.7	1409.2	1226.8	1097.8	1072.1	1045.7
17.5°	2872.4	2861.6	2417.1	2092.8	1746.3	1427.4	1097.1	916.0	894.4	909.3	886.3
20°	2965.6	2870.4	2348.2	1901.6	1511.9	1084.2	828.9	733.0	774.8	834.3	835.6
22.5°	3049.4	2886.6	2312.4	1747.6	1199.8	788.4	665.4	647.8	697.2	777.5	784.3
25°	3046.0	2961.6	2248.2	1592.2	930.2	615.4	578.3	591.1	649.9	733.6	738.4
27.5°	3199.4	2904.1	2081.3	1388.2	700.5	526.9	536.4	560.0	587.7	667.4	683.0
30°	3198.0	3010.9	1997.6	1140.3	562.7	483.0	507.3	527.6	550.6	623.5	632.3
32.5°	3273.7	2941.3	1946.9	887.0	504.6	472.2	478.3	498.5	531.6	581.0	587.0
35°	3364.9	3020.3	1784.8	704.6	483.0	462.7	467.5	479.0	509.4	554.6	560.7
37.5°	3657.4	3035.2	1720.6	593.8	481.7	458.7	458.0	464.1	498.5	539.8	558.0
40°	3771.5	3171.0	1533.5	554.6	476.9	458.7	449.2	452.6	481.0	533.7	547.9
42.5°	4045.1	3216.2	1395.0	541.1	476.9	450.6	435.7	441.1	474.2	520.8	543.1
45°	4326.8	3280.4	1230.2	538.4	476.3	449.9	421.5	433.7	460.7	499.9	524.2
47.5°	4728.1	3511.5	1065.3	530.3	470.9	453.3	418.2	417.5	441.1	474.9	497.9
50°	5382.7	3872.2	937.6	520.2	471.5	450.6	411.4	401.9	417.5	447.2	469.5
52.5°	6294.0	4486.9	887.7	514.8	466.1	439.8	399.9	385.1	393.8	417.5	439.1
55°	7351.9	5317.2	937.0	514.8	455.3	422.9	383.7	366.1	370.9	387.1	408.0
57.5°	8588.1	6348.7	1175.4	507.3	441.8	402.6	364.1	343.8	345.2	359.4	378.3
60°	9879.1	7501.2	1709.8	501.3	432.3	380.3	341.1	320.2	318.2	331.7	348.6
62.5°	11172.1	8564.5	2271.8	515.4	429.6	361.4	316.8	295.9	295.2	307.4	321.6
65°	12200.2	9291.4	2411.7	572.9	447.2	339.8	291.8	272.2	270.9	281.0	296.6
67.5°	12704.9	9396.7	1832.1	644.5	484.4	319.5	267.5	249.3	247.9	258.7	272.2
70°	12331.3	8676.6	1130.9	651.9	482.3	295.9	242.5	227.0	224.3	235.8	245.9
72.5°	10949.1	7589.7	859.3	576.9	417.5	262.1	217.5	204.0	200.0	210.1	219.6
75°	8788.1	6025.8	688.4	465.4	329.0	220.9	192.5	179.7	175.0	184.4	192.5
77.5°	5119.2	3389.9	503.3	363.4	248.6	180.4	164.2	152.7	147.3	157.4	163.5
80°	1664.5	1129.5	316.2	260.8	181.7	141.2	133.1	125.0	119.6	126.3	128.4
82.5°	597.9	420.2	175.0	160.1	120.9	101.3	100.7	95.9	89.2	91.9	91.9
85°	264.8	191.9	104.0	85.8	72.3	54.0	63.5	60.1	53.4	52.0	50.0
87.5°	74.3	63.5	37.8	29.0	23.6	8.8	20.3	18.2	14.9	13.5	9.5
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)