

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: P596724

Luminaire Tested: **MSA-SA3D-827-U-SL3**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P596724  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-18)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 5/27/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA3D-827-U-SL3  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III SPILL LIGHT ELIMINATOR OPTICS.  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 14357 lumens  
Efficiency: N/A  
Efficacy: 74.8 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B2 - U0 - G3

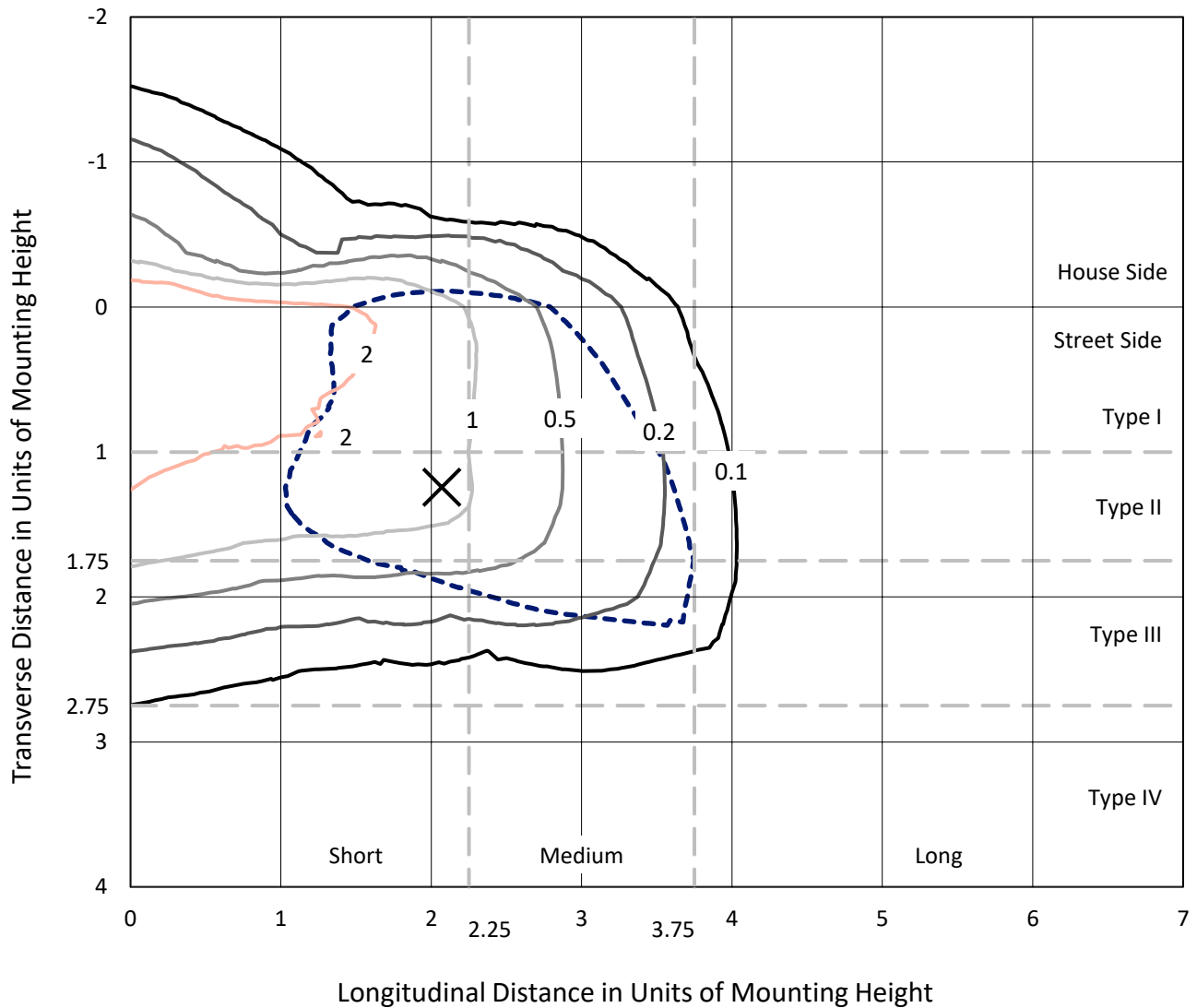
Input Watts (W): 192  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



REPORT NUMBER: P596724  
 CATALOG NUMBER: MSA-SA3D-827-U-SL3

### Iso-Footcandle Lines of Horizontal Illumination

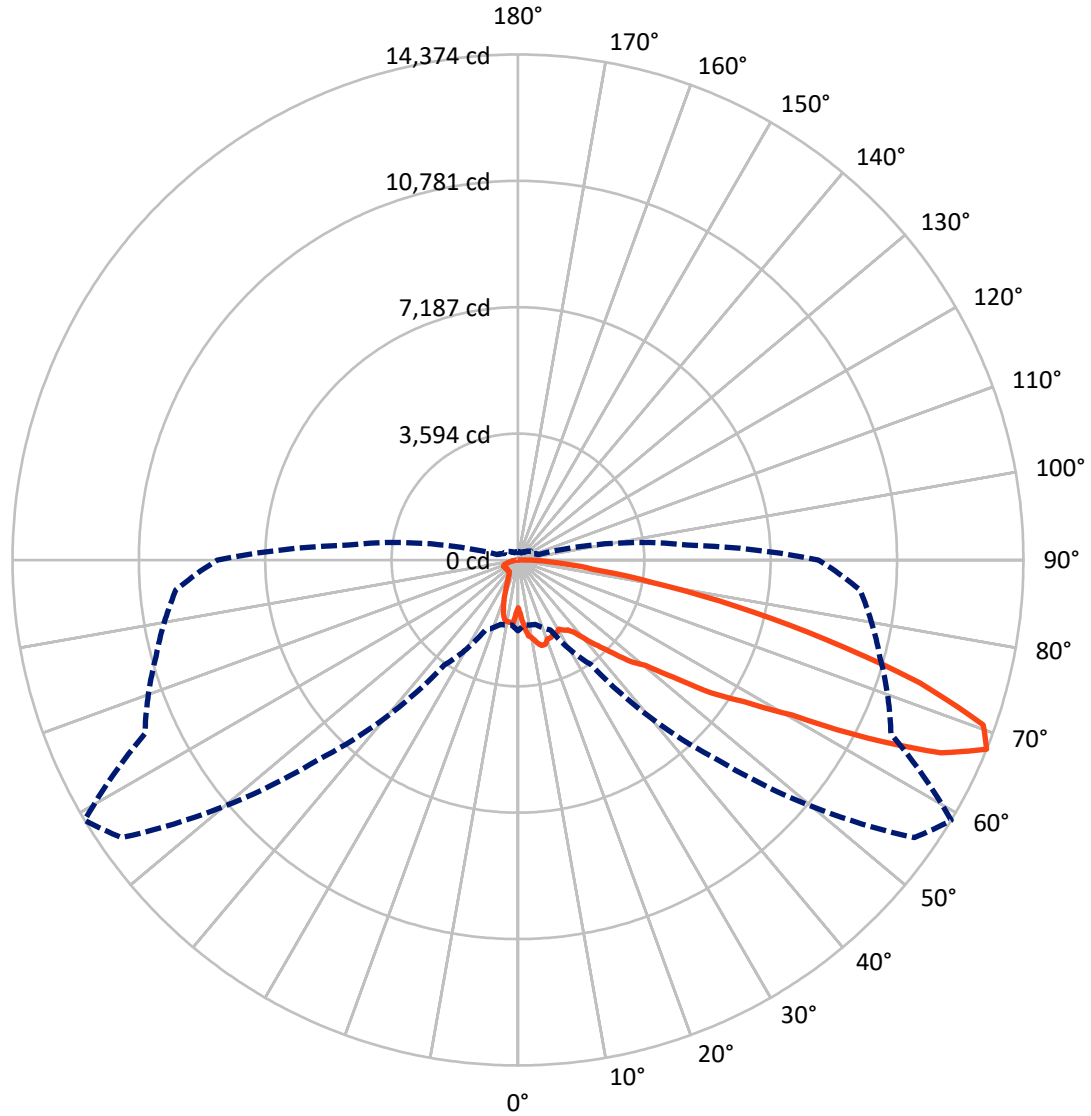
× Max cd  
 - - - 1/2 Max cd



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

REPORT NUMBER: P596724  
CATALOG NUMBER: MSA-SA3D-827-U-SL3

### Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral    - - - Horizontal Cone Through 67.5-Deg Vertical

REPORT NUMBER: P596724

CATALOG NUMBER: MSA-SA3D-827-U-SL3

**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2161.0	0.0	2161.0
	% Fixture	15.1	0.0	15.1
<b>Street Side</b>	Lumens	12196.0	0.0	12196.0
	% Fixture	84.9	0.0	84.9
<b>Total</b>	Lumens	14357.0	0.0	14357.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	177.4	1.2
10°-20°	525.1	3.7
20°-30°	749.8	5.2
30°-40°	1104.9	7.7
40°-50°	1866.8	13.0
50°-60°	3248.6	22.6
60°-70°	4139.7	28.8
70°-80°	2192.0	15.3
80°-90°	352.6	2.5
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°	14357.0	100.0
0°-180°	14357.0	100.0

**Coefficient of Utilization**



REPORT NUMBER: P596724

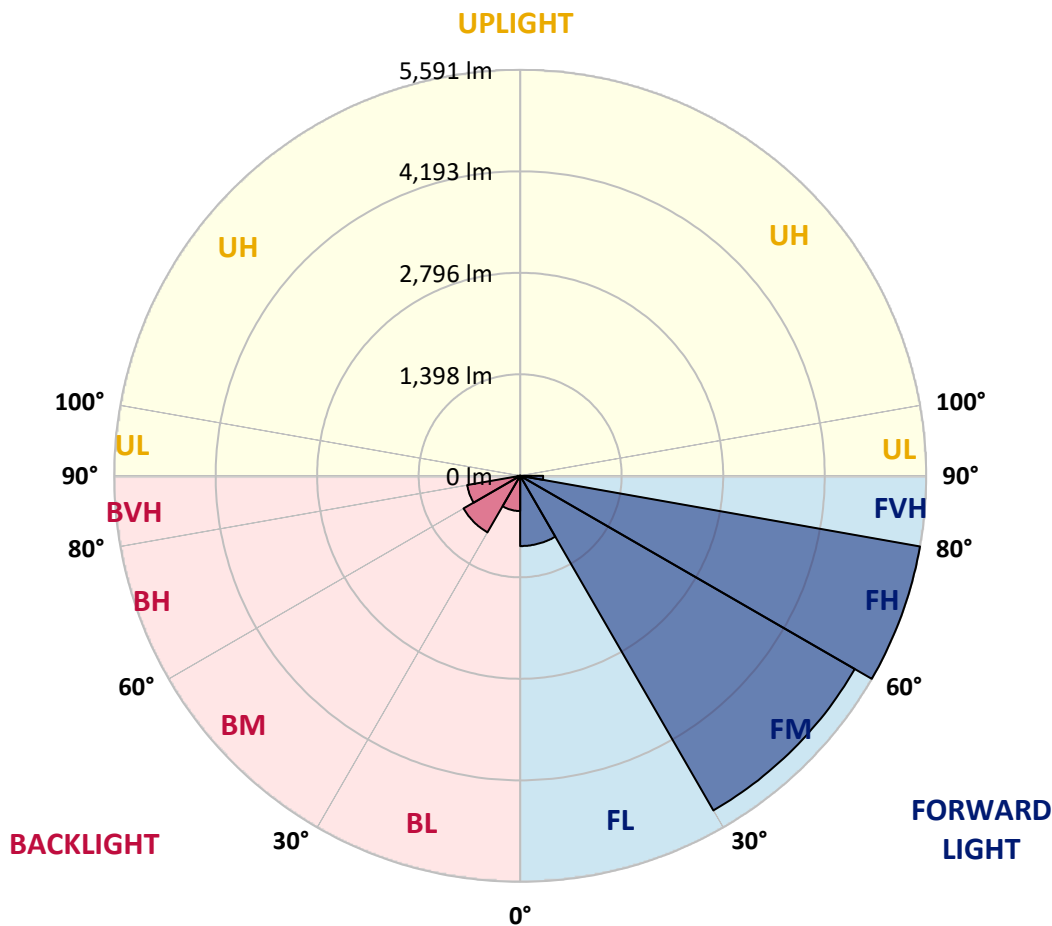
CATALOG NUMBER: MSA-SA3D-827-U-SL3

**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	967.7	6.7			
FM (30°-60°)	5320.5	37.1			
FH (60°-80°)	5591.1	38.9			G3/7500
FVH (80°-90°)	316.7	2.2			G3/500
BL (0°-30°)	484.6	3.4	B1/500		
BM (30°-60°)	899.8	6.3	B1/1000		
BH (60°-80°)	740.7	5.2	B2/1000		G2/1000
BVH (80°-90°)	35.9	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-G3**

Type III Short





REPORT NUMBER: P596724

CATALOG NUMBER: MSA-SA3D-827-U-SL3

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	1358.6	1358.6	1358.6	1358.6	1358.6	1358.6	1358.6	1358.6	1358.6	1358.6	1358.6
2.5°	1696.2	1617.1	1533.2	1556.9	1605.0	1626.9	1603.1	1580.0	1550.2	1514.9	1635.4
5°	2057.0	1939.6	1922.5	1921.9	1904.9	1836.8	1924.4	1918.3	1953.6	1990.1	2083.8
7.5°	2159.8	2116.0	2068.6	2091.1	2005.3	2001.6	2137.9	2176.8	2245.0	2222.5	2348.4
10°	2106.9	2057.6	2082.5	2073.4	2081.3	2171.4	2254.7	2257.2	2330.2	2402.0	2321.0
12.5°	2013.8	2017.4	2116.6	2113.0	2240.7	2408.0	2433.0	2413.5	2532.8	2484.1	2553.4
15°	2080.1	2124.5	2099.6	2120.9	2171.4	2384.3	2453.7	2524.2	2637.4	2681.2	2611.8
17.5°	2186.0	2209.7	2097.8	2086.2	2190.2	2291.2	2463.4	2523.6	2541.3	2853.4	2755.4
20°	2140.9	2189.0	2079.5	1939.0	2111.7	2245.6	2415.3	2397.1	2482.9	2866.8	2785.2
22.5°	2268.7	2189.0	2049.7	1949.9	2010.8	2133.6	2277.8	2397.7	2499.3	2788.3	2828.4
25°	2293.0	2255.3	2125.1	2026.0	2005.3	2049.1	2254.7	2333.2	2504.8	2895.4	2805.3
27.5°	2441.5	2384.9	2119.7	2122.7	2019.9	1942.6	2181.7	2346.6	2566.8	2829.0	2861.9
30°	2625.8	2582.6	2249.9	2262.0	2119.7	1977.3	2231.6	2281.5	2602.7	2932.5	2933.1
32.5°	2763.9	2840.0	2506.0	2340.5	2290.0	2183.5	2154.9	2379.4	2560.7	3119.9	3054.8
35°	3012.8	3071.8	2703.1	2570.5	2399.5	2279.7	2363.0	2443.9	2735.4	3366.3	3235.5
37.5°	3473.3	3405.2	3069.4	2860.7	2796.8	2624.0	2670.3	2613.7	2925.2	3643.1	3589.5
40°	3739.8	3680.8	3327.3	3211.7	2958.6	2980.5	2922.7	2964.1	3178.9	3937.5	3920.5
42.5°	4002.6	3923.6	3624.8	3544.5	3292.0	3185.0	3195.3	3329.1	3570.1	4413.3	4356.7
45°	4262.4	4059.8	3929.0	3950.3	3828.6	3609.0	3624.2	3750.2	3997.2	4957.2	4827.0
47.5°	4461.4	4294.1	4191.9	4165.7	4105.5	4399.3	4267.9	4319.0	4427.9	5441.5	5392.2
50°	4838.0	4642.7	4509.4	4471.7	4676.1	5085.0	4817.3	4707.2	4939.0	6067.5	6042.0
52.5°	5440.9	5197.5	4975.5	4973.0	5268.7	5534.0	5722.6	5532.8	5617.9	6708.8	6781.8
55°	5967.2	5685.5	5485.9	5596.0	6017.0	6179.5	6820.1	6671.7	6599.9	7356.1	7564.8
57.5°	6163.7	5834.5	5704.3	5866.8	6487.3	7322.1	7999.2	7608.6	7538.6	8088.6	8526.1
60°	5732.3	5384.3	5392.2	5698.2	6773.3	8161.0	9288.4	8956.8	8546.8	9000.6	9427.7
62.5°	4503.4	4188.8	4393.8	4859.3	6533.6	8976.3	11016.2	11156.2	9698.5	9756.9	9927.8
65°	3060.8	2843.0	3028.0	3483.7	5299.1	9421.0	12662.0	13222.9	10747.3	10252.1	10143.8
67.5°	2014.4	1860.5	1896.4	2199.4	3647.9	8031.4	13762.6	14374.0	11706.2	10658.5	9762.9
70°	1559.9	1435.8	1420.0	1578.8	2163.5	5579.6	13110.3	14040.0	12290.2	10277.7	8509.6
72.5°	1224.1	1129.8	1138.3	1291.0	1675.5	3095.5	10145.0	11939.2	11410.5	8863.7	6537.8
75°	954.6	877.3	920.5	1095.1	1549.6	1923.8	6999.6	9061.5	8821.8	6563.4	3728.9
77.5°	693.0	643.1	704.5	932.7	1456.5	1650.6	4357.3	6321.9	5651.4	3369.9	1279.5
80°	454.5	426.5	477.0	760.5	1320.8	1588.5	2692.8	3873.7	2792.5	946.7	484.3
82.5°	267.7	255.5	297.5	514.7	1061.7	1488.7	1796.0	2152.5	1142.6	400.3	257.4
85°	140.5	131.4	176.4	295.7	731.9	1359.2	1413.9	1288.6	551.8	174.0	122.9
87.5°	46.8	45.6	74.8	114.4	276.8	721.6	754.4	612.0	227.5	50.5	26.8
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: P596724  
 CATALOG NUMBER: MSA-SA3D-827-U-SL3

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1358.6	1358.6	1358.6	1358.6	1358.6	1358.6	1358.6	1358.6	1358.6	1358.6	1358.6
2.5°	1651.8	1627.5	1487.5	1507.0	1525.3	1516.1	1510.6	1447.4	1441.3	1531.3	1524.0
5°	2081.3	1980.3	1861.1	1855.6	1777.1	1696.8	1712.6	1687.1	1694.4	1731.5	1735.1
7.5°	2308.3	2182.3	2068.6	1883.6	1726.6	1599.5	1619.6	1613.5	1597.0	1681.0	1703.5
10°	2304.0	2192.1	2063.7	1839.8	1733.9	1630.5	1506.4	1389.0	1354.3	1312.9	1316.6
12.5°	2456.1	2356.9	2077.1	1848.9	1705.3	1527.1	1294.7	1166.3	1043.4	1041.0	1009.9
15°	2503.6	2430.5	2105.7	1796.6	1505.2	1249.6	1009.3	870.0	781.2	763.5	737.4
17.5°	2623.4	2509.0	2018.7	1627.5	1272.8	977.1	758.7	661.3	654.0	666.2	652.8
20°	2631.3	2445.8	1861.7	1377.4	1022.7	740.4	618.7	570.1	596.2	626.0	624.8
22.5°	2624.6	2366.1	1726.0	1164.5	768.4	595.0	542.1	531.1	555.5	599.9	605.4
25°	2556.5	2339.9	1556.3	956.4	623.6	509.8	495.2	501.9	532.3	584.7	584.7
27.5°	2627.7	2233.4	1343.3	778.1	524.4	453.9	464.2	481.2	503.8	563.4	574.3
30°	2604.5	2268.7	1171.8	626.6	462.4	414.9	438.0	455.1	480.6	542.7	548.2
32.5°	2666.6	2174.4	1027.6	526.9	421.6	399.7	405.2	428.3	461.8	510.4	520.2
35°	2761.5	2209.1	862.1	473.9	401.5	382.1	392.4	410.7	444.1	491.6	499.5
37.5°	3064.5	2207.3	747.7	444.7	397.9	378.4	383.3	396.1	435.0	478.2	496.5
40°	3259.2	2333.8	643.7	438.0	393.6	376.6	372.3	386.3	417.4	468.5	481.2
42.5°	3624.8	2411.1	598.7	435.6	393.0	366.3	362.0	378.4	408.8	456.3	475.8
45°	4011.2	2521.2	562.8	434.4	391.2	364.4	351.7	372.3	397.9	443.5	466.0
47.5°	4465.6	2754.2	542.7	430.1	387.5	366.9	348.0	358.3	386.9	432.6	455.1
50°	5060.6	3062.7	546.9	424.1	393.0	367.5	342.5	347.4	373.6	418.0	441.1
52.5°	5784.0	3540.3	574.3	426.5	396.7	364.4	340.1	337.7	360.2	399.1	422.2
55°	6655.9	4218.0	656.5	438.0	396.7	363.8	336.4	325.5	342.5	374.2	396.7
57.5°	7707.8	5002.8	817.1	443.5	393.6	360.2	328.5	309.1	319.4	345.6	366.9
60°	8611.3	5636.2	982.6	447.2	399.7	351.7	312.7	288.4	295.1	315.1	334.0
62.5°	9071.8	5813.8	1032.4	444.1	416.1	346.2	293.9	266.5	267.1	284.1	301.2
65°	9158.2	5577.2	832.3	441.1	437.4	345.6	280.5	247.6	243.4	255.5	270.1
67.5°	8542.5	4841.0	600.5	434.4	439.9	341.9	271.3	232.4	221.5	230.0	242.1
70°	7253.3	3898.6	504.4	421.0	410.7	323.7	255.5	216.6	202.0	208.1	217.2
72.5°	5407.4	2884.4	439.9	392.4	357.7	276.8	231.2	198.9	183.7	188.0	194.7
75°	3004.3	1538.6	368.1	341.3	292.0	223.9	197.1	176.4	163.1	164.9	172.2
77.5°	997.8	567.6	270.1	270.7	220.8	172.8	162.4	150.9	140.5	141.1	147.2
80°	452.0	313.9	193.5	194.7	153.9	125.3	124.7	121.1	114.4	112.6	116.8
82.5°	262.2	190.4	132.6	126.5	99.2	81.5	90.7	88.8	87.0	80.3	81.5
85°	129.0	102.2	69.4	65.7	54.8	40.8	48.7	50.5	48.7	41.4	40.8
87.5°	31.6	33.5	17.0	15.8	9.1	4.3	7.3	7.3	9.1	6.1	3.0
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)