

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: P367904

Luminaire Tested: **MSA-SA3B-830-U-SL3**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367904
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-18)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA3B-830-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: 11462 lumens
Efficiency: N/A
Efficacy: 91.0 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B2 - U0 - G3

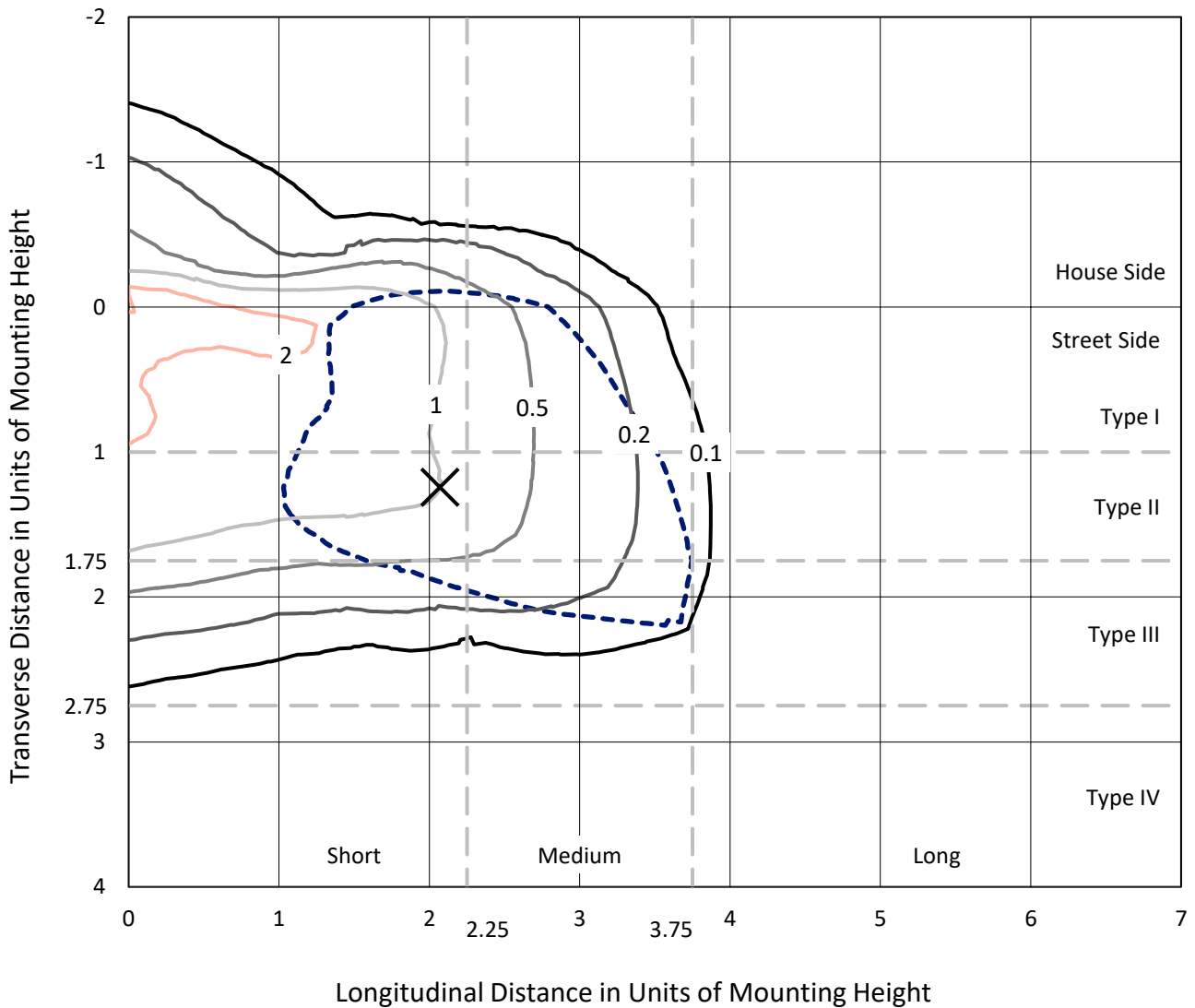
Input Watts (W): 126
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

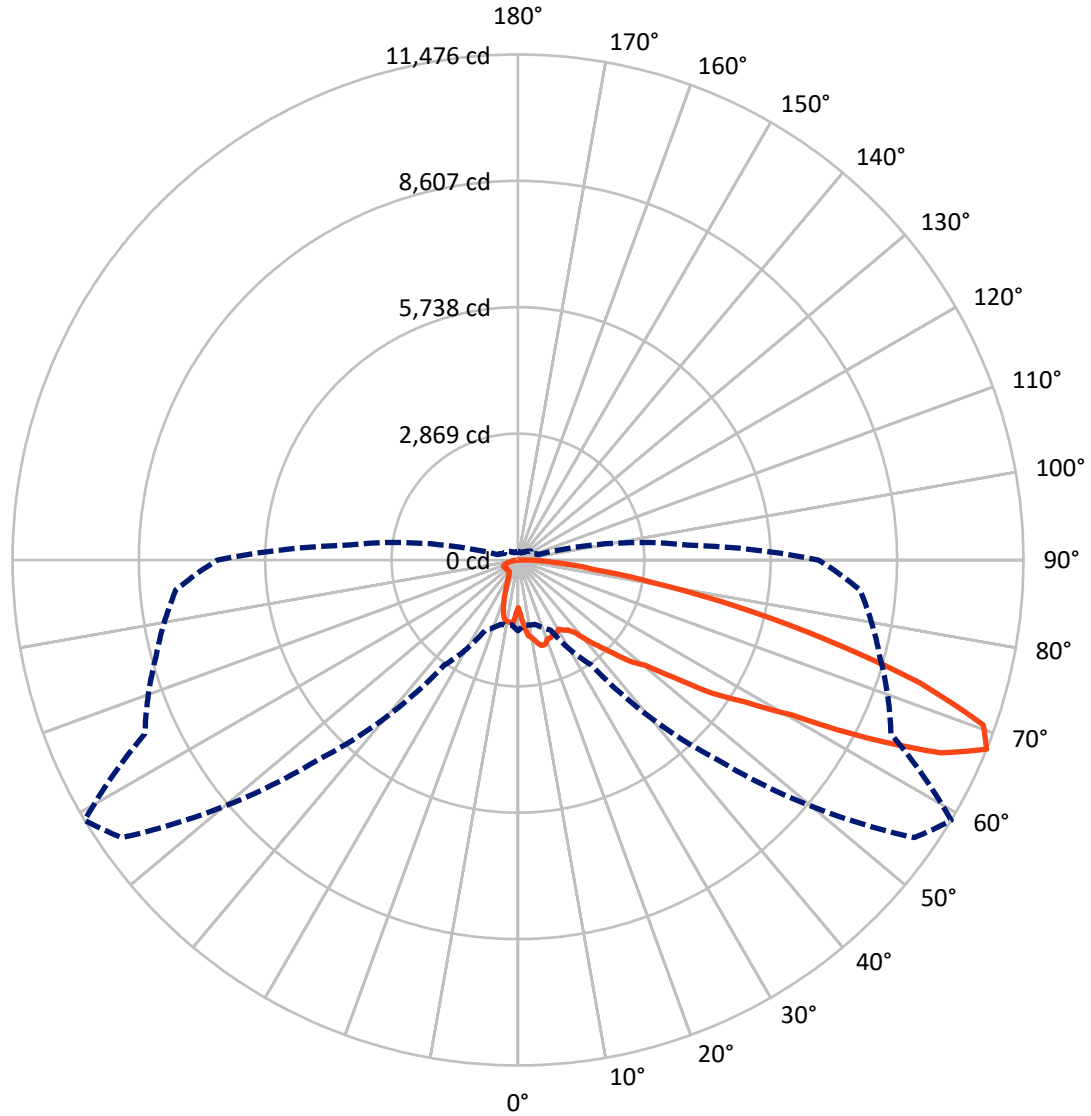
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



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

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1725.3	0.0	1725.3
	% Fixture	15.1	0.0	15.1
Street Side	Lumens	9736.7	0.0	9736.7
	% Fixture	84.9	0.0	84.9
Total	Lumens	11462.0	0.0	11462.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	141.7	1.2
10°-20°	419.2	3.7
20°-30°	598.6	5.2
30°-40°	882.1	7.7
40°-50°	1490.4	13.0
50°-60°	2593.5	22.6
60°-70°	3305.0	28.8
70°-80°	1750.0	15.3
80°-90°	281.5	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°	11462.0	100.0
0°-180°	11462.0	100.0

Coefficient of Utilization



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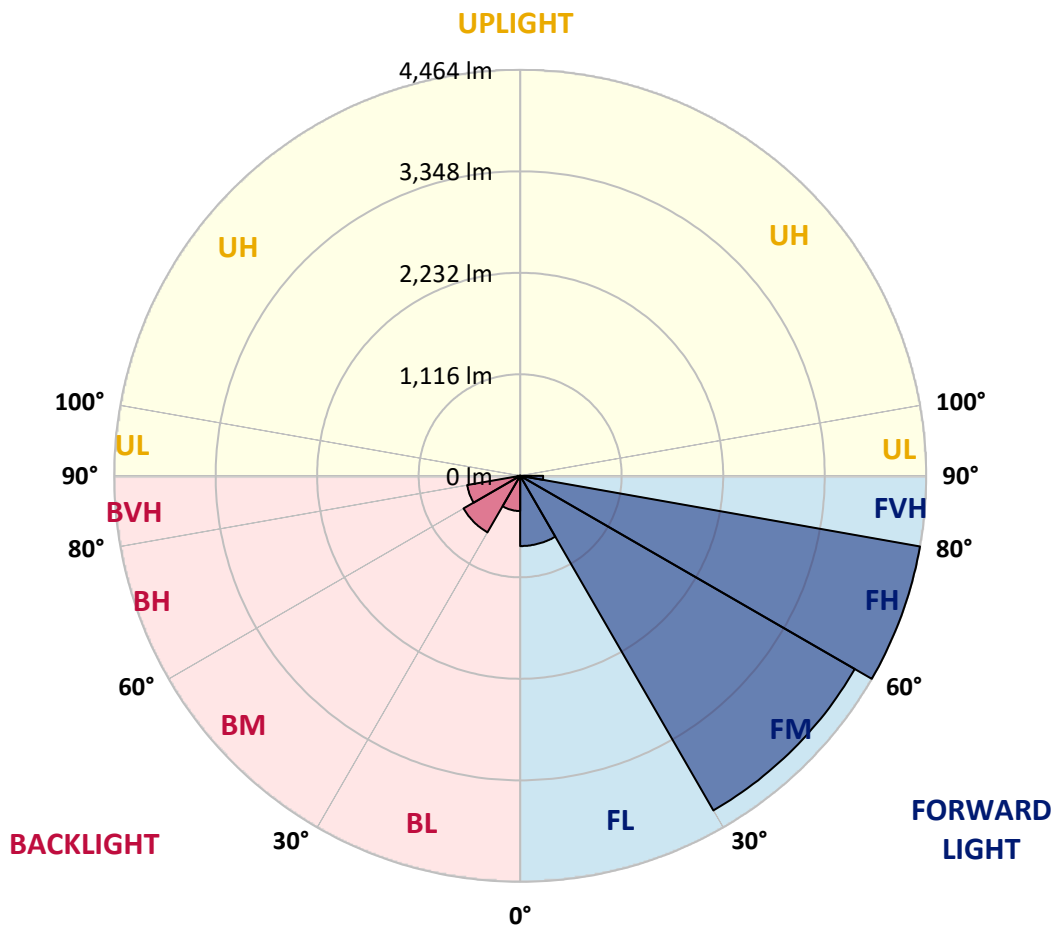
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	772.6	6.7			
FM (30°-60°)	4247.7	37.1			
FH (60°-80°)	4463.7	38.9			G2/5000
FVH (80°-90°)	252.9	2.2			G3/500
BL (0°-30°)	386.9	3.4	B1/500		
BM (30°-60°)	718.4	6.3	B1/1000		
BH (60°-80°)	591.3	5.2	B2/1000		G2/1000
BVH (80°-90°)	28.7	0.3			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G3

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	1084.6	1084.6	1084.6	1084.6	1084.6	1084.6	1084.6	1084.6	1084.6	1084.6	1084.6
2.5°	1354.2	1291.0	1224.0	1243.0	1281.3	1298.8	1279.9	1261.4	1237.6	1209.4	1305.6
5°	1642.2	1548.5	1534.9	1534.4	1520.8	1466.4	1536.3	1531.5	1559.6	1588.8	1663.6
7.5°	1724.3	1689.3	1651.4	1669.4	1600.9	1598.0	1706.8	1737.9	1792.3	1774.3	1874.9
10°	1682.0	1642.7	1662.6	1655.3	1661.6	1733.5	1800.1	1802.0	1860.3	1917.6	1853.0
12.5°	1607.7	1610.6	1689.8	1686.9	1788.9	1922.5	1942.4	1926.8	2022.0	1983.2	2038.6
15°	1660.7	1696.1	1676.2	1693.2	1733.5	1903.5	1958.9	2015.2	2105.6	2140.6	2085.2
17.5°	1745.2	1764.1	1674.8	1665.5	1748.6	1829.2	1966.7	2014.8	2028.8	2278.0	2199.8
20°	1709.2	1747.6	1660.2	1548.0	1685.9	1792.8	1928.3	1913.7	1982.2	2288.7	2223.6
22.5°	1811.2	1747.6	1636.4	1556.7	1605.3	1703.4	1818.5	1914.2	1995.3	2226.0	2258.1
25°	1830.7	1800.6	1696.6	1617.4	1600.9	1635.9	1800.1	1862.7	1999.7	2311.5	2239.6
27.5°	1949.2	1904.0	1692.2	1694.7	1612.6	1550.9	1741.8	1873.4	2049.2	2258.6	2284.8
30°	2096.4	2061.9	1796.2	1805.9	1692.2	1578.6	1781.6	1821.4	2077.9	2341.2	2341.6
32.5°	2206.6	2267.3	2000.7	1868.6	1828.2	1743.2	1720.4	1899.6	2044.4	2490.8	2438.8
35°	2405.3	2452.4	2158.0	2052.2	1915.7	1820.0	1886.5	1951.1	2183.8	2687.5	2583.0
37.5°	2773.0	2718.6	2450.4	2283.8	2232.8	2094.9	2131.8	2086.6	2335.3	2908.5	2865.7
40°	2985.7	2938.6	2656.4	2564.1	2362.0	2379.5	2333.4	2366.4	2537.9	3143.6	3130.0
42.5°	3195.5	3132.4	2893.9	2829.8	2628.2	2542.7	2551.0	2657.8	2850.2	3523.4	3478.2
45°	3402.9	3241.2	3136.8	3153.8	3056.6	2881.3	2893.4	2994.0	3191.2	3957.6	3853.7
47.5°	3561.8	3428.2	3346.6	3325.7	3277.6	3512.2	3407.3	3448.1	3535.1	4344.3	4304.9
50°	3862.4	3706.5	3600.1	3570.0	3733.2	4059.6	3845.9	3758.0	3943.1	4844.1	4823.7
52.5°	4343.8	4149.5	3972.2	3970.3	4206.3	4418.1	4568.7	4417.1	4485.1	5356.0	5414.3
55°	4763.9	4539.0	4379.7	4467.6	4803.7	4933.4	5444.9	5326.4	5269.1	5872.8	6039.4
57.5°	4920.8	4658.0	4554.1	4683.8	5179.2	5845.6	6386.2	6074.4	6018.5	6457.6	6806.8
60°	4576.4	4298.6	4304.9	4549.2	5407.5	6515.4	7415.5	7150.7	6823.4	7185.7	7526.7
62.5°	3595.3	3344.2	3507.9	3879.4	5216.1	7166.3	8794.9	8906.6	7742.8	7789.5	7925.9
65°	2443.6	2269.8	2417.4	2781.2	4230.6	7521.3	10108.8	10556.6	8580.2	8184.8	8098.4
67.5°	1608.2	1485.3	1514.0	1755.9	2912.4	6412.0	10987.4	11475.6	9345.7	8509.3	7794.3
70°	1245.4	1146.3	1133.7	1260.4	1727.2	4454.5	10466.7	11208.9	9812.0	8205.2	6793.7
72.5°	977.3	902.0	908.8	1030.7	1337.7	2471.3	8099.3	9531.7	9109.6	7076.4	5219.5
75°	762.1	700.4	734.9	874.3	1237.1	1535.8	5588.2	7234.3	7042.9	5239.9	2977.0
77.5°	553.2	513.4	562.5	744.6	1162.8	1317.8	3478.7	5047.1	4511.8	2690.4	1021.5
80°	362.8	340.5	380.8	607.1	1054.5	1268.2	2149.8	3092.6	2229.4	755.8	386.6
82.5°	213.7	204.0	237.5	410.9	847.6	1188.6	1433.8	1718.5	912.2	319.6	205.5
85°	112.2	104.9	140.9	236.1	584.3	1085.1	1128.8	1028.7	440.5	138.9	98.1
87.5°	37.4	36.4	59.7	91.3	221.0	576.1	602.3	488.6	181.7	40.3	21.4
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°	1084.6	1084.6	1084.6	1084.6	1084.6	1084.6	1084.6	1084.6	1084.6	1084.6	1084.6
2.5°	1318.7	1299.3	1187.6	1203.1	1217.7	1210.4	1206.0	1155.5	1150.7	1222.6	1216.7
5°	1661.6	1581.0	1485.8	1481.4	1418.8	1354.7	1367.3	1346.9	1352.7	1382.4	1385.3
7.5°	1842.8	1742.3	1651.4	1503.8	1378.5	1277.0	1293.0	1288.1	1275.0	1342.0	1360.0
10°	1839.4	1750.0	1647.6	1468.8	1384.3	1301.7	1202.6	1108.9	1081.2	1048.2	1051.1
12.5°	1960.8	1881.7	1658.2	1476.1	1361.5	1219.2	1033.6	931.1	833.0	831.1	806.3
15°	1998.7	1940.4	1681.1	1434.3	1201.7	997.7	805.8	694.6	623.7	609.6	588.7
17.5°	2094.4	2003.1	1611.6	1299.3	1016.1	780.1	605.7	528.0	522.1	531.9	521.2
20°	2100.7	1952.6	1486.3	1099.7	816.5	591.1	494.0	455.1	476.0	499.8	498.8
22.5°	2095.4	1889.0	1378.0	929.7	613.5	475.0	432.8	424.0	443.5	478.9	483.3
25°	2041.0	1868.1	1242.5	763.5	497.9	407.0	395.4	400.7	425.0	466.8	466.8
27.5°	2097.8	1783.1	1072.5	621.2	418.7	362.3	370.6	384.2	402.2	449.8	458.5
30°	2079.4	1811.2	935.5	500.3	369.1	331.3	349.7	363.3	383.7	433.3	437.6
32.5°	2128.9	1736.0	820.4	420.6	336.6	319.1	323.5	341.9	368.7	407.5	415.3
35°	2204.7	1763.6	688.3	378.4	320.6	305.0	313.3	327.9	354.6	392.5	398.8
37.5°	2446.6	1762.2	596.9	355.1	317.7	302.1	306.0	316.2	347.3	381.8	396.3
40°	2602.0	1863.2	513.9	349.7	314.3	300.7	297.3	308.4	333.2	374.0	384.2
42.5°	2893.9	1924.9	477.9	347.8	313.8	292.4	289.0	302.1	326.4	364.3	379.8
45°	3202.3	2012.8	449.3	346.8	312.3	290.9	280.7	297.3	317.7	354.1	372.1
47.5°	3565.2	2198.8	433.3	343.4	309.4	292.9	277.8	286.1	308.9	345.3	363.3
50°	4040.2	2445.1	436.7	338.5	313.8	293.4	273.5	277.3	298.2	333.7	352.1
52.5°	4617.7	2826.4	458.5	340.5	316.7	290.9	271.5	269.6	287.5	318.6	337.1
55°	5313.8	3367.5	524.1	349.7	316.7	290.5	268.6	259.9	273.5	298.7	316.7
57.5°	6153.6	3994.1	652.3	354.1	314.3	287.5	262.3	246.7	255.0	275.9	292.9
60°	6874.8	4499.7	784.4	357.0	319.1	280.7	249.7	230.2	235.6	251.6	266.7
62.5°	7242.5	4641.5	824.3	354.6	332.2	276.4	234.6	212.7	213.2	226.8	240.4
65°	7311.5	4452.6	664.5	352.1	349.2	275.9	223.9	197.7	194.3	204.0	215.7
67.5°	6820.0	3864.9	479.4	346.8	351.2	273.0	216.6	185.5	176.8	183.6	193.3
70°	5790.7	3112.5	402.7	336.1	327.9	258.4	204.0	172.9	161.3	166.1	173.4
72.5°	4317.1	2302.8	351.2	313.3	285.6	221.0	184.6	158.8	146.7	150.1	155.4
75°	2398.5	1228.4	293.9	272.5	233.1	178.7	157.4	140.9	130.2	131.6	137.5
77.5°	796.6	453.2	215.7	216.1	176.3	137.9	129.7	120.5	112.2	112.7	117.5
80°	360.9	250.6	154.5	155.4	122.9	100.1	99.6	96.7	91.3	89.9	93.3
82.5°	209.3	152.0	105.9	101.0	79.2	65.1	72.4	70.9	69.5	64.1	65.1
85°	103.0	81.6	55.4	52.5	43.7	32.5	38.9	40.3	38.9	33.0	32.5
87.5°	25.3	26.7	13.6	12.6	7.3	3.4	5.8	5.8	7.3	4.9	2.4
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)