

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: P367846

Luminaire Tested: **MSA-SA3B-740-U-T2**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P367846  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-8)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA3B-740-U-T2  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS.  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 14662 lumens  
Efficiency: N/A  
Efficacy: 116.4 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type II - Medium  
BUG Rating: B2 - U0 - G3

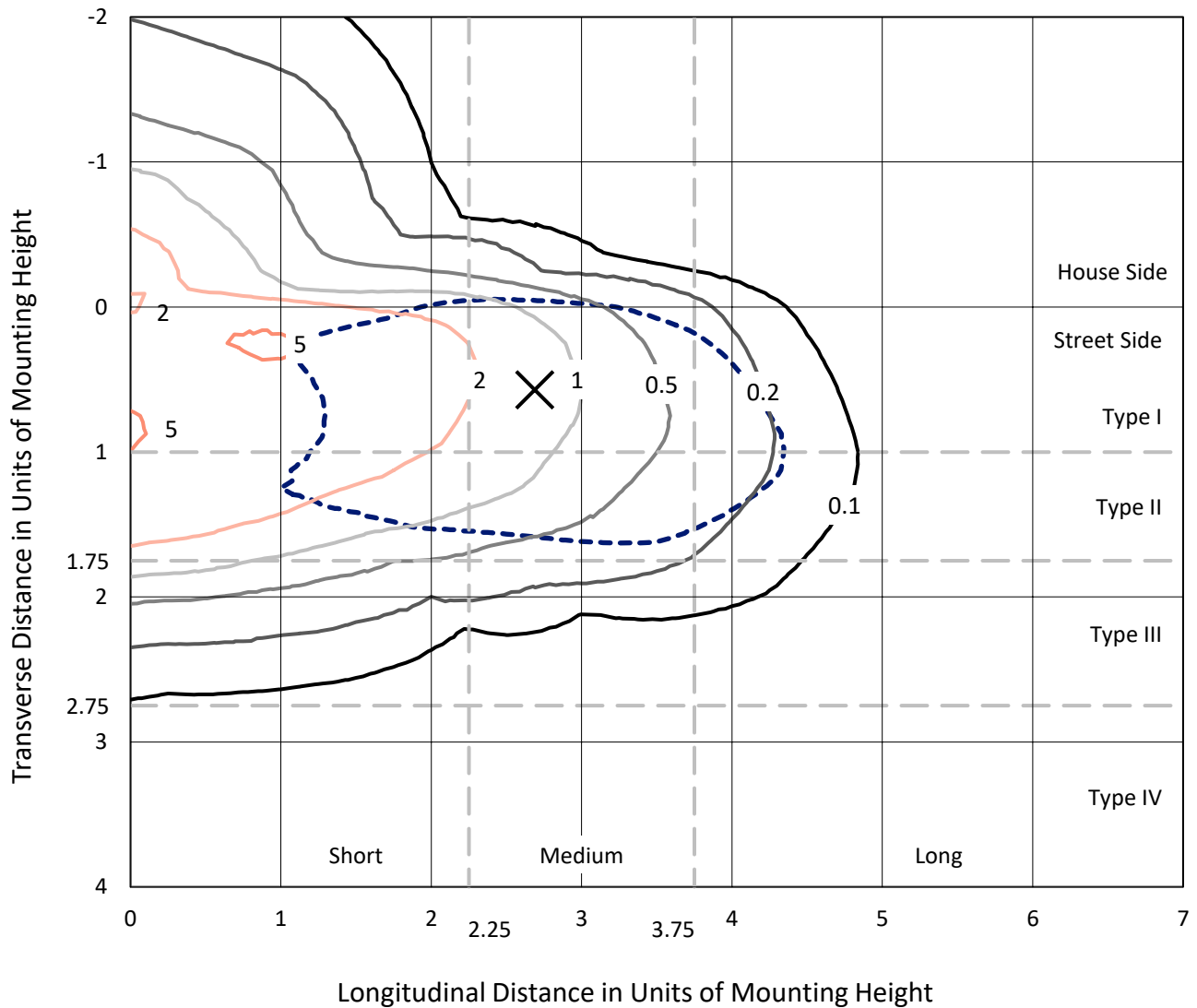
Input Watts (W): 126  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

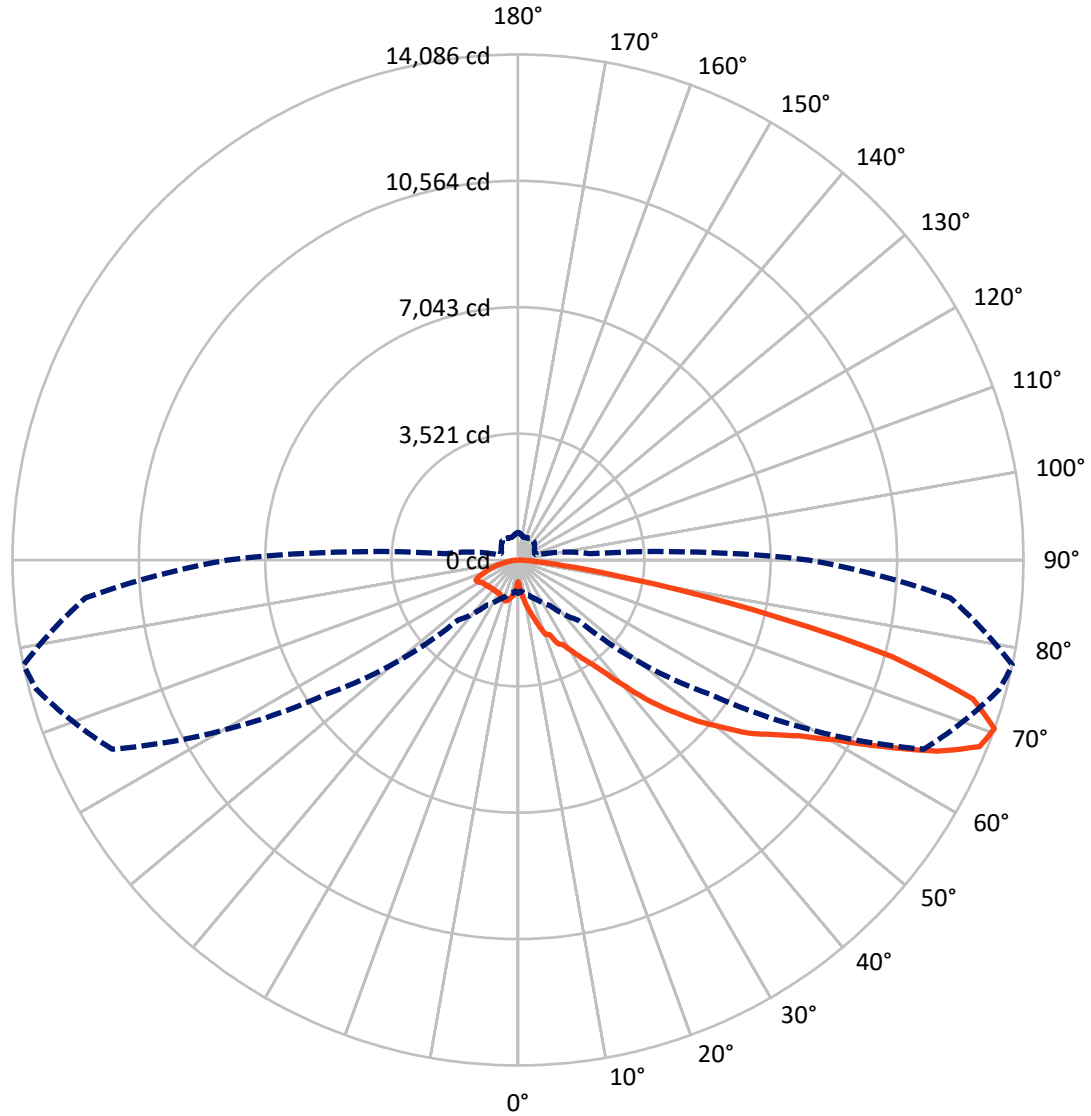
✕ Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 5.5 fc  
 Type II - Medium - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 78-Deg Lateral    - - - Horizontal Cone Through 70-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2617.0	0.0	2617.0
	% Fixture	17.8	0.0	17.8
<b>Street Side</b>	Lumens	12045.0	0.0	12045.0
	% Fixture	82.2	0.0	82.2
<b>Total</b>	Lumens	14662.0	0.0	14662.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	92.4	0.6
10°-20°	407.0	2.8
20°-30°	783.4	5.3
30°-40°	1319.6	9.0
40°-50°	2283.3	15.6
50°-60°	3447.5	23.5
60°-70°	3818.5	26.0
70°-80°	2201.5	15.0
80°-90°	308.8	2.1
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°	14662.0	100.0
0°-180°	14662.0	100.0

**Coefficient of Utilization**

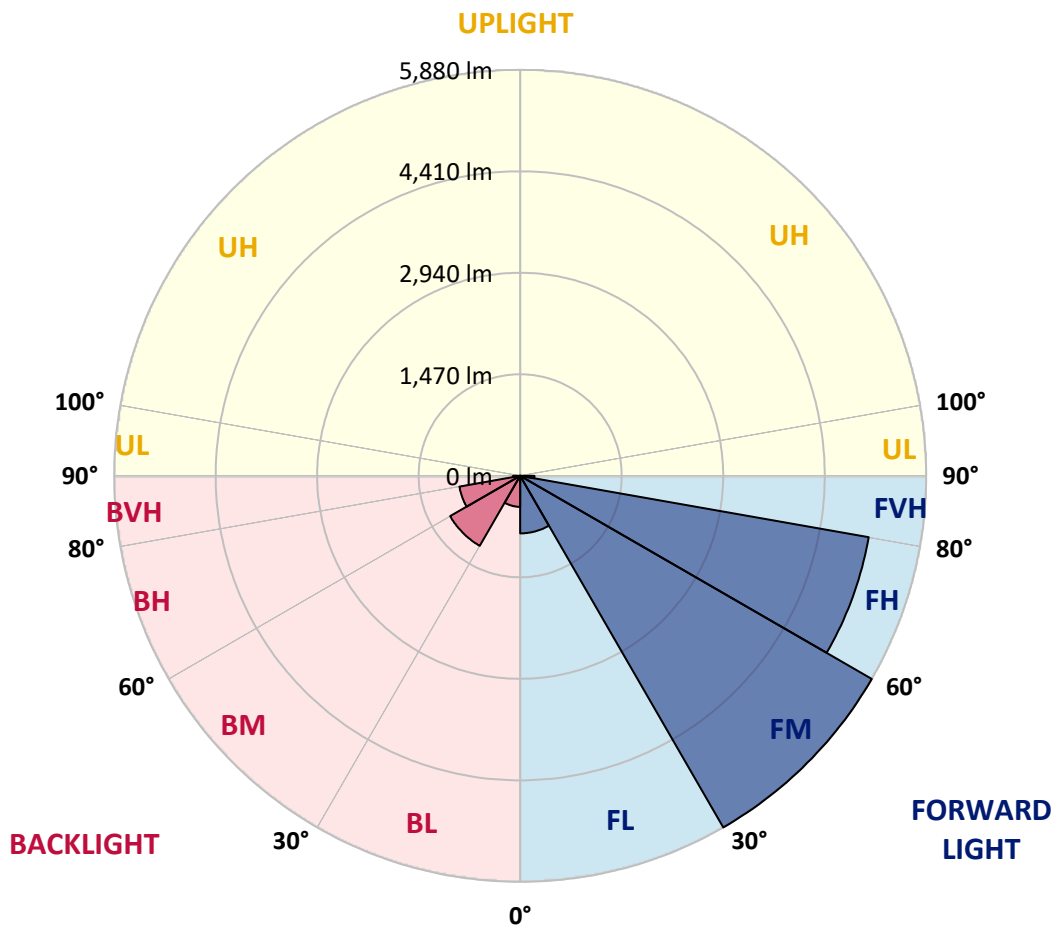


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	833.5	5.7			
FM (30°-60°)	5879.9	40.1			
FH (60°-80°)	5125.7	35.0			G3/7500
FVH (80°-90°)	206.0	1.4			G2/225
BL (0°-30°)	449.4	3.1	B1/500		
BM (30°-60°)	1170.5	8.0	B2/2500		
BH (60°-80°)	894.3	6.1	B2/1000		G2/1000
BVH (80°-90°)	102.8	0.7			G2/225
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G3**  
 Type II Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	78°	85°
0°	597.8	597.8	597.8	597.8	597.8	597.8	597.8	597.8	597.8	597.8	597.8
2.5°	769.5	742.0	700.5	717.6	738.4	740.8	734.1	696.2	683.3	712.1	720.6
5°	1078.2	1031.7	1003.6	994.5	963.3	898.5	945.0	921.1	926.0	911.9	939.5
7.5°	1338.0	1306.8	1265.2	1253.6	1182.1	1131.4	1163.2	1152.8	1102.6	1083.1	1114.3
10°	1470.0	1435.8	1437.6	1412.5	1393.6	1398.5	1382.6	1336.7	1299.5	1273.2	1198.0
12.5°	1549.5	1558.0	1603.9	1591.0	1662.5	1721.2	1676.6	1608.7	1490.8	1466.9	1392.4
15°	1738.3	1770.1	1727.3	1746.9	1777.4	1889.9	1871.6	1856.9	1732.2	1685.8	1548.2
17.5°	1932.7	1938.8	1874.0	1863.6	1937.0	1993.8	2065.3	1982.8	1998.1	1965.7	1743.2
20°	1974.3	2016.4	1923.5	1859.3	2010.3	2122.8	2211.4	2124.0	2204.7	2213.2	1904.0
22.5°	2126.4	2075.7	1953.5	1890.5	2022.5	2160.7	2304.9	2353.8	2328.1	2256.0	2059.2
25°	2232.2	2205.3	2080.6	2010.9	2061.0	2188.2	2441.2	2569.0	2591.6	2581.8	2207.1
27.5°	2428.4	2441.8	2185.1	2204.7	2135.0	2146.6	2523.1	2854.4	2713.2	2674.1	2390.5
30°	2738.3	2678.4	2390.5	2406.4	2290.9	2271.3	2696.1	3100.7	2974.2	2927.1	2541.5
32.5°	3061.6	3067.1	2717.5	2581.8	2520.1	2500.5	2661.9	3229.7	3304.3	3243.2	2769.5
35°	3517.6	3485.8	3072.0	2893.5	2670.4	2636.2	2905.8	3603.8	3740.7	3569.5	3040.2
37.5°	4211.9	4116.0	3634.3	3221.8	3056.7	3017.6	3254.2	3939.3	4247.4	4034.7	3482.8
40°	4769.4	4574.4	4136.8	3634.3	3355.0	3403.3	3501.7	4346.4	4773.0	4653.2	3892.3
42.5°	5213.7	5040.8	4492.5	4139.2	3759.6	3699.7	3807.3	4850.7	5488.2	5370.8	4403.3
45°	5639.8	5287.7	4892.2	4574.4	4209.5	4282.2	4266.3	5365.3	6365.3	6004.0	4854.9
47.5°	6060.3	5729.6	5315.8	4888.6	4521.2	4974.1	4804.8	5747.9	6956.9	6689.2	5330.5
50°	6600.6	6236.9	5765.7	5336.0	5115.9	5447.2	5163.0	6071.9	7619.5	7305.3	5779.1
52.5°	6959.4	6605.5	6192.3	5885.5	5865.3	5737.6	5664.8	6482.0	8200.2	8009.5	6254.6
55°	6917.2	6576.2	6389.1	6422.7	6672.1	6241.2	6181.9	7089.0	8805.9	8585.2	6768.1
57.5°	6388.5	6016.3	6056.0	6255.3	6925.2	7125.6	7024.8	7737.5	9346.2	9246.0	7403.1
60°	4976.6	4785.3	5108.6	5472.9	6586.5	7384.8	8093.8	8528.4	10011.2	10171.4	8400.7
62.5°	3232.8	2977.3	3488.3	4106.8	5576.2	7213.7	9182.4	10028.3	11100.4	11464.1	9916.5
65°	1674.8	1633.8	1991.4	2559.8	3881.9	6150.7	9566.3	11601.6	12424.3	12847.9	11364.5
67.5°	1217.6	1141.8	1307.4	1641.7	2369.7	4194.2	8838.9	12805.1	13487.3	13875.4	12206.1
70°	927.2	871.0	997.5	1204.7	1547.6	2369.1	6524.8	12476.9	13897.4	14085.6	12094.3
72.5°	694.3	646.1	756.7	949.8	1192.5	1333.7	3856.8	10258.8	13197.5	13261.7	10854.7
75°	554.4	517.1	564.8	750.0	971.8	907.7	2048.8	7432.5	10722.7	10777.7	8291.2
77.5°	454.8	423.0	442.5	562.3	756.1	682.7	1016.5	4727.8	6807.8	6723.5	4664.9
80°	371.0	343.5	352.7	406.5	575.8	509.8	570.9	2466.3	3247.4	3116.6	1940.0
82.5°	285.4	262.2	280.6	298.9	416.9	366.1	333.1	1122.2	1330.0	1238.9	711.5
85°	191.3	169.9	243.9	224.3	272.6	224.9	182.1	446.8	495.7	462.1	250.0
87.5°	52.6	49.5	81.9	111.9	111.9	85.0	66.6	108.2	138.1	121.0	58.7
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°	597.8	597.8	597.8	597.8	597.8	597.8	597.8	597.8	597.8	597.8	597.8
2.5°	724.3	710.9	675.4	672.3	680.9	682.1	676.6	663.8	657.1	693.7	688.2
5°	932.7	885.1	856.3	830.0	793.4	767.1	773.8	792.1	798.3	825.8	828.8
7.5°	1094.7	1031.7	968.8	884.4	828.8	793.4	820.3	839.8	855.1	894.2	910.1
10°	1165.0	1096.5	1007.3	918.7	903.4	909.5	894.2	899.1	922.9	924.8	932.7
12.5°	1295.8	1218.2	1057.4	977.3	973.1	985.9	980.4	1003.0	1019.5	1064.1	1045.2
15°	1421.1	1322.1	1095.3	1013.4	995.7	1021.4	1051.3	1089.2	1124.7	1166.8	1145.4
17.5°	1573.3	1424.2	1097.1	996.9	1000.0	1055.0	1086.1	1106.9	1212.7	1270.7	1241.4
20°	1669.3	1434.5	1056.2	956.0	1000.0	1049.5	1092.9	1115.5	1234.1	1321.5	1341.6
22.5°	1756.0	1438.2	1024.4	933.9	962.1	1027.5	1092.9	1143.0	1218.8	1302.5	1305.6
25°	1803.7	1435.2	983.5	935.8	961.5	993.8	1051.9	1097.8	1154.0	1270.7	1273.8
27.5°	1926.0	1395.4	943.1	943.1	956.6	957.8	1031.7	1058.6	1066.6	1172.9	1191.9
30°	1961.4	1404.0	938.2	941.9	948.6	936.4	968.8	986.5	998.1	1089.8	1092.9
32.5°	2018.3	1335.5	952.9	930.9	922.3	920.5	928.4	944.3	949.2	1005.5	1015.9
35°	2087.3	1308.0	957.8	927.8	910.7	901.6	925.4	905.8	921.1	987.1	994.5
37.5°	2312.3	1270.1	982.8	927.8	905.8	895.4	883.8	893.0	947.4	1011.0	1050.1
40°	2455.9	1281.7	976.7	937.0	889.3	879.6	860.0	893.6	978.0	1090.4	1119.8
42.5°	2707.7	1288.5	984.1	932.7	894.8	856.9	869.8	906.4	995.1	1059.3	1104.5
45°	2968.1	1309.2	979.2	919.9	882.6	900.3	882.6	915.6	957.8	959.6	993.8
47.5°	3223.6	1393.0	968.8	893.6	879.6	926.0	880.8	886.3	889.3	900.3	940.7
50°	3523.7	1482.2	954.1	856.9	883.8	927.2	887.5	860.6	857.5	893.6	938.8
52.5°	3864.8	1583.1	935.2	821.5	858.8	915.6	910.7	862.4	836.2	871.0	916.2
55°	4266.3	1698.0	913.2	786.0	831.3	916.8	923.6	849.6	836.8	874.7	922.9
57.5°	4799.9	1864.2	870.4	734.7	797.6	897.9	890.6	834.9	822.7	863.0	913.2
60°	5710.7	2183.9	809.3	684.0	761.6	851.4	863.7	808.6	796.4	841.0	893.6
62.5°	6930.1	2568.4	735.3	634.4	717.6	801.3	830.0	770.8	769.5	826.4	881.4
65°	8065.1	2786.6	658.9	589.2	672.3	754.9	792.1	735.3	737.7	809.3	864.3
67.5°	8537.0	2529.9	590.4	548.9	620.4	701.7	761.0	707.8	699.9	786.0	836.8
70°	8093.8	2009.7	531.2	506.1	561.7	644.2	717.6	671.1	652.8	731.0	770.8
72.5°	7161.7	1675.4	475.5	456.0	510.4	583.7	658.9	621.6	597.8	657.7	693.1
75°	5598.2	1374.6	412.0	406.5	451.7	528.7	597.8	572.1	541.5	579.4	614.9
77.5°	3187.5	869.8	346.0	349.6	382.0	463.3	524.4	504.3	473.1	489.0	529.9
80°	1275.6	438.9	278.1	280.6	308.1	380.8	434.6	427.2	394.9	407.7	435.8
82.5°	476.8	240.8	205.4	206.6	234.1	301.3	371.0	367.3	336.8	327.6	343.5
85°	189.5	119.2	125.9	131.4	157.7	217.0	297.7	264.0	228.0	199.9	209.6
87.5°	45.2	37.9	44.0	46.5	51.3	67.8	108.8	87.4	89.8	72.1	53.8
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)