

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: P368622

Luminaire Tested: **MSA-SA4D-730-U-T4W**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368622
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-14)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA4D-730-U-T4W
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 24292 lumens
Efficiency: N/A
Efficacy: 93.8 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B3 - U0 - G4

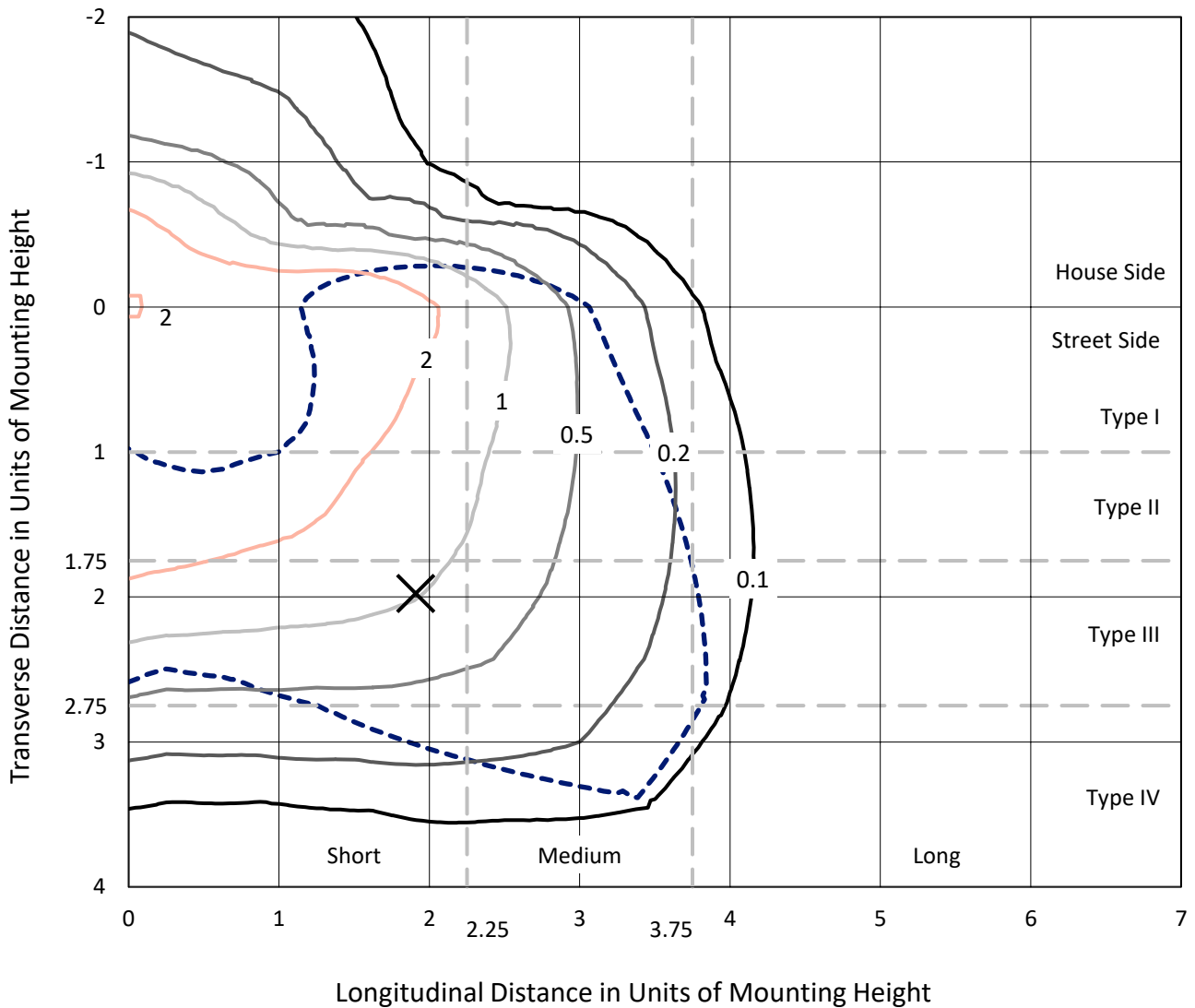
Input Watts (W): 259
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

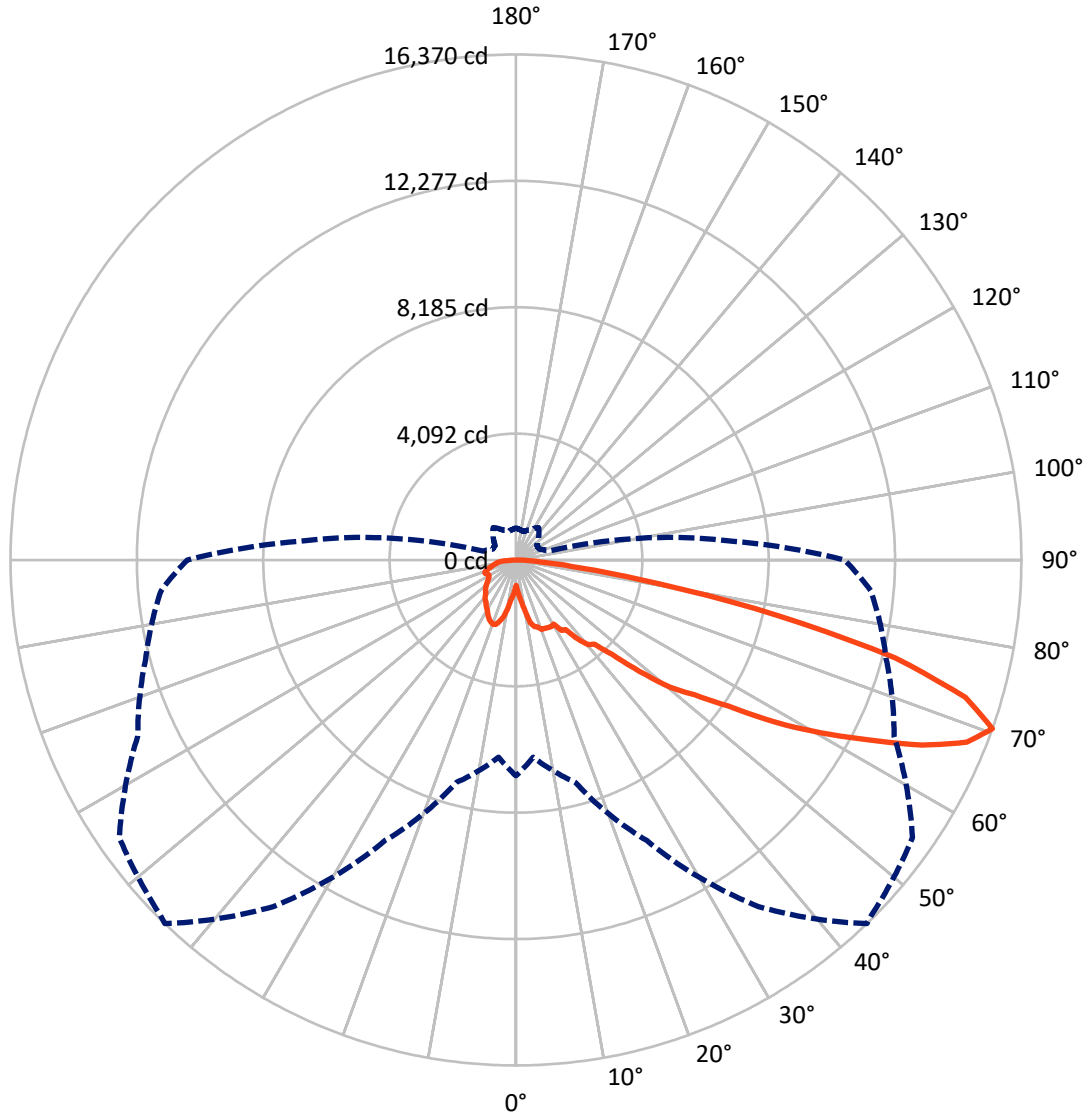
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.7 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 44-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	5359.8	0.0	5359.8
	% Fixture	22.1	0.0	22.1
Street Side	Lumens	18932.2	0.0	18932.2
	% Fixture	77.9	0.0	77.9
Total	Lumens	24292.0	0.0	24292.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	129.5	0.5
10°-20°	596.2	2.5
20°-30°	1114.1	4.6
30°-40°	1788.3	7.4
40°-50°	3018.4	12.4
50°-60°	5378.8	22.1
60°-70°	7357.5	30.3
70°-80°	4326.6	17.8
80°-90°	582.6	2.4
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°	24292.0	100.0
0°-180°	24292.0	100.0

Coefficient of Utilization



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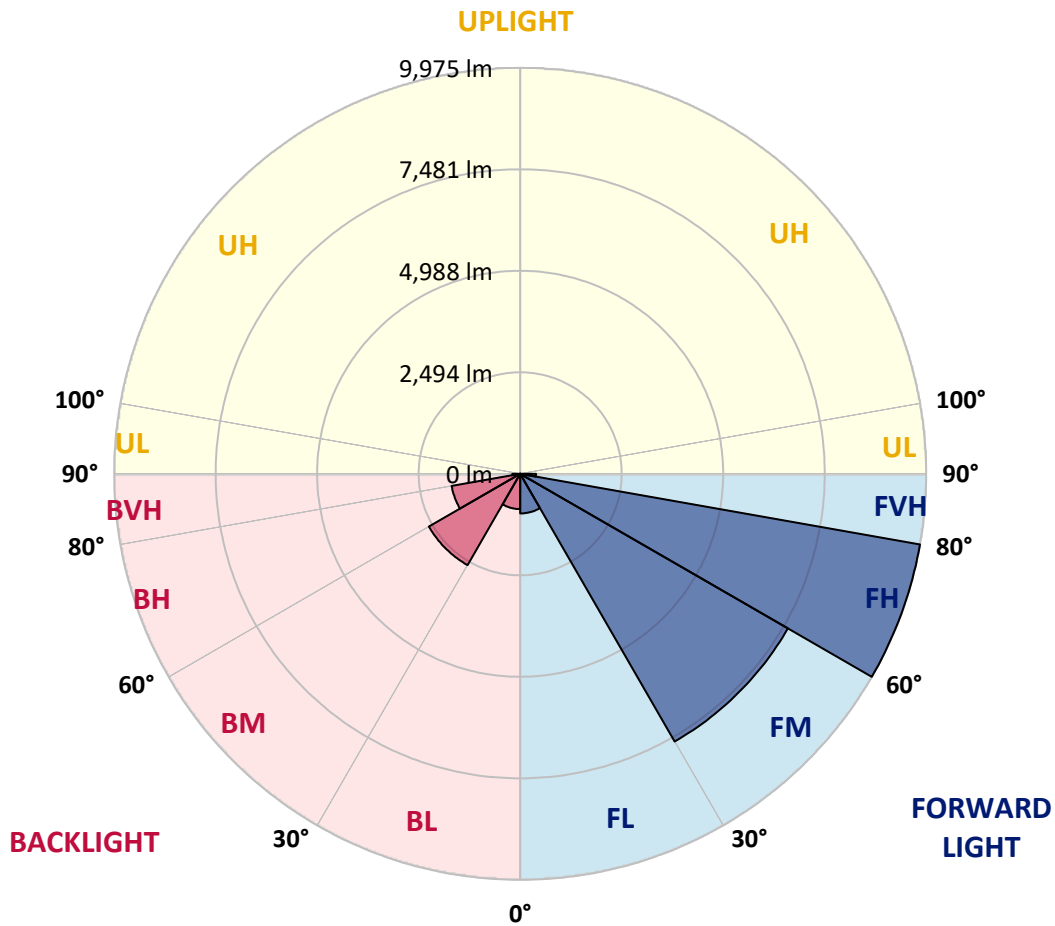
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	973.5	4.0			
FM (30°-60°)	7595.4	31.3			
FH (60°-80°)	9975.0	41.1			G4/12000
FVH (80°-90°)	388.3	1.6			G3/500
BL (0°-30°)	866.3	3.6	B2/1000		
BM (30°-60°)	2590.1	10.7	B3/5000		
BH (60°-80°)	1709.1	7.0	B3/2500		G3/2500
BVH (80°-90°)	194.3	0.8			G2/225
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G4

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	825.7	825.7	825.7	825.7	825.7	825.7	825.7	825.7	825.7	825.7	825.7
2.5°	1002.0	982.1	934.3	950.2	970.1	978.1	976.1	974.1	943.2	932.3	987.1
5°	1361.6	1317.8	1282.9	1269.0	1223.1	1187.3	1165.4	1223.1	1214.2	1229.1	1267.0
7.5°	1700.2	1672.4	1593.7	1565.8	1472.1	1410.4	1403.4	1449.2	1461.2	1437.3	1502.0
10°	1918.4	1870.6	1854.6	1787.9	1723.1	1713.2	1707.2	1686.3	1657.4	1655.4	1597.6
12.5°	2087.7	2112.6	2125.5	2048.9	2050.8	2086.7	2067.8	1983.1	1934.3	1848.7	1855.6
15°	2391.5	2427.3	2324.8	2276.0	2182.3	2236.1	2229.1	2158.4	2151.4	2095.7	2030.9
17.5°	2656.4	2672.4	2501.1	2389.5	2357.6	2279.9	2300.9	2302.8	2211.2	2310.8	2253.0
20°	2678.4	2735.1	2537.9	2315.8	2411.4	2401.5	2404.4	2384.5	2264.0	2428.3	2406.4
22.5°	2785.9	2699.3	2522.0	2359.6	2384.5	2399.5	2413.4	2389.5	2382.5	2474.2	2540.9
25°	2766.0	2738.1	2558.8	2421.4	2424.4	2427.3	2434.3	2506.0	2498.1	2622.6	2657.4
27.5°	2952.3	2909.4	2569.8	2535.9	2458.2	2441.3	2393.5	2542.9	2659.4	2656.4	2848.7
30°	3306.9	3263.0	2824.8	2726.2	2585.7	2412.4	2504.0	2703.3	2794.9	2825.8	3069.8
32.5°	3860.7	3932.4	3326.8	2929.4	2755.0	2717.2	2707.2	2687.3	2914.4	3066.8	3288.9
35°	4655.5	4598.7	3918.4	3364.6	2933.3	2771.0	2792.9	2914.4	3184.3	3282.9	3488.1
37.5°	5565.9	5448.3	4676.4	3857.7	3447.3	3244.1	3171.4	3288.9	3348.7	3426.4	3845.7
40°	6491.2	6204.3	5420.4	4506.1	3756.1	3602.7	3538.9	3394.5	3534.9	3692.3	4225.2
42.5°	7384.6	7162.5	6230.2	5280.0	4276.0	3729.2	3694.3	3552.9	3988.1	4154.5	4773.0
45°	8320.9	7806.0	7059.9	6153.5	5036.0	4349.7	4297.9	4043.9	4601.7	4948.3	5546.0
47.5°	8950.4	8473.3	7819.9	6862.7	5672.4	5387.6	5289.0	4854.7	5360.7	5810.9	6740.2
50°	9546.0	9055.0	8368.7	7638.6	6824.9	6497.2	6287.0	5563.9	6305.9	7039.0	8271.1
52.5°	10398.7	9959.4	9006.2	8420.5	8062.9	7257.1	7100.8	6703.3	7411.5	8400.6	9944.5
55°	11310.0	10711.4	9847.8	9523.1	9378.7	8346.8	8219.3	7966.3	8883.7	9794.1	11571.0
57.5°	11712.4	11087.9	10611.8	10417.6	10405.6	9930.5	9784.1	9607.8	10388.7	10989.3	13101.9
60°	12032.2	11361.8	11171.6	11280.2	11674.6	11361.8	11171.6	11016.2	11613.8	12170.6	14350.9
62.5°	11973.4	11301.1	11398.7	11729.4	12736.4	12828.0	12681.6	12305.1	12828.0	13138.8	15067.1
65°	11025.2	10403.6	10972.4	11757.3	13723.4	14455.5	14447.6	13462.5	13643.8	13643.8	14991.4
67.5°	9363.8	8720.3	9651.6	11511.2	14405.7	15745.4	15747.4	14689.6	13718.5	13593.0	13820.1
70°	6992.2	6409.5	7456.4	10025.1	13701.5	16369.9	16279.3	15679.7	13513.3	12416.6	11544.1
72.5°	4176.4	3799.9	4763.1	7298.0	11687.5	15221.5	15462.5	14539.2	12370.8	10325.9	8252.2
75°	1896.5	1733.1	2238.1	4192.3	8343.8	12696.5	12958.5	12270.2	9825.9	7426.5	4769.0
77.5°	811.8	767.9	977.1	1859.6	4600.7	8682.5	9219.3	8769.1	6657.5	4315.8	2109.6
80°	521.9	494.0	600.6	894.4	2136.5	4691.3	5153.5	4985.2	3391.5	1678.3	743.0
82.5°	311.8	302.8	401.4	561.8	1165.4	2064.8	2326.7	2388.5	1408.4	753.0	425.3
85°	170.3	172.3	220.1	340.6	699.2	803.8	860.6	936.3	663.4	436.3	206.2
87.5°	56.8	65.7	88.6	138.4	249.0	227.1	228.1	264.9	279.9	181.3	65.7
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°	825.7	825.7	825.7	825.7	825.7	825.7	825.7	825.7	825.7	825.7	825.7
2.5°	996.0	978.1	932.3	935.3	952.2	956.2	961.2	932.3	926.3	981.1	986.1
5°	1272.9	1214.2	1187.3	1178.3	1152.4	1143.5	1191.3	1213.2	1235.1	1277.9	1298.8
7.5°	1495.1	1429.3	1380.5	1335.7	1297.8	1275.9	1356.6	1418.4	1456.2	1543.9	1583.7
10°	1596.7	1539.9	1521.9	1486.1	1515.0	1580.7	1595.7	1597.6	1681.3	1679.3	1696.3
12.5°	1798.8	1762.0	1703.2	1716.2	1791.9	1859.6	1840.7	1869.6	1899.4	1971.2	1938.3
15°	1983.1	1973.2	1918.4	1927.3	1942.3	2026.9	2037.9	2066.8	2112.6	2169.4	2130.5
17.5°	2210.2	2206.2	2072.8	2060.8	2095.7	2178.3	2152.4	2101.6	2253.0	2313.8	2297.9
20°	2364.6	2334.7	2163.4	2112.6	2201.2	2212.2	2182.3	2101.6	2233.1	2365.6	2401.5
22.5°	2493.1	2458.2	2281.9	2182.3	2164.4	2169.4	2169.4	2154.4	2219.2	2327.7	2326.7
25°	2596.7	2629.5	2405.4	2309.8	2214.2	2094.7	2079.7	2092.7	2129.5	2338.7	2331.7
27.5°	2856.6	2766.0	2447.3	2375.6	2179.3	1991.1	2031.9	2051.8	2063.8	2292.9	2330.7
30°	3026.0	3053.9	2596.7	2414.4	2128.5	1875.5	1889.5	1947.3	2017.0	2287.9	2298.9
32.5°	3254.1	3194.3	2829.7	2349.7	1993.1	1805.8	1779.9	1857.6	1961.2	2207.2	2237.1
35°	3466.2	3536.9	2928.4	2337.7	1898.5	1701.2	1729.1	1756.0	1863.6	2117.6	2152.4
37.5°	3964.2	3802.9	3205.3	2279.9	1819.8	1648.4	1618.6	1659.4	1751.0	1947.3	2027.9
40°	4342.7	4352.7	3265.0	2207.2	1669.4	1572.7	1509.0	1549.8	1588.7	1745.1	1779.9
42.5°	5052.9	4835.8	3411.4	2047.9	1574.7	1459.2	1423.3	1441.3	1447.2	1513.0	1570.8
45°	5956.3	5447.3	3469.2	1833.7	1450.2	1412.4	1339.7	1330.7	1297.8	1306.8	1357.6
47.5°	7206.3	6401.5	3427.4	1605.6	1339.7	1351.6	1247.0	1206.2	1160.4	1171.3	1219.2
50°	8822.9	7620.7	3424.4	1412.4	1264.0	1271.9	1186.3	1112.6	1066.8	1089.7	1131.5
52.5°	10636.7	8843.8	3438.3	1279.9	1181.3	1177.3	1146.4	1056.8	1019.9	1043.8	1091.7
55°	12371.8	9895.7	3541.9	1196.2	1095.6	1102.6	1114.6	1038.9	998.0	1019.9	1069.7
57.5°	13881.8	10726.4	3503.1	1107.6	1016.0	1047.8	1079.7	1014.0	983.1	1015.0	1064.8
60°	14937.6	11111.8	3196.3	1022.9	957.2	1001.0	1062.8	1011.0	1007.0	1075.7	1135.5
62.5°	15323.1	10969.4	2598.7	956.2	922.3	995.0	1101.6	1076.7	1080.7	1165.4	1248.0
65°	14760.3	10220.4	1938.3	913.4	895.4	1023.9	1191.3	1115.6	1060.8	1130.5	1206.2
67.5°	13159.7	8888.7	1416.4	876.5	864.6	1069.7	1273.9	1111.6	1010.0	1080.7	1142.5
70°	10646.7	7016.1	1096.6	829.7	823.7	1038.9	1281.9	1081.7	955.2	1001.0	1035.9
72.5°	7295.0	4803.9	908.4	784.9	753.0	920.3	1217.2	1015.0	889.5	916.4	945.2
75°	4076.8	2696.3	764.0	729.1	659.4	819.7	1141.5	975.1	840.7	848.6	888.5
77.5°	1829.7	1166.4	648.4	655.4	574.7	725.1	1042.9	911.4	766.0	748.0	787.9
80°	692.2	568.7	525.9	553.8	483.1	628.5	940.3	853.6	687.3	664.4	687.3
82.5°	401.4	344.6	390.4	426.3	383.5	577.7	897.4	800.8	605.6	547.8	567.7
85°	186.3	178.3	234.1	276.9	267.9	450.2	767.9	602.6	431.3	364.6	403.4
87.5°	48.8	54.8	82.7	97.6	99.6	154.4	295.8	224.1	168.3	127.5	122.5
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)