

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: P367440

Luminaire Tested: **MSA-SA2C-740-U-SL2**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367440
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-SA2C-740-U-SL2
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) 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: 12255 lumens
Efficiency: N/A
Efficacy: 108.5 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type III - Medium
BUG Rating: B2 - U0 - G3

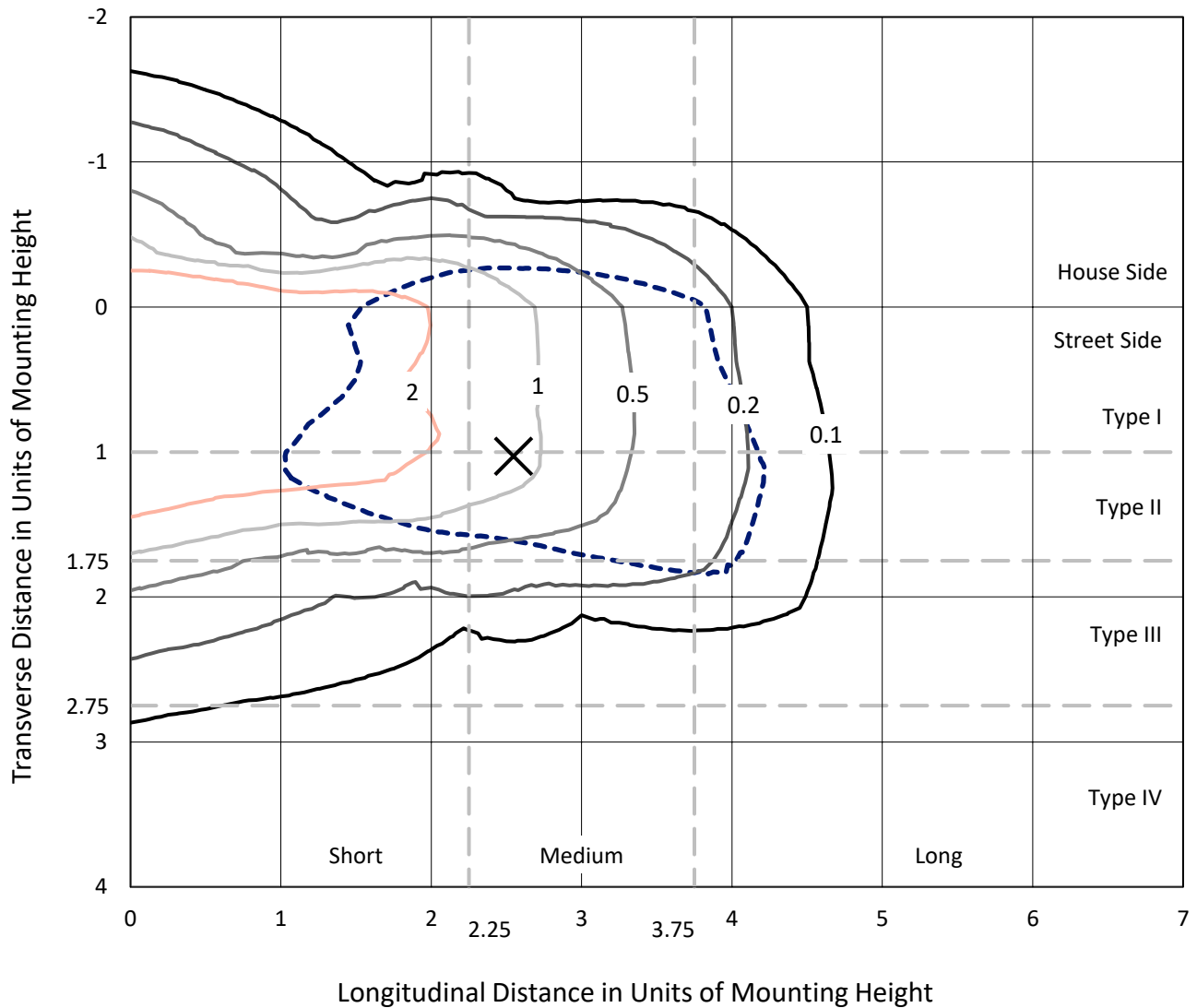
Input Watts (W): 113
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

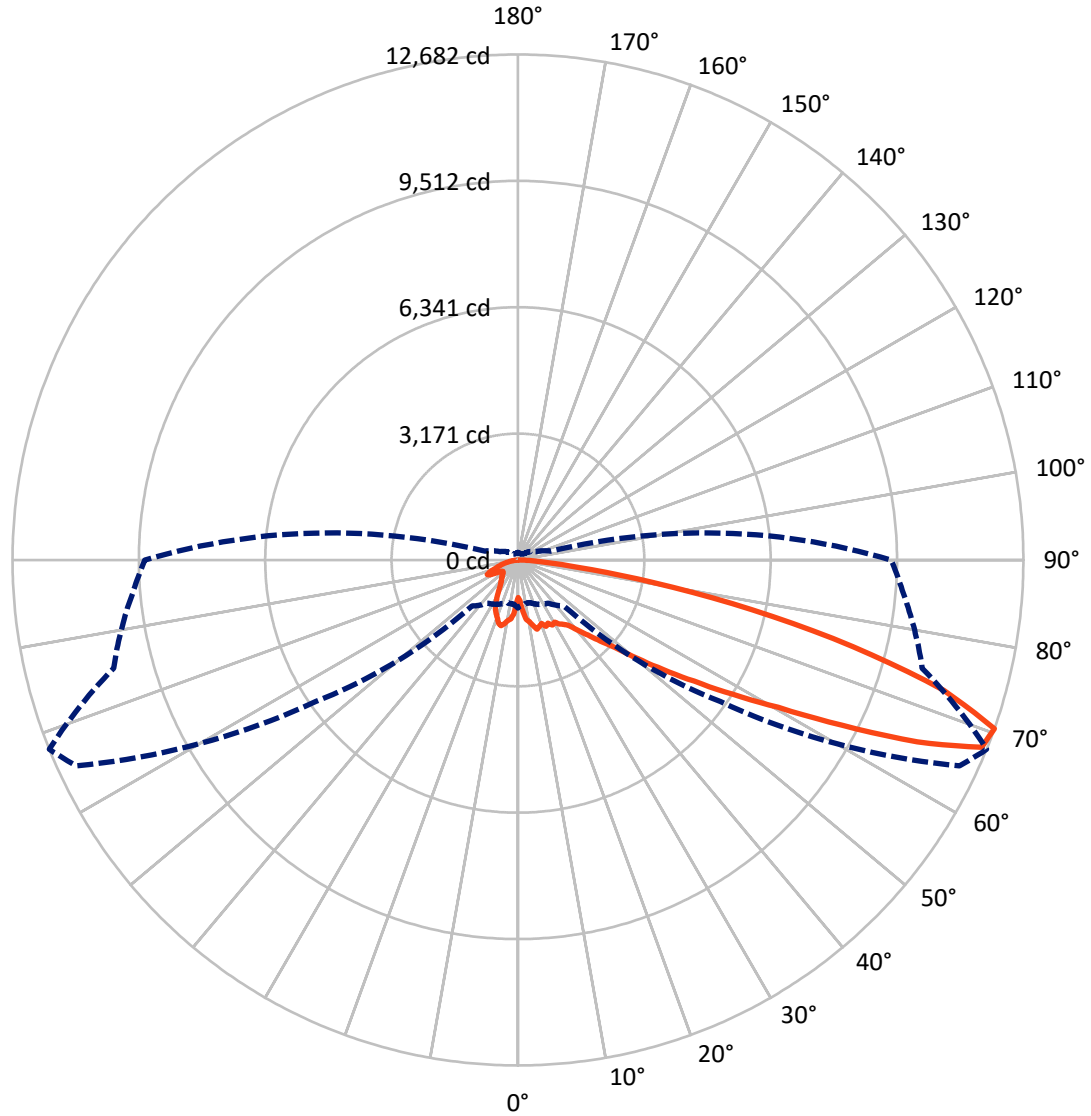
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 4.6 fc
 Type III - Medium - N/A

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Luminous Intensity Polar Plot



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

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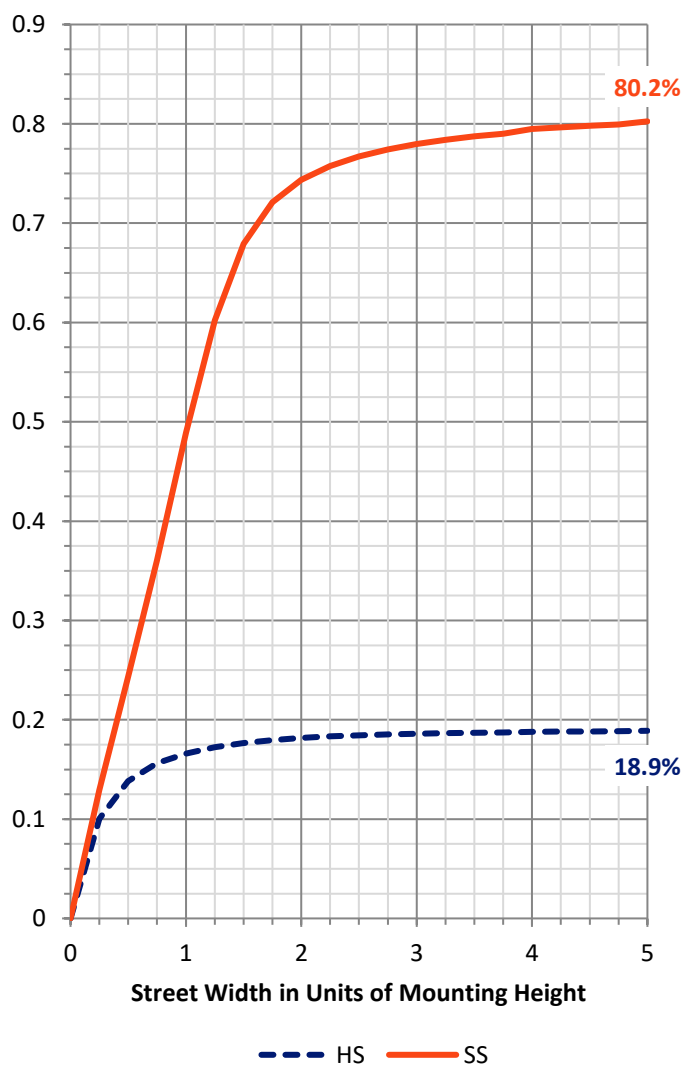
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2339.8	0.0	2339.8
	% Fixture	19.1	0.0	19.1
Street Side	Lumens	9915.2	0.0	9915.2
	% Fixture	80.9	0.0	80.9
Total	Lumens	12255.0	0.0	12255.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	125.5	1.0
10°-20°	409.0	3.3
20°-30°	622.2	5.1
30°-40°	950.4	7.8
40°-50°	1634.1	13.3
50°-60°	2704.8	22.1
60°-70°	3334.6	27.2
70°-80°	2142.1	17.5
80°-90°	332.3	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°	12255.0	100.0
0°-180°	12255.0	100.0

Coefficient of Utilization



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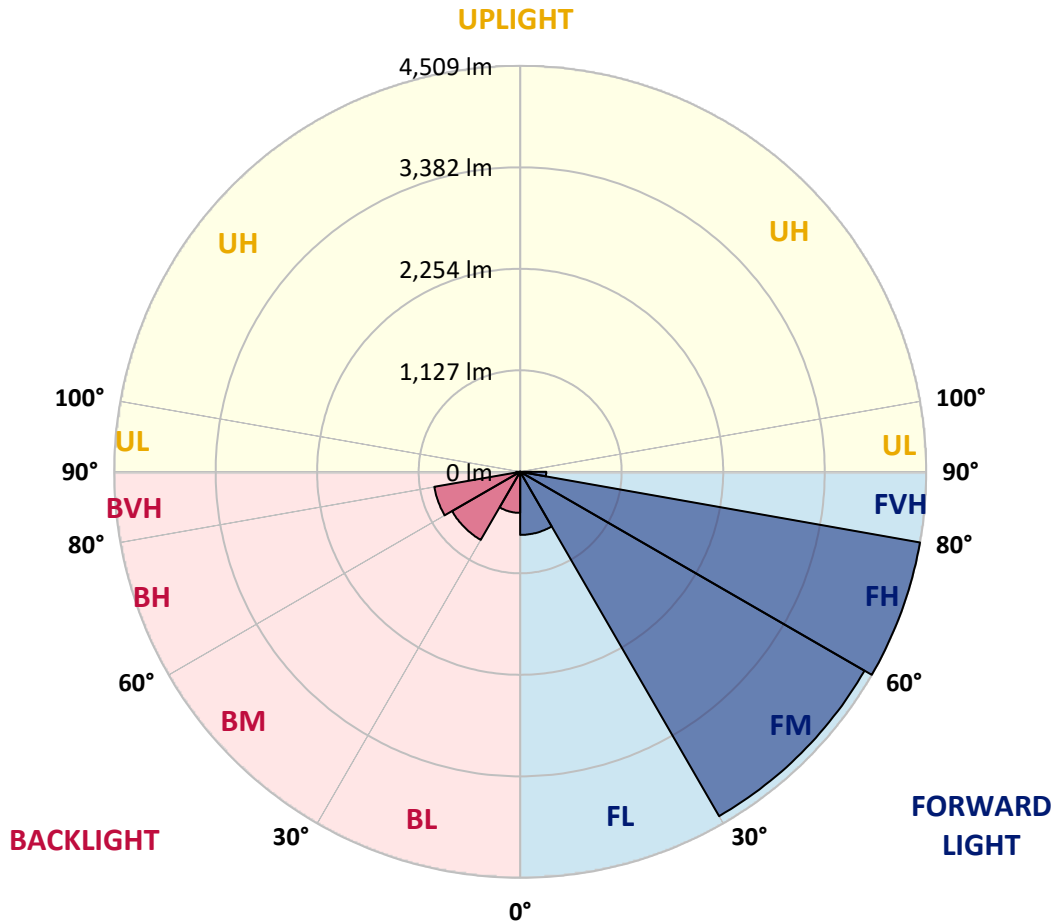
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	700.8	5.7			
FM (30°-60°)	4415.9	36.0			
FH (60°-80°)	4508.9	36.8			G2/5000
FVH (80°-90°)	289.6	2.4			G3/500
BL (0°-30°)	455.9	3.7	B1/500		
BM (30°-60°)	873.3	7.1	B1/1000		
BH (60°-80°)	967.9	7.9	B2/1000		G2/1000
BVH (80°-90°)	42.6	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 Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	68°	75°	85°
0°	939.6	939.6	939.6	939.6	939.6	939.6	939.6	939.6	939.6	939.6	939.6
2.5°	1079.7	1036.1	992.0	1013.5	1047.9	1078.1	1072.0	1075.6	1034.0	1028.4	1137.6
5°	1272.0	1197.1	1195.6	1196.6	1199.7	1164.8	1249.9	1294.0	1303.8	1348.9	1456.1
7.5°	1338.7	1308.4	1277.6	1293.0	1254.0	1257.6	1362.3	1477.2	1504.3	1537.2	1683.9
10°	1324.8	1296.1	1305.3	1307.9	1315.1	1373.0	1440.2	1550.5	1573.6	1678.2	1716.2
12.5°	1326.9	1321.7	1364.8	1366.4	1443.3	1547.4	1574.1	1675.6	1684.9	1761.8	1920.3
15°	1397.1	1432.5	1408.4	1421.2	1436.1	1560.8	1599.2	1744.9	1800.3	1899.3	2018.3
17.5°	1534.1	1544.3	1472.0	1453.0	1501.8	1539.7	1627.4	1690.5	1748.5	2024.9	2189.1
20°	1565.9	1593.6	1507.4	1409.5	1512.5	1565.4	1626.4	1655.1	1700.3	2043.4	2276.3
22.5°	1702.3	1644.9	1540.8	1455.6	1489.5	1540.8	1584.9	1693.1	1811.6	1990.6	2363.4
25°	1779.8	1746.4	1653.6	1562.3	1533.6	1535.1	1620.3	1717.2	1758.2	2068.0	2380.9
27.5°	1967.0	1913.6	1704.9	1687.4	1579.2	1495.1	1625.9	1776.7	1848.5	2007.5	2466.0
30°	2201.4	2160.9	1887.0	1863.9	1698.7	1552.0	1697.7	1820.8	1810.5	2047.0	2525.0
32.5°	2391.1	2458.8	2182.4	2000.3	1882.9	1742.3	1675.1	1813.1	1915.2	2138.8	2625.0
35°	2662.0	2725.6	2412.7	2289.6	2034.7	1830.5	1832.6	1918.8	1981.8	2246.0	2736.8
37.5°	3130.7	3074.8	2823.0	2628.6	2465.5	2160.9	2069.6	2039.3	2090.1	2377.3	2955.8
40°	3468.7	3421.6	3125.1	3014.3	2696.8	2519.9	2269.6	2240.9	2330.6	2512.7	3134.8
42.5°	3869.3	3785.2	3509.3	3418.0	3086.1	2767.1	2514.8	2531.2	2574.8	2768.1	3376.9
45°	4277.1	4072.9	3916.5	3909.3	3687.8	3247.2	2908.1	2894.8	2896.4	3144.1	3648.8
47.5°	4600.7	4417.1	4238.1	4153.0	4041.1	4077.6	3479.5	3323.1	3275.9	3522.6	4056.5
50°	4819.7	4608.4	4405.8	4385.8	4684.3	4880.8	4016.0	3848.8	3878.0	4064.2	4600.2
52.5°	4824.3	4573.5	4362.2	4502.2	5205.4	5486.5	4940.3	4473.0	4566.4	4693.0	5309.5
55°	4488.9	4228.9	4091.4	4410.4	5409.1	6205.1	6238.9	5473.2	5365.5	5412.1	6157.4
57.5°	3781.6	3519.0	3439.0	3821.1	5022.8	6898.0	7807.4	6668.2	6352.3	6157.4	7026.2
60°	2846.6	2619.4	2569.6	2813.3	4164.2	6694.4	9077.3	8155.6	7511.9	6989.8	7897.6
62.5°	2134.7	1971.6	1896.7	1931.6	2881.5	6032.2	9911.3	10034.9	9123.5	7898.7	8749.1
65°	1734.6	1602.8	1536.1	1491.0	1792.1	4664.3	9760.5	11616.7	11005.8	8853.2	9411.7
67.5°	1448.9	1332.0	1301.2	1345.3	1416.6	2706.1	8580.8	12501.4	12543.0	9794.9	9799.0
70°	1202.8	1116.1	1104.8	1229.9	1323.8	1633.1	6197.9	12223.5	12682.0	10501.1	9708.2
72.5°	929.4	882.7	881.2	1077.6	1315.1	1392.0	3690.8	10559.6	11175.6	10275.5	8819.8
75°	644.7	612.4	637.0	885.8	1284.8	1412.0	2106.5	8224.9	8686.0	8743.9	7065.2
77.5°	443.7	416.5	443.1	640.6	1147.4	1445.9	1473.6	5947.1	5998.4	5863.5	4046.8
80°	308.8	289.8	310.3	453.4	893.0	1431.0	1254.6	3744.2	3435.4	2616.8	1295.6
82.5°	191.3	185.7	208.2	323.1	628.8	1301.7	1188.9	1932.1	1475.1	722.2	462.6
85°	100.5	92.3	121.0	210.8	393.4	1021.7	1114.0	881.7	569.3	256.5	185.7
87.5°	29.7	26.7	46.7	85.1	166.7	458.0	637.5	373.9	212.3	75.4	58.0
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°	939.6	939.6	939.6	939.6	939.6	939.6	939.6	939.6	939.6	939.6	939.6
2.5°	1145.3	1139.7	1063.8	1073.5	1089.9	1094.0	1093.5	1065.8	1036.6	1118.1	1115.6
5°	1458.7	1407.9	1370.0	1361.8	1315.1	1268.4	1284.8	1279.2	1272.0	1308.9	1313.5
7.5°	1684.4	1614.1	1570.0	1456.6	1348.9	1255.6	1285.3	1294.6	1276.1	1342.8	1362.8
10°	1743.9	1688.5	1640.8	1495.1	1435.6	1381.2	1300.7	1208.9	1196.6	1158.1	1162.7
12.5°	1897.2	1889.5	1726.9	1598.7	1521.3	1413.0	1239.2	1127.9	1032.5	1037.1	1009.4
15°	2018.3	2022.4	1827.0	1647.4	1439.7	1274.6	1069.9	931.4	833.5	814.0	794.0
17.5°	2180.9	2172.6	1835.2	1589.0	1325.8	1083.8	833.0	695.5	679.1	690.4	672.9
20°	2251.6	2179.3	1782.8	1443.8	1147.9	823.2	629.3	556.5	588.3	633.4	634.5
22.5°	2315.2	2191.6	1755.7	1326.9	910.9	598.6	505.2	491.9	529.3	590.3	595.5
25°	2312.7	2248.6	1706.9	1208.9	706.3	467.3	439.0	448.8	493.4	557.0	560.6
27.5°	2429.1	2205.0	1580.2	1054.0	531.9	400.1	407.2	425.2	446.2	506.7	518.5
30°	2428.1	2286.0	1516.6	865.8	427.2	366.7	385.2	400.6	418.0	473.4	480.1
32.5°	2485.5	2233.2	1478.2	673.4	383.1	358.5	363.1	378.5	403.7	441.1	445.7
35°	2554.8	2293.2	1355.1	535.0	366.7	351.3	354.9	363.6	386.7	421.1	425.7
37.5°	2776.8	2304.5	1306.4	450.8	365.7	348.3	347.7	352.4	378.5	409.8	423.7
40°	2863.5	2407.6	1164.3	421.1	362.1	348.3	341.1	343.6	365.2	405.2	416.0
42.5°	3071.2	2441.9	1059.1	410.8	362.1	342.1	330.8	334.9	360.1	395.4	412.4
45°	3285.1	2490.6	934.0	408.8	361.6	341.6	320.1	329.3	349.8	379.5	398.0
47.5°	3589.8	2666.1	808.8	402.6	357.5	344.2	317.5	317.0	334.9	360.6	378.0
50°	4086.8	2939.9	711.9	394.9	358.0	342.1	312.4	305.2	317.0	339.5	356.5
52.5°	4778.7	3406.7	674.0	390.8	353.9	333.9	303.6	292.4	299.0	317.0	333.4
55°	5581.9	4037.0	711.4	390.8	345.7	321.1	291.3	278.0	281.6	293.9	309.8
57.5°	6520.5	4820.2	892.4	385.2	335.4	305.7	276.5	261.1	262.1	272.9	287.2
60°	7500.7	5695.3	1298.2	380.6	328.3	288.8	259.0	243.1	241.6	251.8	264.7
62.5°	8482.4	6502.6	1724.9	391.3	326.2	274.4	240.6	224.7	224.1	233.4	244.1
65°	9263.0	7054.4	1831.1	434.9	339.5	258.0	221.6	206.7	205.7	213.4	225.2
67.5°	9646.1	7134.5	1391.0	489.3	367.7	242.6	203.1	189.3	188.2	196.4	206.7
70°	9362.5	6587.7	858.6	494.9	366.2	224.7	184.1	172.3	170.3	179.0	186.7
72.5°	8313.1	5762.4	652.4	438.0	317.0	199.0	165.2	154.9	151.8	159.5	166.7
75°	6672.3	4575.1	522.6	353.4	249.8	167.7	146.2	136.4	132.8	140.0	146.2
77.5°	3886.8	2573.7	382.1	275.9	188.7	136.9	124.6	115.9	111.8	119.5	124.1
80°	1263.8	857.6	240.0	198.0	138.0	107.2	101.0	94.9	90.8	95.9	97.5
82.5°	453.9	319.0	132.8	121.6	91.8	76.9	76.4	72.8	67.7	69.8	69.8
85°	201.1	145.7	79.0	65.1	54.9	41.0	48.2	45.6	40.5	39.5	38.0
87.5°	56.4	48.2	28.7	22.1	18.0	6.7	15.4	13.8	11.3	10.3	7.2
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)