

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: P597144

Luminaire Tested: **MSA-SA4C-835-U-SL4**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P597144
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-20)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA4C-835-U-SL4
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV SPILL LIGHT ELIMINATOR OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 19322 lumens
Efficiency: N/A
Efficacy: 85.9 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G4

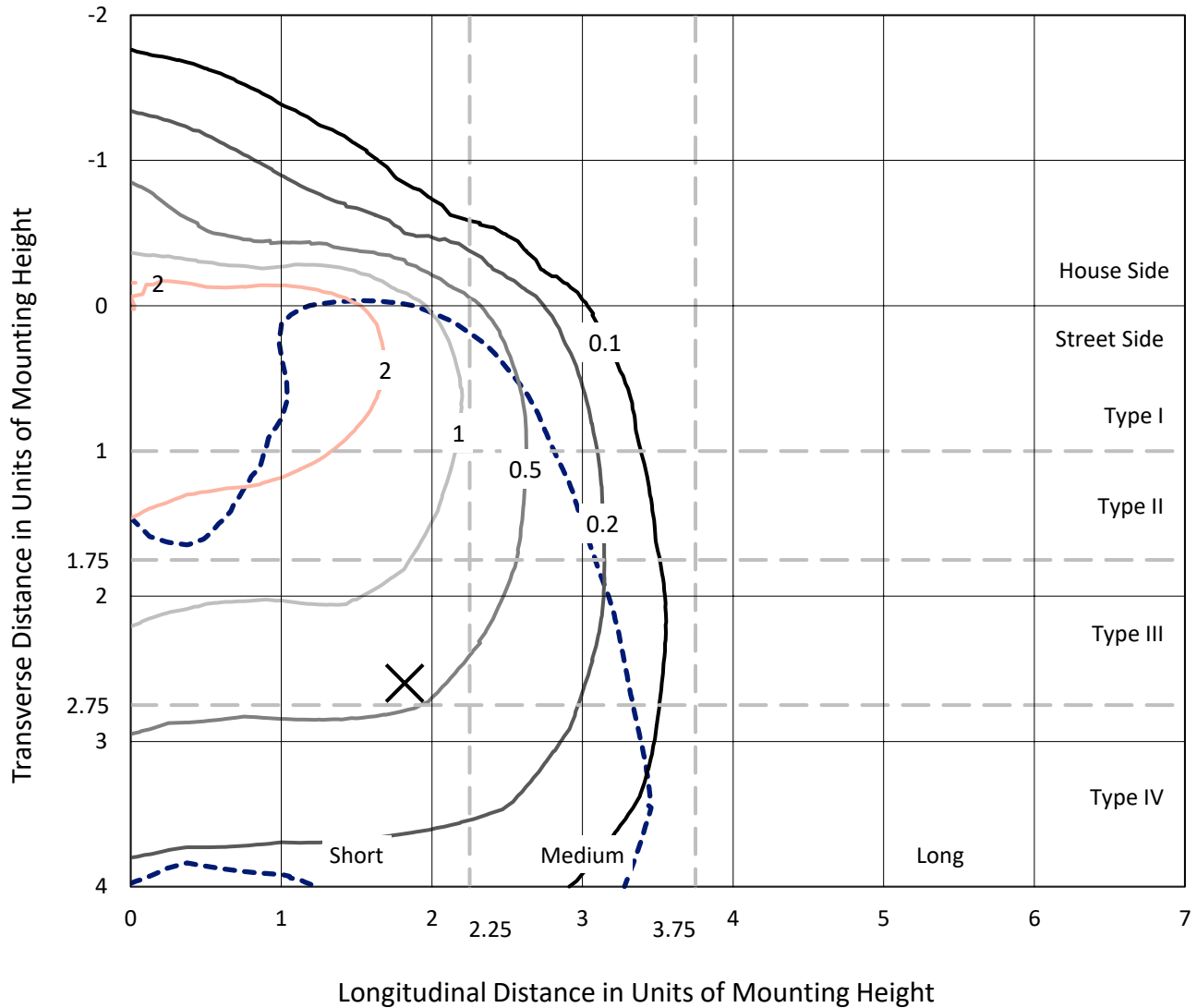
Input Watts (W): 225
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

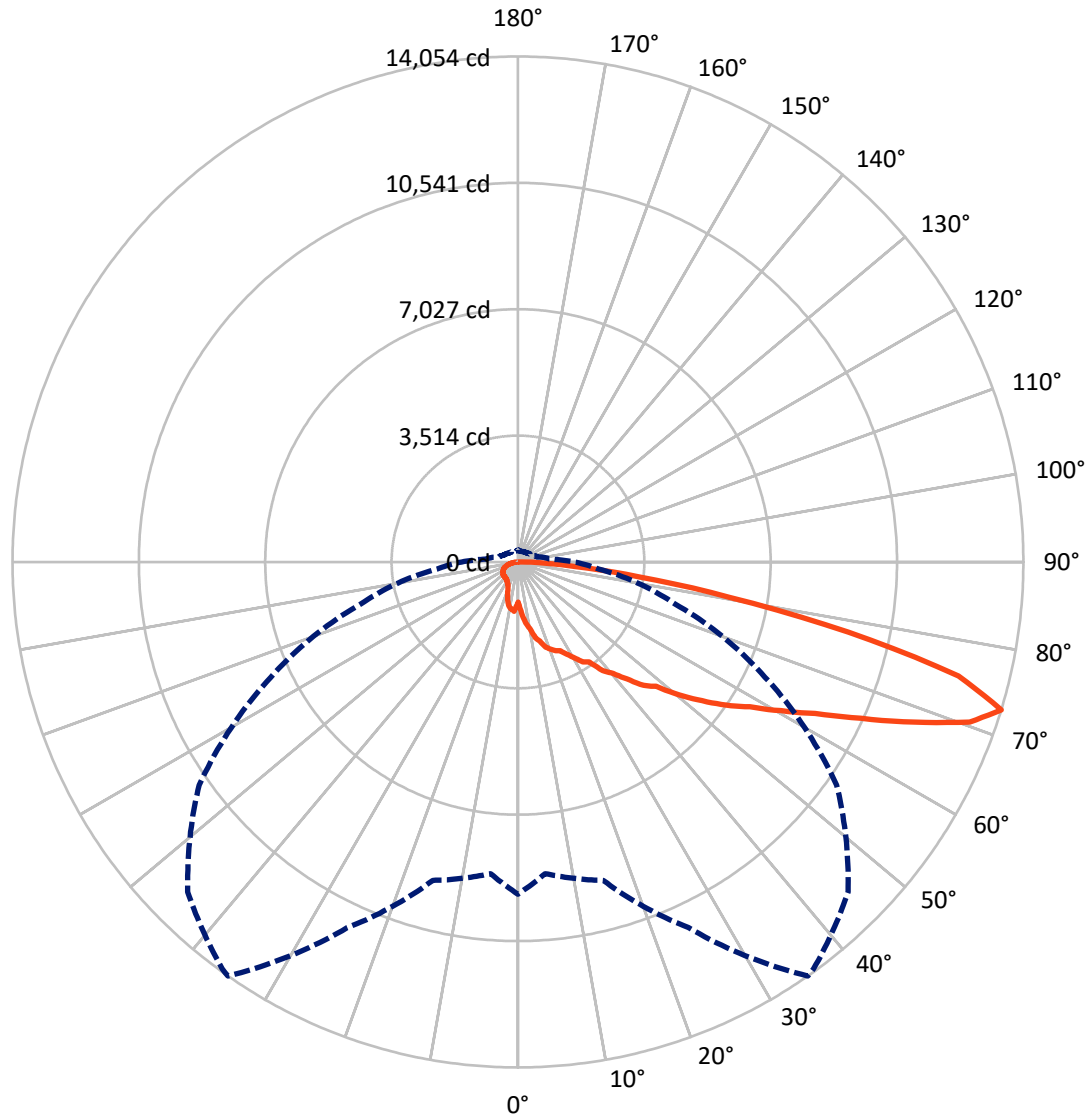
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.9 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 35-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical

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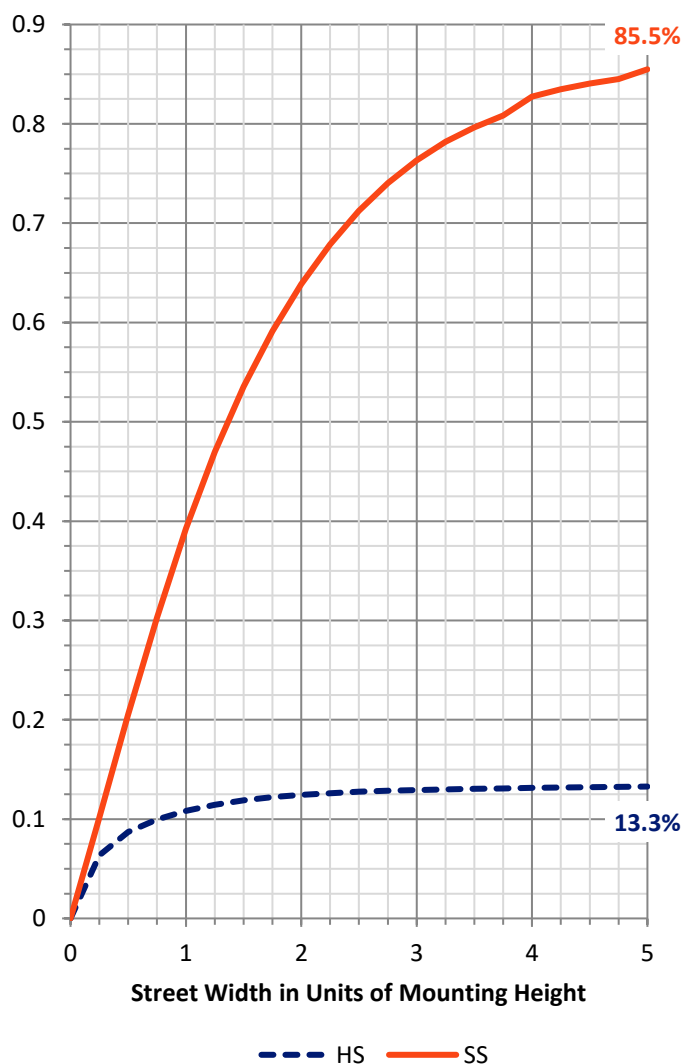
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2593.0	0.0	2593.0
	% Fixture	13.4	0.0	13.4
Street Side	Lumens	16729.1	0.0	16729.1
	% Fixture	86.6	0.0	86.6
Total	Lumens	19322.0	0.0	19322.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	148.4	0.8
10°-20°	522.8	2.7
20°-30°	908.3	4.7
30°-40°	1518.1	7.9
40°-50°	2634.9	13.6
50°-60°	3983.3	20.6
60°-70°	5160.3	26.7
70°-80°	3807.7	19.7
80°-90°	638.2	3.3
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°	19322.0	100.0
0°-180°	19322.0	100.0

Coefficient of Utilization



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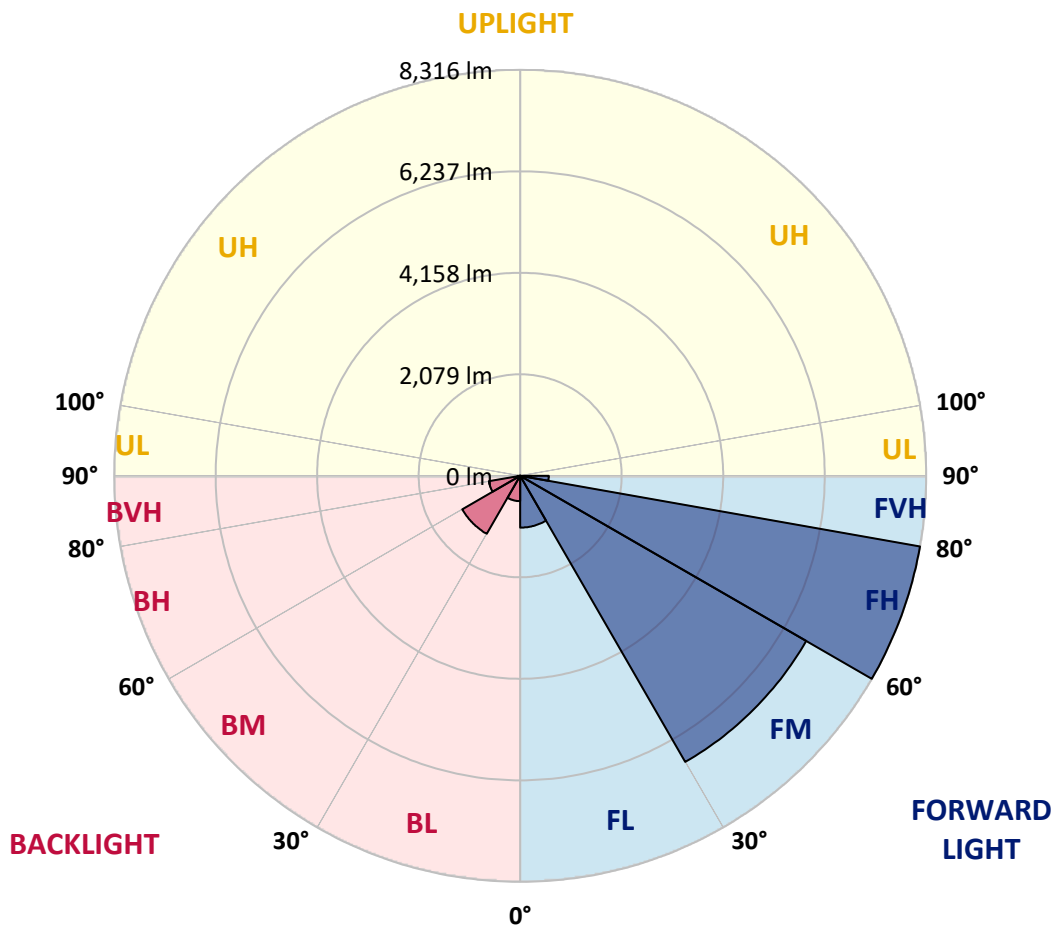
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1061.2	5.5			
FM (30°-60°)	6765.9	35.0			
FH (60°-80°)	8316.0	43.0			G4/12000
FVH (80°-90°)	585.9	3.0			G4/750
BL (0°-30°)	518.3	2.7	B2/1000		
BM (30°-60°)	1370.4	7.1	B2/2500		
BH (60°-80°)	652.0	3.4	B2/1000		G2/1000
BVH (80°-90°)	52.2	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-G4

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	1116.6	1116.6	1116.6	1116.6	1116.6	1116.6	1116.6	1116.6	1116.6	1116.6	1116.6
2.5°	1392.9	1326.1	1268.4	1265.9	1319.5	1340.1	1331.9	1313.7	1292.3	1246.9	1345.9
5°	1745.0	1649.4	1631.2	1609.8	1561.1	1574.3	1495.2	1555.4	1574.3	1618.0	1684.0
7.5°	1952.9	1896.8	1853.1	1834.9	1750.8	1740.9	1682.4	1768.1	1804.4	1798.6	1896.8
10°	2034.5	1983.4	1986.7	1927.3	1900.1	1911.6	1918.2	1919.9	1942.1	1960.3	1910.8
12.5°	2076.6	2096.4	2168.9	2128.5	2163.2	2177.2	2246.4	2175.5	2178.0	2084.8	2135.9
15°	2288.5	2338.0	2295.9	2294.3	2283.6	2306.7	2366.0	2318.2	2355.3	2325.6	2259.6
17.5°	2544.2	2559.0	2478.2	2445.2	2488.1	2480.7	2465.8	2473.2	2380.9	2552.4	2471.6
20°	2622.5	2681.1	2574.7	2445.2	2587.0	2606.0	2602.7	2570.6	2412.2	2659.6	2581.3
22.5°	2850.1	2770.9	2686.8	2604.4	2676.9	2687.7	2669.5	2592.8	2540.0	2634.1	2695.9
25°	2953.2	2934.2	2827.0	2817.1	2737.1	2699.2	2730.5	2708.3	2656.3	2823.7	2755.3
27.5°	3189.1	3166.8	2920.2	3021.7	2905.4	2895.5	2729.7	2803.9	2855.9	2843.5	2945.8
30°	3456.3	3481.8	3121.4	3222.9	3088.5	3070.3	2903.7	2997.7	3033.2	3044.7	3172.6
32.5°	3753.2	3823.3	3465.3	3382.0	3310.3	3322.7	3181.6	3010.1	3147.8	3417.5	3472.8
35°	4074.8	4103.6	3728.4	3603.1	3415.9	3402.7	3405.1	3426.6	3565.9	3873.6	3916.4
37.5°	4669.4	4535.8	4206.7	3889.2	3826.5	3703.7	3787.0	3852.9	3992.3	4464.0	4643.8
40°	5035.5	4936.6	4435.2	4251.3	4078.1	4089.6	4245.5	4244.7	4573.7	5060.3	5334.9
42.5°	5374.5	5266.5	4793.9	4609.2	4445.1	4485.5	4530.0	4608.4	5239.2	6023.5	6148.9
45°	5647.5	5410.8	5071.0	5029.8	4894.5	4840.9	5029.8	5155.1	6035.1	6802.8	6875.4
47.5°	5833.0	5638.4	5306.0	5269.8	5170.0	5301.1	5816.5	5897.3	6651.9	7585.5	7579.7
50°	6115.1	5848.7	5548.5	5529.5	5810.7	5880.8	6509.3	6501.0	7252.3	8235.3	8099.3
52.5°	6440.0	6104.3	5778.6	5982.3	6411.1	6445.8	6990.9	7212.7	7907.9	8862.1	8506.7
55°	6813.6	6438.3	6123.3	6395.5	7033.8	6931.5	7483.2	8025.0	8728.5	9522.7	8801.1
57.5°	7276.2	6821.0	6566.2	6980.2	7602.0	7692.7	8188.3	8870.3	9389.1	9933.4	9015.5
60°	7764.4	7230.0	6996.6	7390.8	8397.8	8501.7	8986.6	9573.0	10129.6	10320.1	8975.1
62.5°	8230.4	7652.3	7441.2	7927.7	9280.2	9537.5	9895.4	10269.0	10745.7	10414.2	8486.0
65°	8749.1	8170.2	8037.4	8767.3	10476.8	10732.5	11200.1	11087.9	10956.8	10081.0	7677.0
67.5°	9298.4	8710.3	8735.1	9741.2	11887.9	11931.6	12649.9	11904.4	10708.6	9198.6	6318.8
70°	9593.6	8991.6	9246.4	10779.5	13323.6	13261.0	13407.8	12123.7	9696.7	7271.3	4355.2
72.5°	9235.7	8698.8	9165.6	11216.6	14054.3	13986.7	12982.2	10821.5	7581.4	4521.8	2258.0
75°	7819.7	7301.8	8016.0	9998.5	12652.4	12715.0	11048.3	8047.3	4340.3	1818.4	937.7
77.5°	5313.5	5046.3	5658.2	7452.7	9398.1	9615.0	8197.4	4705.7	1822.6	752.9	567.4
80°	2808.1	2681.1	3133.0	4293.3	5950.9	6112.6	4820.3	2343.8	933.5	487.4	404.9
82.5°	1525.7	1472.1	1714.5	2207.7	3381.2	3522.2	2499.6	1557.0	629.2	305.1	247.4
85°	1025.1	1004.5	1165.3	1185.9	1599.1	1645.3	1309.6	1199.1	377.7	149.3	163.3
87.5°	513.0	492.3	613.6	541.8	610.3	611.1	600.4	765.3	95.7	49.5	29.7
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°	1116.6	1116.6	1116.6	1116.6	1116.6	1116.6	1116.6	1116.6	1116.6	1116.6	1116.6
2.5°	1347.5	1318.7	1218.9	1218.1	1232.9	1223.0	1230.4	1190.0	1172.7	1251.9	1247.8
5°	1674.9	1588.3	1505.1	1476.2	1442.4	1369.0	1373.1	1373.9	1361.6	1408.6	1411.9
7.5°	1867.1	1763.2	1686.5	1533.1	1412.7	1318.7	1331.0	1345.1	1331.0	1393.7	1416.8
10°	1895.1	1812.7	1721.1	1550.4	1470.4	1385.5	1299.7	1223.8	1214.8	1185.9	1195.0
12.5°	2061.7	1993.3	1801.9	1614.7	1521.5	1391.2	1234.6	1148.0	1075.4	1087.8	1064.7
15°	2198.6	2150.0	1920.7	1675.8	1453.1	1291.5	1124.9	1006.1	941.0	933.5	910.5
17.5°	2384.2	2314.9	1931.4	1633.7	1364.9	1171.1	983.0	848.6	820.6	809.0	797.5
20°	2473.2	2348.7	1892.7	1501.8	1261.8	1027.6	842.8	727.4	719.1	739.7	735.6
22.5°	2550.8	2376.7	1858.0	1421.8	1101.0	882.4	747.2	671.3	662.2	688.6	693.6
25°	2596.1	2456.7	1820.1	1340.1	1001.2	774.4	675.4	632.5	634.2	668.8	664.7
27.5°	2800.6	2484.8	1724.4	1243.6	886.5	694.4	640.8	618.5	609.4	657.3	661.4
30°	2929.3	2667.9	1703.0	1141.4	801.6	635.8	609.4	600.4	598.7	656.5	660.6
32.5°	3168.4	2728.9	1712.9	1030.0	724.9	617.7	586.4	585.5	602.0	657.3	663.9
35°	3500.0	2986.2	1665.0	966.5	682.8	589.7	568.2	574.8	602.8	663.0	672.1
37.5°	4146.5	3228.7	1679.9	907.2	668.8	580.6	563.3	567.4	612.7	677.9	702.6
40°	4658.7	3668.2	1656.8	877.5	649.9	578.9	552.5	569.0	611.9	686.1	708.4
42.5°	5400.9	4018.7	1659.3	847.8	649.0	572.3	550.9	570.7	610.3	678.7	709.2
45°	6037.5	4332.9	1694.7	830.5	640.8	583.1	548.4	573.2	599.5	652.3	686.1
47.5°	6559.6	4683.4	1731.0	814.0	637.5	593.0	545.9	555.8	581.4	622.6	653.2
50°	6985.1	4930.0	1777.2	810.7	637.5	588.0	539.3	538.5	560.0	593.0	621.8
52.5°	7316.6	5104.0	1808.5	814.8	637.5	569.0	531.1	524.5	537.7	561.6	590.5
55°	7556.6	5157.6	1783.0	825.5	636.7	551.7	516.3	510.5	517.1	533.6	560.8
57.5°	7653.1	5016.6	1630.4	806.5	636.7	539.3	498.1	491.5	498.1	510.5	537.7
60°	7411.5	4563.0	1410.2	757.9	624.3	522.9	477.5	473.4	483.3	494.0	520.4
62.5°	6805.3	3960.1	1175.2	700.2	598.7	508.8	457.7	458.5	474.2	489.0	515.4
65°	5863.5	3231.1	979.7	641.6	566.6	486.6	437.1	442.9	465.1	484.9	511.3
67.5°	4614.1	2394.1	824.7	584.7	521.2	450.3	414.0	415.6	431.3	450.3	475.8
70°	3084.3	1523.2	677.9	517.9	461.8	403.3	378.5	372.8	368.6	385.1	407.4
72.5°	1564.4	899.7	556.7	442.9	397.5	352.1	333.2	318.3	306.8	316.7	334.0
75°	819.7	629.2	449.5	367.8	328.2	299.4	285.3	265.5	257.3	263.1	275.4
77.5°	579.8	492.3	363.7	291.1	267.2	237.5	240.0	219.4	212.8	216.1	229.3
80°	445.3	390.1	279.6	220.2	206.2	177.3	185.6	173.2	164.9	163.3	173.2
82.5°	303.5	293.6	198.7	154.2	144.3	123.7	135.2	130.3	119.6	113.0	117.9
85°	204.5	194.6	121.2	89.1	84.9	64.3	82.5	79.2	70.1	60.2	61.0
87.5°	35.5	65.2	34.6	22.3	20.6	7.4	19.0	18.1	16.5	8.2	6.6
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)