

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: P366761

Luminaire Tested: **MSA-SA1B-730-U-SL4-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P366761
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-21)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA1B-730-U-SL4-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS
EACH AND TYPE IV SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3815 lumens
Efficiency: N/A
Efficacy: 86.7 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B0 - U0 - G1

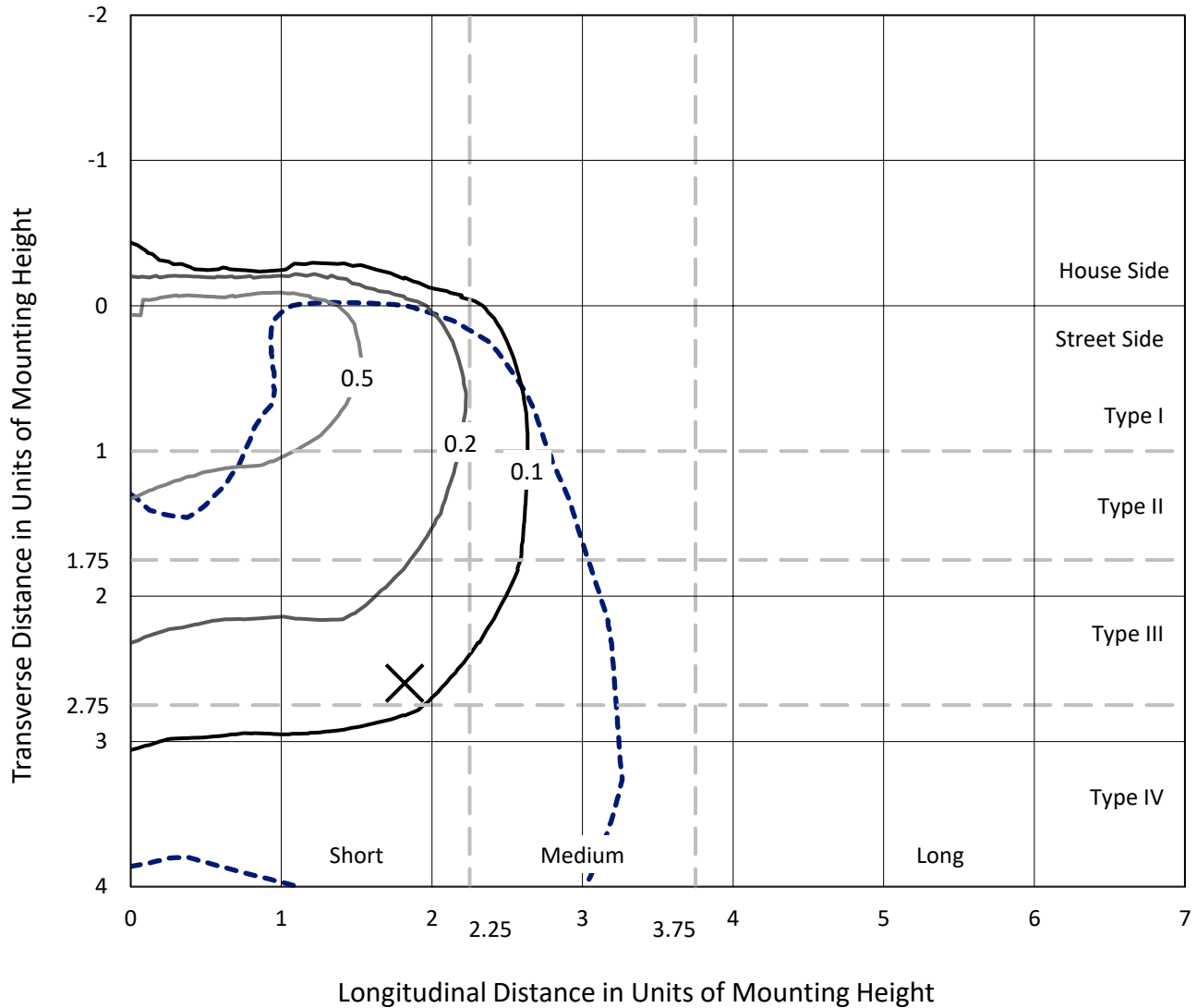
Input Watts (W): 44
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

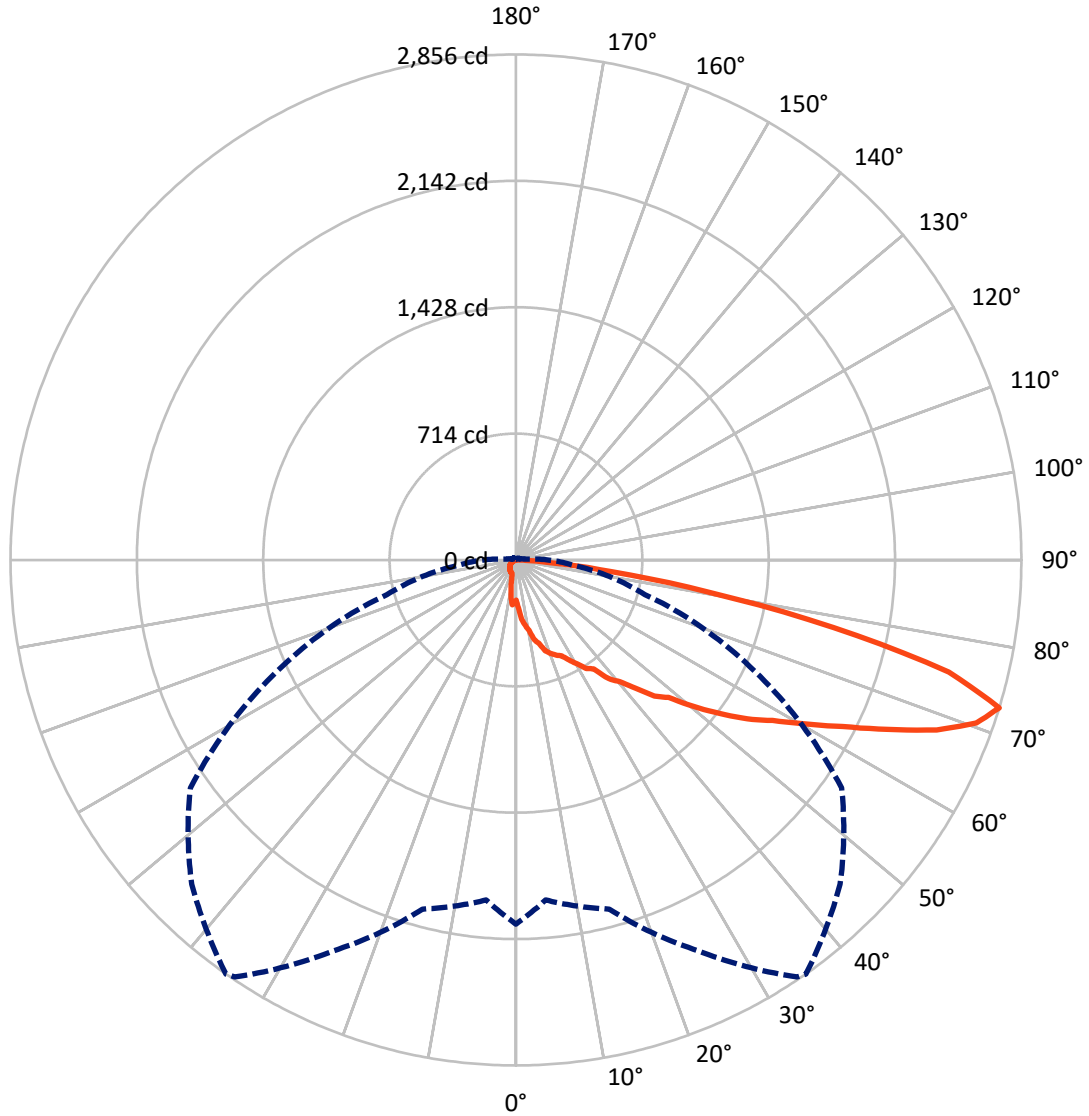
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.9 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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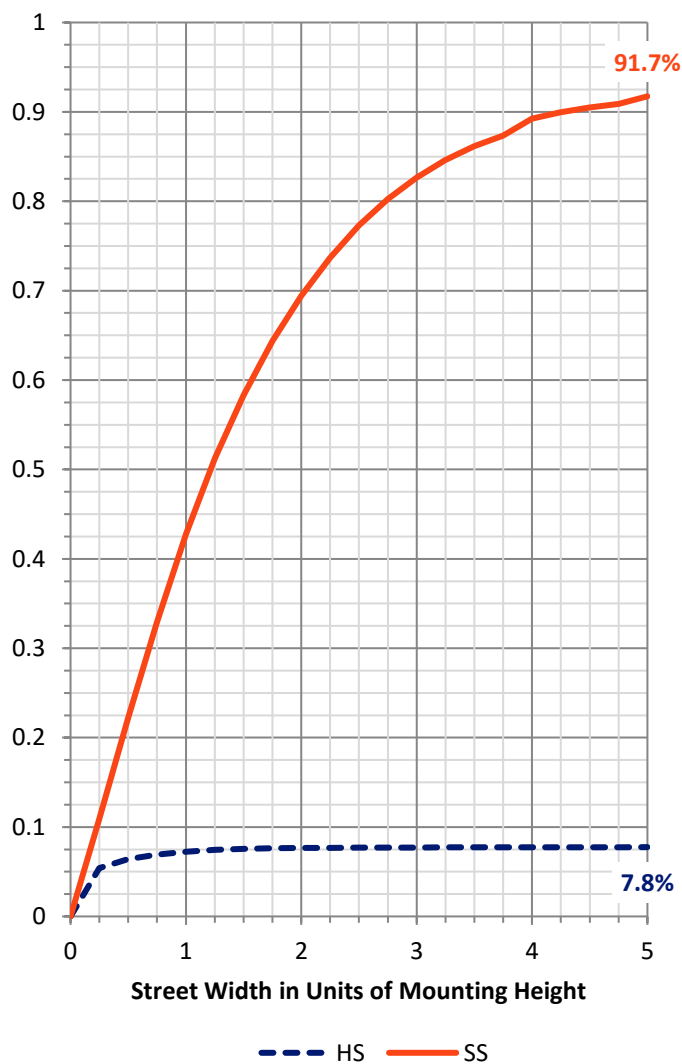
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	297.6	0.0	297.6
	% Fixture	7.8	0.0	7.8
Street Side	Lumens	3517.4	0.0	3517.4
	% Fixture	92.2	0.0	92.2
Total	Lumens	3815.0	0.0	3815.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	29.0	0.8
10°-20°	97.6	2.6
20°-30°	177.8	4.7
30°-40°	306.7	8.0
40°-50°	545.2	14.3
50°-60°	813.5	21.3
60°-70°	1039.4	27.2
70°-80°	723.1	19.0
80°-90°	82.7	2.2
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°	3815.0	100.0
0°-180°	3815.0	100.0

Coefficient of Utilization



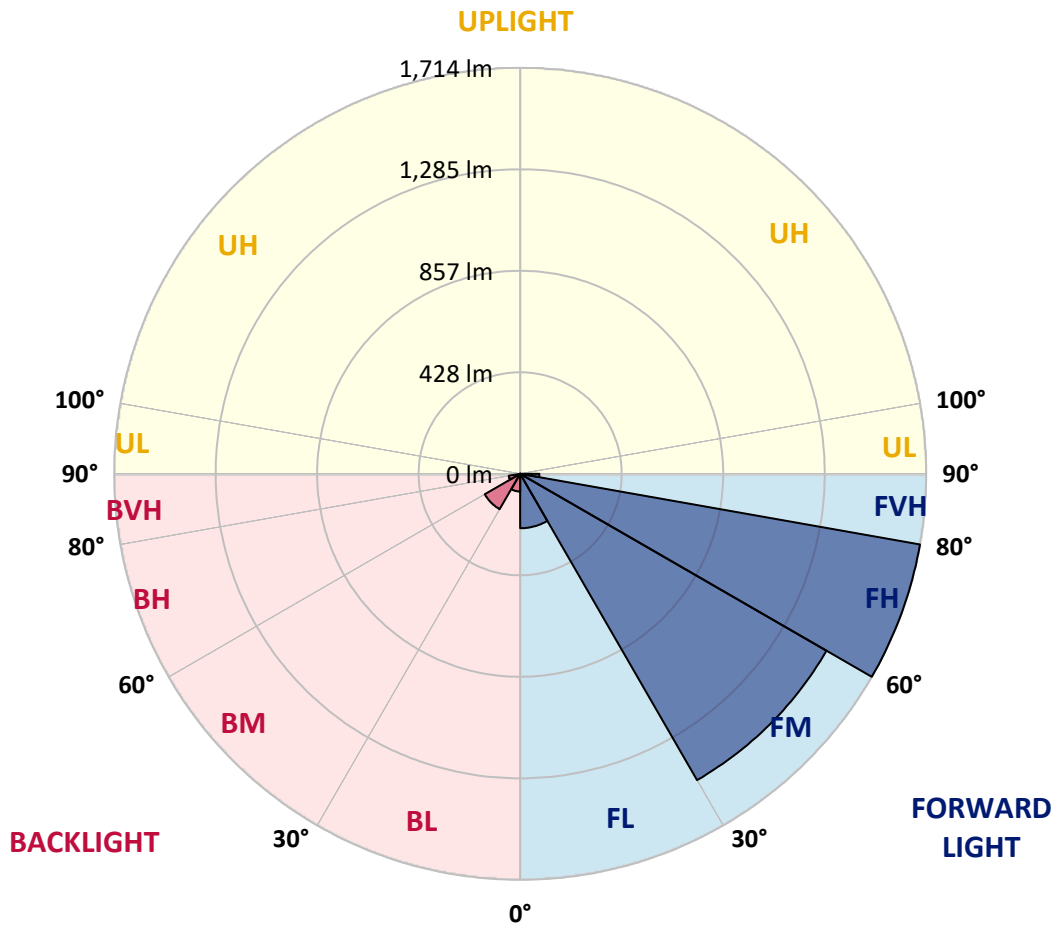
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	229.6	6.0			
FM (30°-60°)	1492.8	39.1			
FH (60°-80°)	1713.7	44.9			G1/1800
FVH (80°-90°)	81.3	2.1			G1/100
BL (0°-30°)	74.8	2.0	B0/110		
BM (30°-60°)	172.5	4.5	B0/220		
BH (60°-80°)	48.8	1.3	B0/110		G0/110
BVH (80°-90°)	1.4	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B0-U0-G1

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	34°	35°	45°	55°	65°	75°	85°
0°	227.3	227.3	227.3	227.3	227.3	227.3	227.3	227.3	227.3	227.3	227.3
2.5°	289.2	277.9	259.5	260.8	269.1	270.8	273.3	266.8	261.0	250.8	270.6
5°	370.5	354.2	343.9	340.6	335.8	336.2	324.5	328.7	327.6	335.0	344.1
7.5°	416.4	407.3	394.3	390.7	373.0	371.1	356.7	376.1	378.0	375.3	390.1
10°	434.6	422.7	424.2	410.6	401.8	404.1	406.4	407.9	410.4	412.9	394.9
12.5°	445.3	447.4	468.3	454.1	463.0	463.0	478.5	462.0	462.6	444.5	447.6
15°	493.6	505.3	495.9	495.8	486.2	488.7	506.7	493.6	500.4	495.0	474.3
17.5°	554.2	556.5	538.7	530.8	539.5	539.7	532.0	531.4	508.0	547.5	522.4
20°	573.6	586.7	561.3	530.7	566.5	564.8	564.2	555.2	516.3	571.1	550.4
22.5°	626.4	607.8	590.5	570.4	584.4	584.4	582.2	562.5	547.3	569.0	577.8
25°	642.8	645.1	622.7	616.2	616.6	599.3	597.8	589.3	574.8	611.8	594.1
27.5°	699.6	698.7	644.8	663.0	639.8	640.0	597.6	616.6	619.1	613.9	633.6
30°	755.4	771.0	689.6	712.7	688.3	681.0	639.6	656.5	660.9	654.9	679.9
32.5°	826.6	849.4	770.4	747.7	710.5	731.3	702.7	662.8	684.7	737.8	751.8
35°	901.9	913.1	828.9	797.2	755.2	755.0	754.1	757.3	781.5	841.3	853.2
37.5°	1037.3	1011.1	934.9	862.4	871.8	850.9	836.4	851.7	876.8	975.4	1026.2
40°	1112.9	1093.9	986.7	943.7	897.1	904.8	944.3	942.6	1009.5	1112.7	1188.8
42.5°	1186.3	1168.3	1062.8	1028.1	968.3	989.2	1006.5	1028.3	1165.4	1331.9	1373.7
45°	1251.7	1198.8	1124.4	1125.7	1094.7	1097.2	1127.7	1147.8	1346.1	1516.8	1546.1
47.5°	1291.3	1247.7	1176.4	1175.0	1173.1	1161.4	1305.1	1323.5	1490.1	1692.8	1695.5
50°	1346.9	1292.4	1229.9	1231.0	1275.3	1300.1	1471.5	1469.6	1629.2	1839.7	1777.8
52.5°	1416.1	1349.6	1280.7	1331.9	1400.4	1440.6	1579.9	1636.6	1778.6	1932.0	1810.0
55°	1504.7	1421.5	1355.1	1420.7	1570.1	1585.6	1685.9	1805.8	1941.4	2026.2	1820.4
57.5°	1608.6	1509.3	1455.6	1561.3	1710.3	1710.7	1840.3	1986.1	2041.3	2064.5	1808.7
60°	1720.6	1604.8	1550.7	1645.9	1864.9	1880.6	2012.0	2085.6	2142.8	2083.9	1787.8
62.5°	1819.2	1691.3	1649.3	1761.1	2034.4	2071.6	2161.5	2151.0	2216.0	2108.2	1734.6
65°	1936.6	1803.3	1775.7	1940.8	2255.7	2306.9	2329.5	2267.0	2240.6	2089.4	1596.4
67.5°	2052.8	1928.2	1927.4	2140.1	2545.9	2563.5	2539.7	2430.6	2212.0	1923.7	1343.0
70°	2134.7	2000.8	2051.3	2358.3	2809.6	2760.1	2660.0	2507.9	2005.6	1474.4	877.4
72.5°	2057.8	1928.7	2042.5	2436.0	2842.2	2856.4	2590.4	2246.5	1490.1	754.1	317.6
75°	1563.8	1484.8	1773.4	2161.2	2523.4	2526.7	2162.1	1584.5	733.7	204.8	87.8
77.5°	787.6	762.5	1122.5	1534.2	1841.1	1835.7	1485.5	848.8	236.1	68.1	44.3
80°	398.7	378.6	477.7	827.7	1093.3	1101.4	848.2	380.1	119.1	37.0	30.7
82.5°	244.9	232.4	261.4	374.5	530.7	543.5	321.8	240.7	73.8	21.9	28.0
85°	47.4	49.9	150.2	187.6	211.9	206.9	95.3	198.1	22.2	13.0	20.3
87.5°	0.0	0.8	34.7	61.2	61.4	54.5	21.7	43.9	3.1	3.6	2.5
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°	227.3	227.3	227.3	227.3	227.3	227.3	227.3	227.3	227.3	227.3	227.3
2.5°	273.9	271.0	247.0	244.3	244.9	240.9	239.5	231.1	229.0	242.0	244.3
5°	340.2	321.0	298.8	290.7	278.3	257.2	254.1	248.7	242.8	245.1	243.4
7.5°	380.9	355.4	331.6	289.2	254.1	223.4	218.4	209.2	200.0	200.2	206.2
10°	387.4	365.9	333.1	281.5	241.5	203.1	169.7	145.6	134.6	124.8	127.7
12.5°	425.2	405.2	344.8	279.2	223.0	163.2	119.5	95.9	85.5	82.1	81.7
15°	455.5	439.8	364.8	272.1	182.2	114.9	85.5	78.6	76.7	80.0	79.0
17.5°	500.5	472.2	362.7	242.8	138.8	87.3	78.8	77.9	80.2	82.1	82.7
20°	520.3	479.4	348.3	196.8	103.9	80.0	76.9	75.0	79.2	85.0	83.8
22.5°	540.2	491.9	331.4	161.1	83.6	76.5	74.8	73.3	76.5	82.1	83.4
25°	549.3	511.9	312.6	125.8	77.7	72.5	71.3	71.9	74.6	79.6	79.0
27.5°	594.7	514.2	276.7	99.3	75.2	69.6	69.6	71.0	71.0	77.7	77.1
30°	623.1	553.1	247.6	83.6	72.3	65.6	67.9	68.5	67.5	74.8	75.4
32.5°	673.0	563.8	219.2	76.7	67.7	65.0	64.6	65.0	65.8	72.9	73.1
35°	749.7	616.8	180.5	74.0	65.4	62.1	59.5	61.6	63.5	68.7	69.6
37.5°	899.6	671.0	147.1	71.9	64.2	59.5	58.5	58.1	61.6	67.5	69.4
40°	1021.0	767.1	119.7	70.2	61.9	57.9	55.4	55.6	58.7	63.1	66.0
42.5°	1192.9	836.5	101.5	67.5	58.7	54.7	51.8	53.5	54.8	59.5	61.4
45°	1336.3	890.4	89.4	65.8	55.4	51.6	49.3	51.2	49.9	52.2	54.8
47.5°	1450.4	937.4	80.4	61.6	53.3	49.9	47.0	46.4	44.1	44.7	47.2
50°	1513.1	929.6	72.9	57.3	50.6	48.1	44.1	40.1	37.0	36.8	38.4
52.5°	1535.4	887.6	66.7	53.7	47.4	44.3	39.7	34.1	31.1	30.1	31.5
55°	1541.5	827.1	61.2	49.7	44.3	39.5	34.7	28.8	25.5	24.0	25.3
57.5°	1521.6	734.1	55.8	45.8	40.7	34.9	29.7	23.6	20.5	18.6	19.8
60°	1472.3	616.0	51.0	41.0	36.8	30.9	25.1	19.0	15.7	14.0	14.6
62.5°	1363.2	482.9	45.8	36.6	32.8	27.0	21.1	15.0	11.9	10.4	10.5
65°	1197.1	360.0	39.9	32.4	29.2	23.4	16.9	11.5	9.0	7.7	7.5
67.5°	953.7	243.9	33.9	28.0	25.9	19.8	13.4	9.0	7.1	6.1	5.8
70°	560.6	122.9	28.2	24.2	22.2	16.5	10.5	7.3	6.5	5.8	5.4
72.5°	184.9	53.1	22.1	19.9	18.4	13.2	8.2	6.7	6.3	5.6	5.2
75°	64.4	30.7	16.3	15.3	14.6	10.0	6.9	6.1	6.1	5.4	4.8
77.5°	42.2	23.8	12.1	11.1	10.9	7.3	5.9	5.8	5.4	4.4	3.6
80°	35.1	13.4	8.4	7.9	7.7	4.6	4.8	4.2	3.3	1.9	0.8
82.5°	32.4	8.1	4.4	4.8	4.4	1.7	2.7	2.3	1.7	0.8	0.0
85°	19.0	3.6	2.5	2.5	1.9	0.4	1.3	1.3	0.8	0.2	0.0
87.5°	2.1	1.7	1.3	1.3	1.0	0.0	0.6	0.4	0.0	0.0	0.0
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)