

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: P366771

Luminaire Tested: **MSA-SA1B-730-U-T4FT-HSS**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P366771  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-13)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA1B-730-U-T4FT-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV FORWARD THROW OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

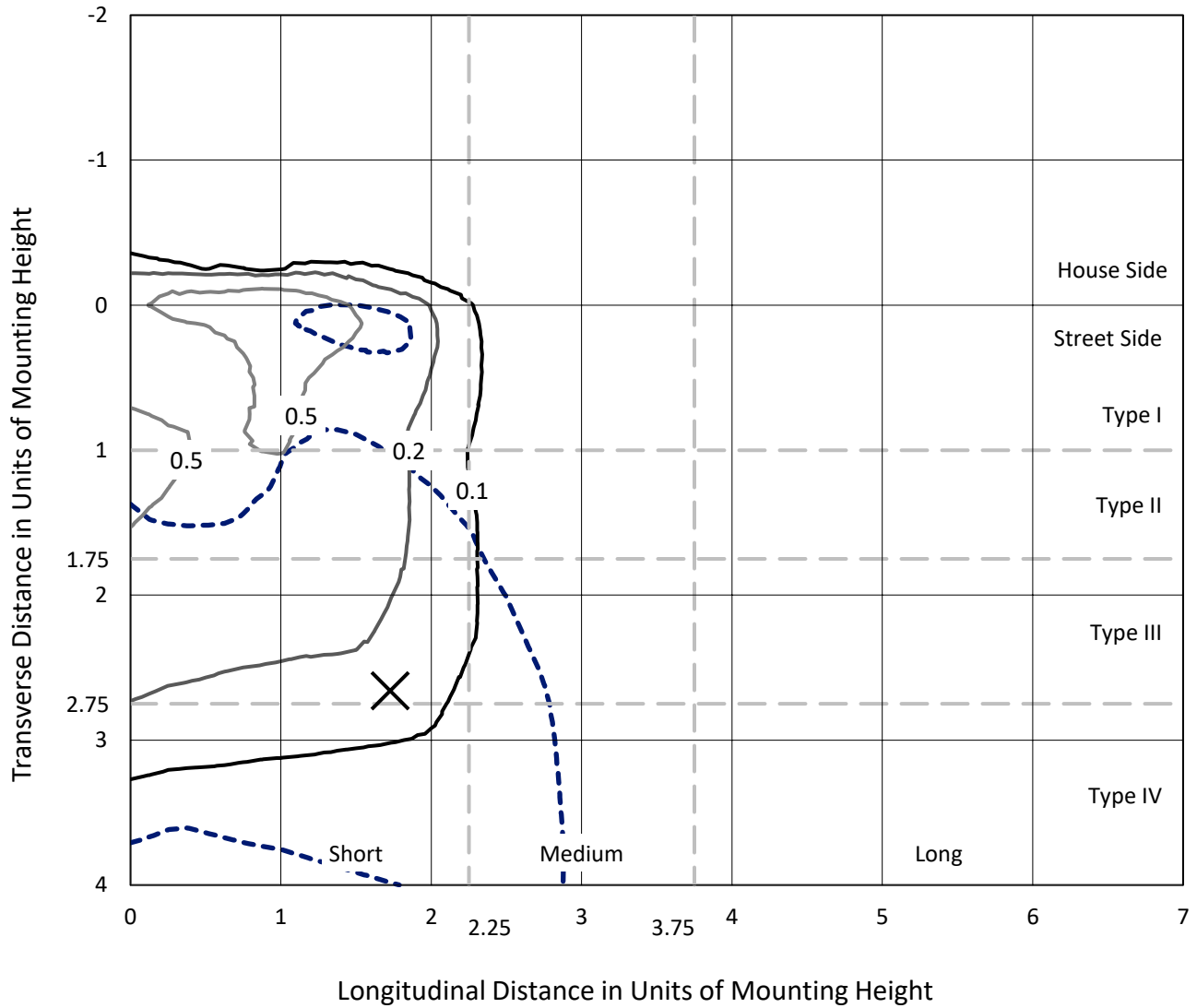
Lumens per Lamp: N/A  
Luminaire Lumens: 3454 lumens  
Efficiency: N/A  
Efficacy: 78.5 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B0 - U0 - G1  
  
Input Watts (W): 44  
Input Voltage (V): NR  
Input Current (Ain): NR  
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

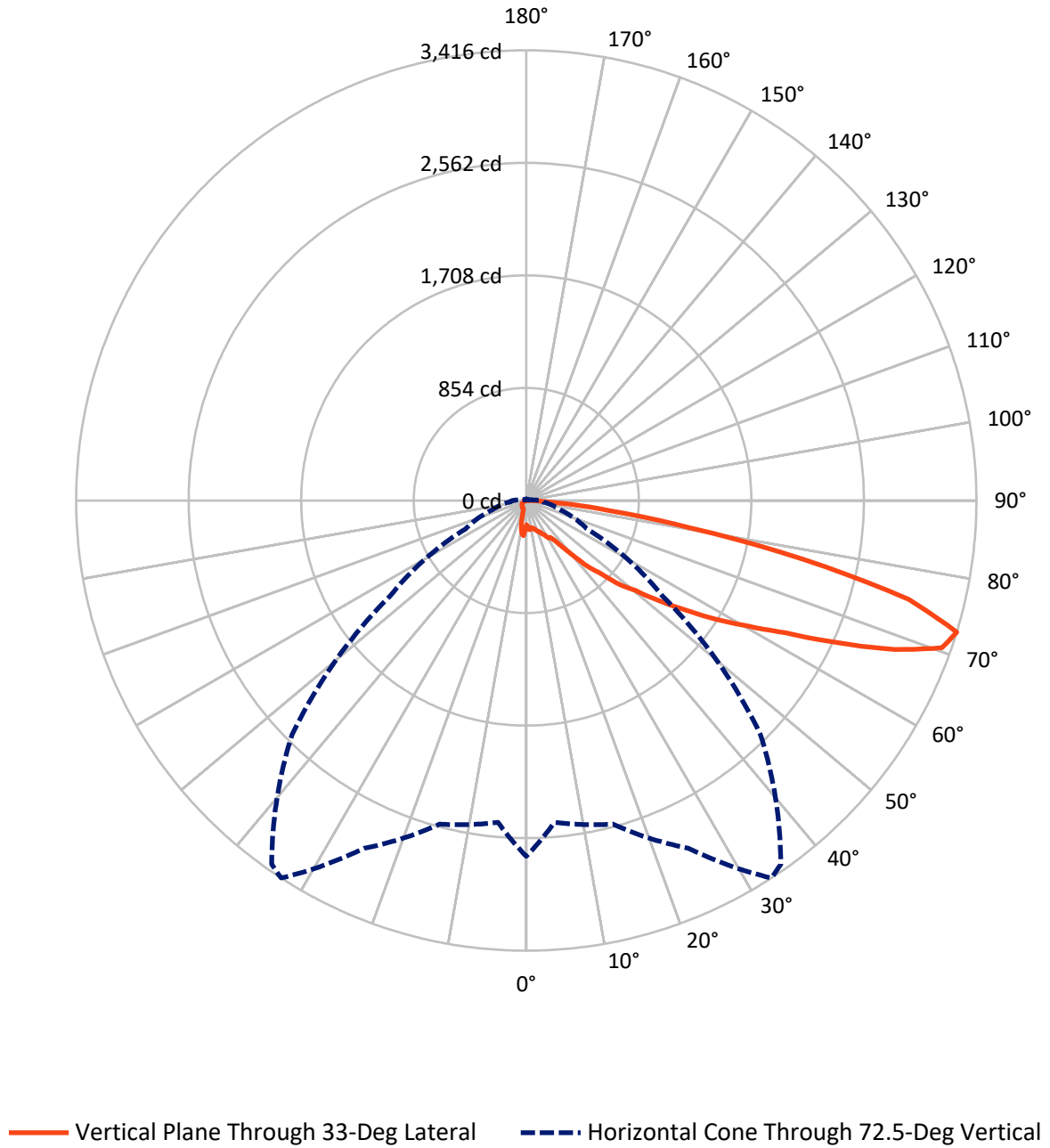
✕ Max cd  
 - - - 1/2 Max cd



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



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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	319.4	0.0	319.4
	% Fixture	9.2	0.0	9.2
<b>Street Side</b>	Lumens	3134.6	0.0	3134.6
	% Fixture	90.8	0.0	90.8
<b>Total</b>	Lumens	3454.0	0.0	3454.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	23.8	0.7
10°-20°	70.9	2.1
20°-30°	120.2	3.5
30°-40°	219.9	6.4
40°-50°	464.1	13.4
50°-60°	776.5	22.5
60°-70°	1039.4	30.1
70°-80°	679.0	19.7
80°-90°	60.2	1.7
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°	3454.0	100.0
0°-180°	3454.0	100.0

**Coefficient of Utilization**

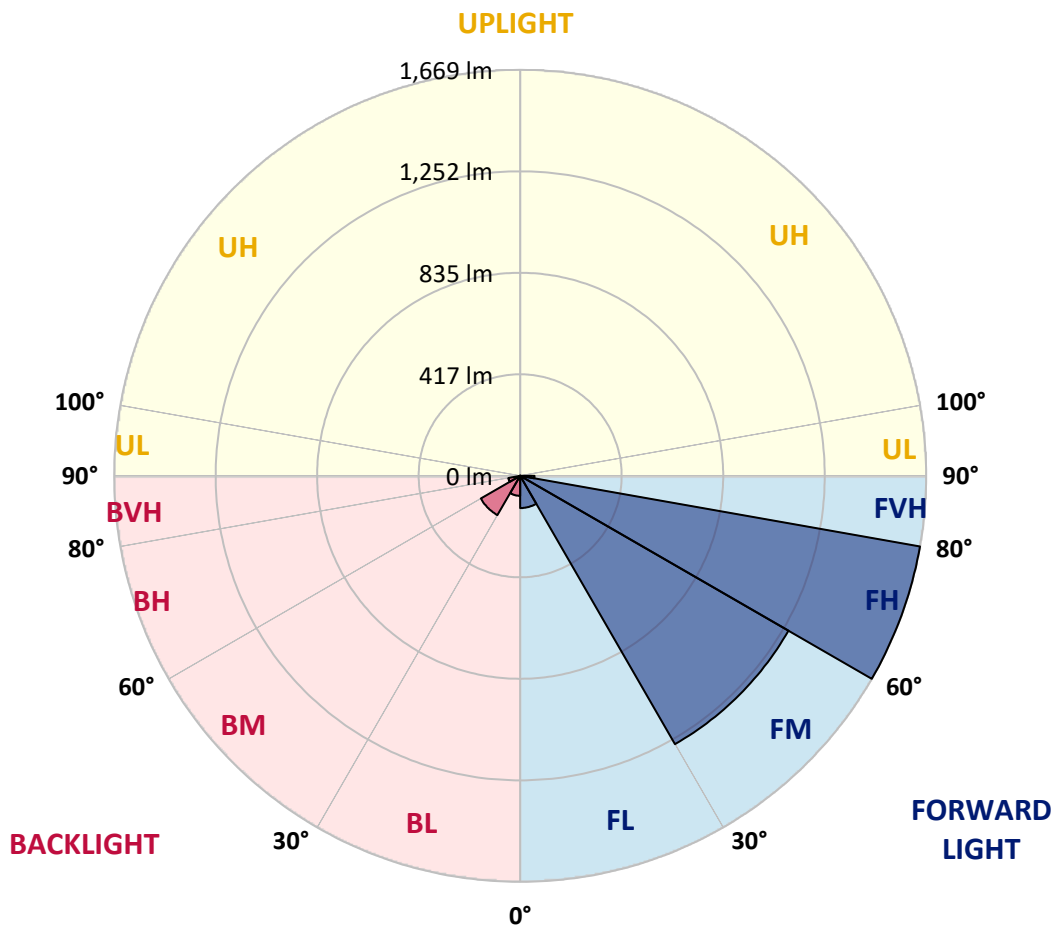


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	132.6	3.8			
FM (30°-60°)	1273.9	36.9			
FH (60°-80°)	1669.1	48.3			G1/1800
FVH (80°-90°)	59.0	1.7			G1/100
BL (0°-30°)	82.2	2.4	B0/110		
BM (30°-60°)	186.7	5.4	B0/220		
BH (60°-80°)	49.3	1.4	B0/110		G0/110
BVH (80°-90°)	1.2	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°	33°	35°	45°	55°	65°	75°	85°
0°	183.7	183.7	183.7	183.7	183.7	183.7	183.7	183.7	183.7	183.7	183.7
2.5°	219.0	210.6	198.3	199.1	201.2	202.9	207.5	205.6	201.9	201.7	219.0
5°	232.0	222.6	221.9	223.0	222.4	225.5	221.7	234.1	244.7	257.4	277.7
7.5°	225.7	221.3	215.7	221.5	221.3	219.8	222.3	247.6	273.1	289.2	322.7
10°	207.5	202.5	206.7	208.6	207.3	214.0	230.7	251.4	281.9	315.6	331.9
12.5°	202.3	205.4	206.9	206.9	219.8	223.2	248.7	268.3	304.5	331.2	378.5
15°	222.4	228.4	217.8	215.5	219.6	221.5	249.9	273.5	319.9	368.6	408.3
17.5°	254.5	254.1	237.8	228.8	235.1	239.7	255.4	283.0	310.3	397.9	455.4
20°	276.5	276.9	247.6	228.8	249.7	252.4	269.8	291.9	313.3	412.7	486.3
22.5°	304.9	294.7	262.3	244.1	258.3	260.8	280.0	297.4	329.1	411.0	525.8
25°	328.1	321.6	280.7	268.1	280.7	277.3	294.7	321.0	345.9	438.4	549.0
27.5°	364.2	353.0	293.8	296.1	295.3	297.8	301.8	342.1	375.7	439.7	602.7
30°	397.7	391.2	322.9	322.9	330.4	325.6	328.5	377.2	404.4	470.8	663.1
32.5°	432.4	432.8	357.3	339.0	333.1	352.9	372.2	394.3	439.1	524.1	755.6
35°	524.3	516.6	423.0	377.6	372.8	371.6	402.7	462.3	500.7	593.5	880.0
37.5°	709.3	682.7	564.6	465.0	447.0	440.9	476.2	537.3	575.5	695.5	1085.8
40°	899.2	850.3	719.1	606.9	548.5	522.0	563.0	615.0	682.9	808.3	1276.2
42.5°	1065.8	1005.4	835.5	760.0	683.8	672.3	633.8	718.4	836.3	972.4	1462.8
45°	1228.3	1109.4	939.1	879.3	786.8	793.3	780.3	853.6	995.7	1152.3	1628.3
47.5°	1340.1	1233.3	1066.0	988.4	951.4	913.2	1016.7	1092.9	1137.6	1266.6	1771.4
50°	1460.5	1352.3	1175.1	1120.9	1072.2	1110.7	1245.1	1255.3	1251.7	1373.2	1868.8
52.5°	1616.0	1488.5	1300.4	1239.0	1266.6	1305.0	1460.1	1462.0	1353.1	1463.0	1939.0
55°	1759.8	1618.5	1467.2	1409.3	1467.0	1499.4	1671.4	1608.3	1412.2	1524.0	1973.5
57.5°	1962.5	1799.0	1689.1	1587.1	1704.0	1673.0	1857.3	1763.5	1478.5	1564.4	1960.8
60°	2218.7	2026.2	1916.1	1808.2	1933.6	1954.7	2038.7	1841.0	1504.2	1577.7	1884.7
62.5°	2479.4	2285.7	2140.9	2067.6	2209.9	2279.3	2206.7	1879.5	1473.3	1551.8	1712.3
65°	2802.7	2554.7	2385.6	2342.6	2606.3	2708.3	2405.3	1888.9	1413.7	1409.3	1376.7
67.5°	3024.2	2782.7	2627.6	2699.5	3018.0	3026.3	2583.7	1891.8	1212.9	1103.4	903.6
70°	3076.7	2818.2	2748.8	2960.5	3346.5	3242.8	2641.2	1746.0	899.6	654.9	413.1
72.5°	2700.8	2451.9	2542.3	2911.2	3416.3	3368.8	2514.1	1259.7	506.5	262.0	126.8
75°	1656.7	1506.1	1907.1	2468.2	2998.9	2968.2	1961.4	650.9	204.0	104.7	47.4
77.5°	720.5	669.1	995.3	1637.7	2154.9	2127.5	1149.3	239.7	105.5	73.6	24.0
80°	238.4	231.3	377.0	775.5	1262.2	1238.0	484.2	99.7	75.2	59.1	13.4
82.5°	56.6	56.2	131.6	356.9	643.0	622.9	148.6	55.0	54.5	46.6	7.1
85°	14.2	14.6	36.4	145.9	261.2	230.3	38.7	27.4	38.4	31.6	3.6
87.5°	0.0	0.0	9.4	20.9	39.5	24.7	4.2	7.3	10.7	11.3	1.9
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°	183.7	183.7	183.7	183.7	183.7	183.7	183.7	183.7	183.7	183.7	183.7
2.5°	222.8	220.7	203.5	207.7	214.2	213.6	217.8	214.6	211.7	225.9	224.6
5°	283.4	271.9	266.6	274.0	270.0	260.6	268.5	267.1	264.8	269.6	273.3
7.5°	328.9	318.3	313.5	297.8	275.0	257.0	259.8	253.1	246.8	254.3	262.0
10°	343.8	338.1	337.5	306.8	285.3	259.3	228.4	201.7	194.6	185.2	189.5
12.5°	384.5	387.9	366.3	330.4	289.0	238.9	184.1	146.3	131.0	121.0	121.6
15°	417.9	429.9	398.5	334.1	254.3	182.2	122.5	88.6	79.0	76.5	75.7
17.5°	467.5	479.2	408.5	308.2	205.0	123.5	78.8	69.0	69.6	71.3	71.0
20°	504.3	502.6	399.8	262.3	151.1	80.9	66.0	64.6	67.7	72.7	71.5
22.5°	539.8	527.9	394.5	220.0	97.8	65.0	63.7	63.5	66.4	71.1	72.5
25°	565.1	567.1	385.5	172.2	71.1	60.4	61.6	63.3	66.2	71.3	70.6
27.5°	637.6	583.9	347.9	125.0	60.0	57.9	60.8	64.2	65.2	71.7	71.9
30°	684.6	647.6	323.3	84.2	55.4	53.5	59.3	63.9	65.0	73.4	74.0
32.5°	766.5	675.0	294.9	62.5	51.6	52.2	55.8	61.9	67.3	76.3	76.7
35°	868.3	763.0	243.5	56.2	50.2	49.3	51.0	58.1	66.9	76.7	78.6
37.5°	1062.2	815.8	193.1	54.5	50.2	48.5	50.2	54.5	65.8	80.5	84.6
40°	1192.0	923.2	139.2	54.1	49.3	47.7	48.3	52.5	62.5	78.2	84.2
42.5°	1352.0	968.4	102.6	53.1	48.3	46.0	46.4	51.8	59.3	73.4	77.9
45°	1482.9	1001.4	80.7	52.7	46.0	45.3	46.0	51.2	56.2	63.1	67.1
47.5°	1582.5	1039.8	64.8	50.2	45.4	45.3	44.3	47.9	51.0	52.7	55.4
50°	1655.3	1031.1	53.7	46.4	43.5	44.7	43.0	43.5	44.3	43.3	46.4
52.5°	1700.0	1000.1	44.7	41.8	41.2	42.2	40.1	38.4	37.0	36.2	38.2
55°	1716.3	937.7	38.0	35.9	37.2	37.6	35.9	32.8	30.5	29.3	30.9
57.5°	1685.4	842.8	33.0	29.7	32.8	32.8	30.5	27.2	24.5	22.6	24.2
60°	1607.2	737.9	29.3	24.7	28.0	28.2	25.5	22.1	19.9	18.0	19.0
62.5°	1461.5	623.6	25.7	21.5	24.2	24.4	21.1	17.8	16.3	14.2	15.0
65°	1170.0	476.9	21.9	19.0	20.9	20.3	17.5	15.1	13.2	11.3	11.7
67.5°	759.4	294.4	19.0	17.3	17.6	17.1	14.8	13.2	11.1	9.6	9.8
70°	340.0	126.8	16.7	15.5	15.3	14.4	12.5	12.3	10.9	9.6	9.6
72.5°	104.9	47.7	14.4	14.0	13.2	12.1	10.9	11.7	10.7	9.2	9.0
75°	41.4	21.9	11.9	11.9	11.5	10.0	9.8	10.5	10.0	8.4	8.1
77.5°	21.7	13.8	9.8	10.2	10.0	7.7	8.8	9.6	9.2	7.1	5.9
80°	12.8	8.4	7.3	8.2	8.1	5.4	6.7	6.1	4.4	2.1	0.6
82.5°	7.1	3.8	3.3	4.8	4.8	1.9	3.5	3.1	1.7	0.0	0.0
85°	3.5	2.7	2.5	2.7	1.9	0.6	1.7	1.7	1.0	0.0	0.0
87.5°	1.7	1.5	1.2	1.0	0.8	0.0	0.6	0.8	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)