

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: P368465

Luminaire Tested: **MSA-SA4C-727-U-T4FT-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368465
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-SA4C-727-U-T4FT-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) 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: 15069 lumens
Efficiency: N/A
Efficacy: 67.0 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G3

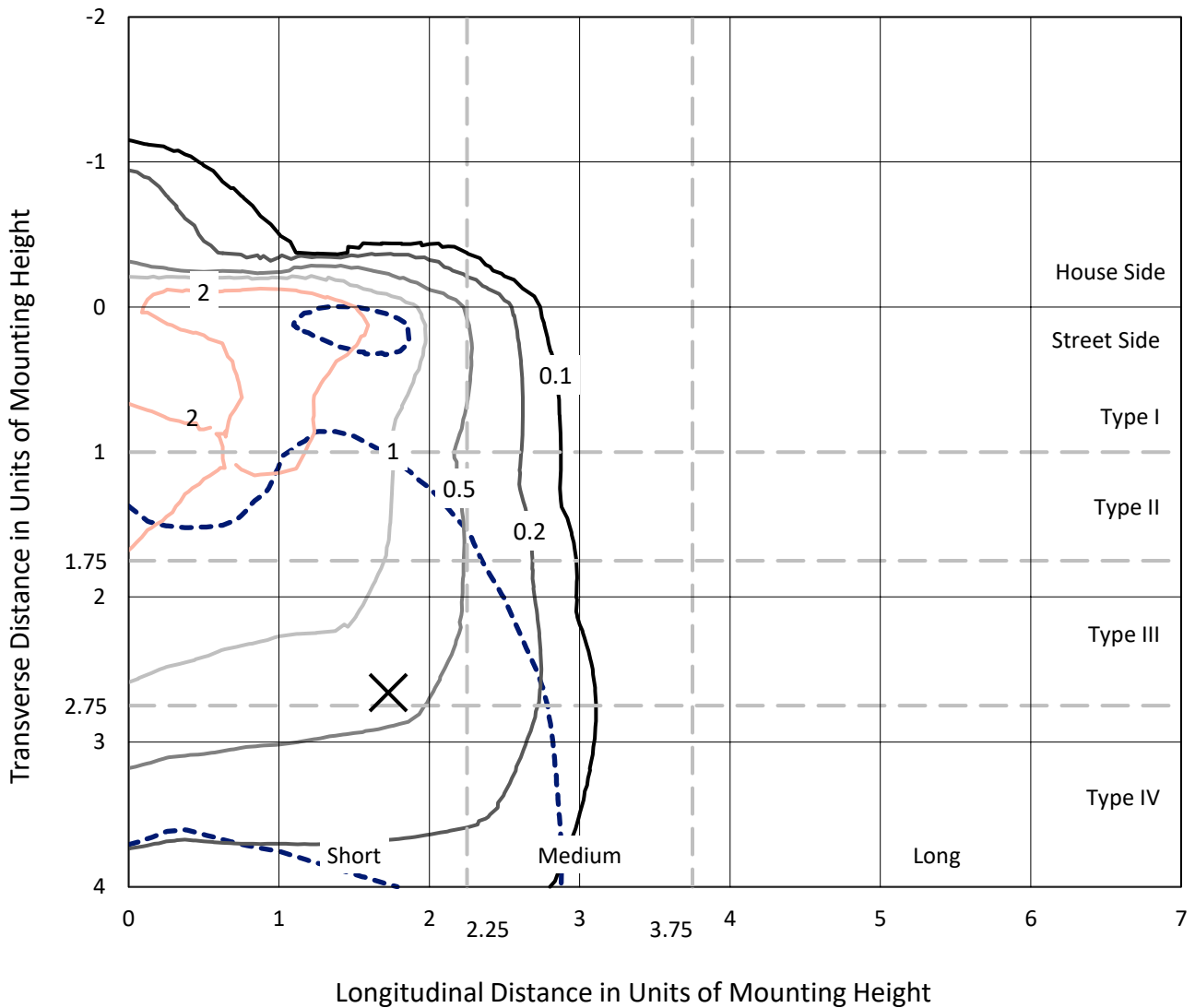
Input Watts (W): 225
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

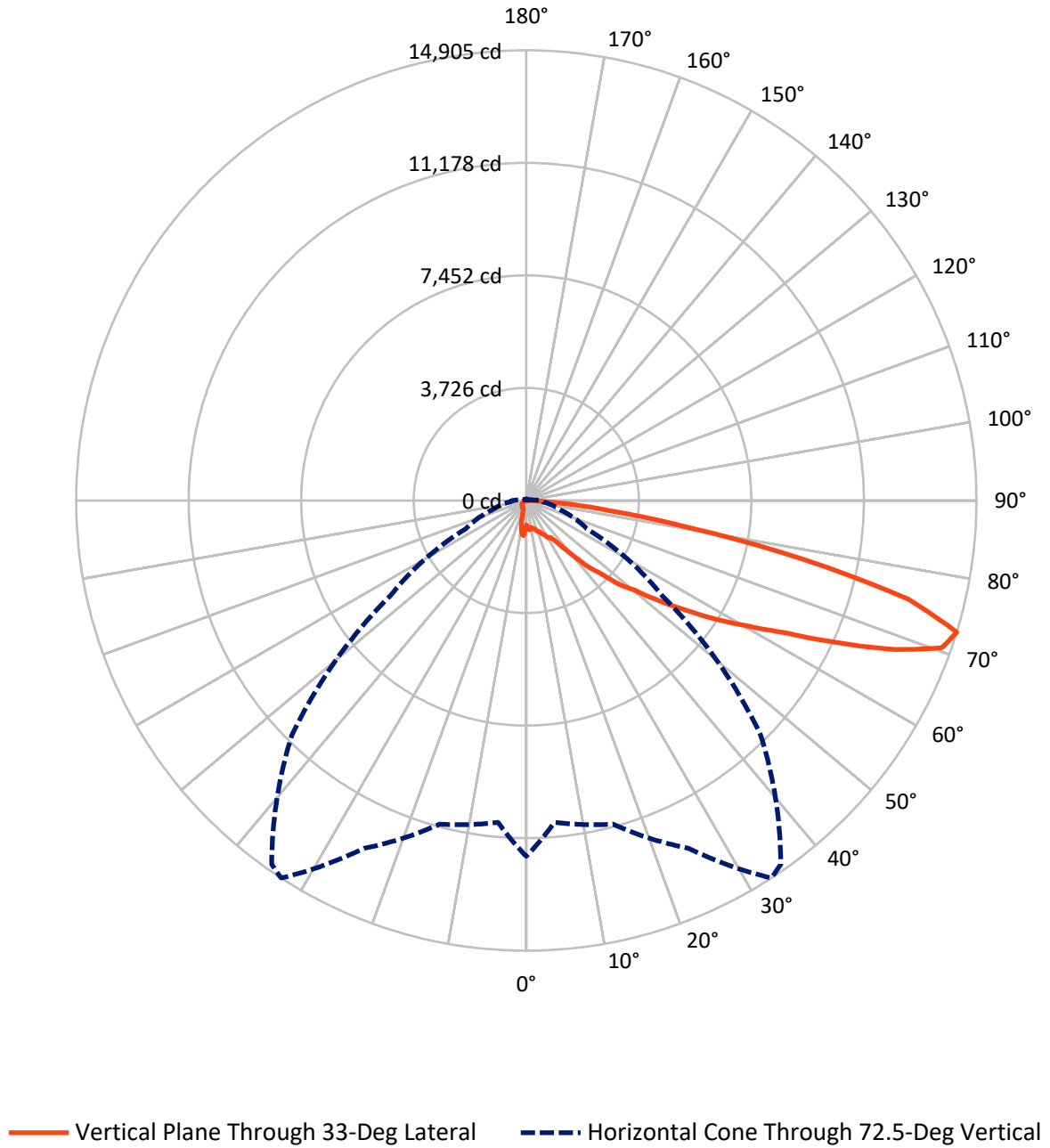
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.8 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1393.3	0.0	1393.3
	% Fixture	9.2	0.0	9.2
Street Side	Lumens	13675.7	0.0	13675.7
	% Fixture	90.8	0.0	90.8
Total	Lumens	15069.0	0.0	15069.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	103.7	0.7
10°-20°	309.1	2.1
20°-30°	524.2	3.5
30°-40°	959.4	6.4
40°-50°	2024.9	13.4
50°-60°	3387.9	22.5
60°-70°	4534.8	30.1
70°-80°	2962.2	19.7
80°-90°	262.6	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°	15069.0	100.0
0°-180°	15069.0	100.0

Coefficient of Utilization

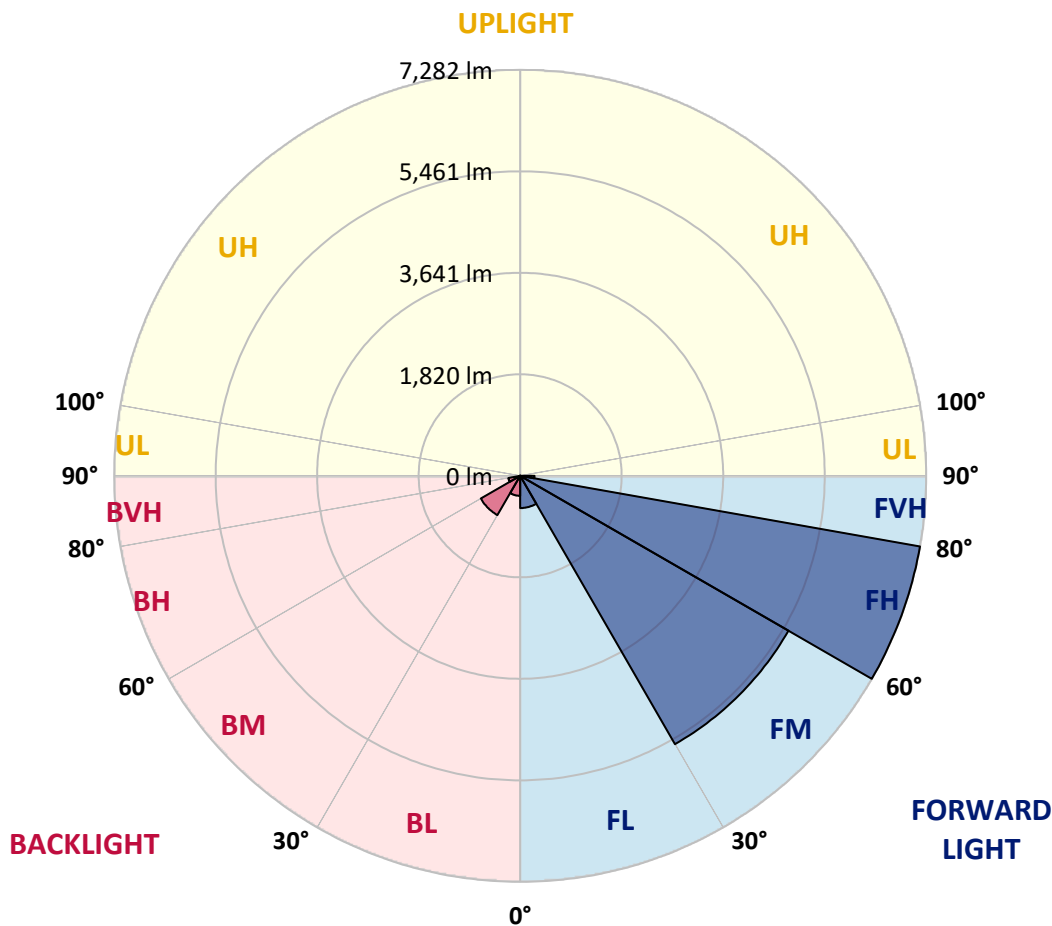


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	578.5	3.8			
FM (30°-60°)	5557.7	36.9			
FH (60°-80°)	7282.0	48.3			G3/7500
FVH (80°-90°)	257.5	1.7			G3/500
BL (0°-30°)	358.6	2.4	B1/500		
BM (30°-60°)	814.6	5.4	B1/1000		
BH (60°-80°)	215.1	1.4	B1/500		G1/500
BVH (80°-90°)	5.1	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G3
 Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	33°	35°	45°	55°	65°	75°	85°
0°	801.5	801.5	801.5	801.5	801.5	801.5	801.5	801.5	801.5	801.5	801.5
2.5°	955.4	918.6	865.1	868.4	877.6	885.2	905.2	896.9	881.0	880.1	955.4
5°	1012.3	971.3	968.0	973.0	970.5	983.9	967.1	1021.5	1067.5	1122.8	1211.4
7.5°	984.7	965.5	941.2	966.3	965.5	958.8	969.7	1080.1	1191.4	1261.6	1408.1
10°	905.2	883.5	901.9	910.3	904.4	933.7	1006.5	1096.8	1229.9	1377.1	1448.2
12.5°	882.6	896.0	902.7	902.7	958.8	973.8	1085.1	1170.5	1328.6	1444.9	1651.5
15°	970.5	996.4	950.4	940.4	957.9	966.3	1090.1	1193.0	1395.5	1608.0	1781.2
17.5°	1110.2	1108.5	1037.4	998.1	1025.7	1045.8	1114.4	1234.9	1353.7	1736.0	1987.0
20°	1206.4	1208.1	1080.1	998.1	1089.3	1101.0	1177.1	1273.4	1367.1	1800.4	2121.7
22.5°	1330.2	1285.9	1144.5	1065.0	1126.9	1137.8	1221.5	1297.6	1435.7	1792.9	2294.1
25°	1431.5	1403.0	1224.8	1169.6	1224.8	1209.8	1285.9	1400.5	1509.3	1912.5	2395.3
27.5°	1588.8	1540.2	1281.7	1291.8	1288.4	1299.3	1316.9	1492.6	1639.0	1918.4	2629.5
30°	1735.2	1706.7	1408.9	1408.9	1441.5	1420.6	1433.2	1645.7	1764.5	2053.9	2893.1
32.5°	1886.6	1888.3	1558.6	1479.2	1453.2	1539.4	1623.9	1720.1	1915.9	2286.5	3296.3
35°	2287.4	2253.9	1845.6	1647.3	1626.4	1621.4	1756.9	2017.1	2184.5	2589.4	3839.3
37.5°	3094.7	2978.4	2463.1	2028.8	1950.2	1923.4	2077.4	2344.2	2510.7	3034.5	4737.0
40°	3923.0	3709.6	3137.4	2647.9	2392.8	2277.3	2456.4	2683.1	2979.3	3526.4	5567.8
42.5°	4650.0	4386.5	3645.2	3315.6	2983.4	2933.2	2765.1	3134.0	3648.6	4242.6	6381.8
45°	5358.6	4839.9	4097.0	3836.0	3432.7	3461.2	3404.3	3723.9	4343.8	5027.3	7103.9
47.5°	5846.4	5380.4	4650.9	4312.0	4150.5	3984.1	4435.8	4768.0	4962.9	5526.0	7728.0
50°	6371.8	5899.9	5126.9	4890.1	4677.6	4845.8	5432.3	5476.6	5460.7	5991.1	8153.0
52.5°	7050.3	6494.0	5673.2	5405.5	5526.0	5693.3	6370.1	6378.5	5903.3	6382.7	8459.2
55°	7677.8	7061.2	6401.1	6148.4	6400.3	6541.6	7292.1	7016.9	6161.0	6648.7	8609.8
57.5°	8562.1	7848.5	7369.1	6924.0	7434.3	7298.8	8102.8	7693.7	6450.5	6825.3	8554.6
60°	9679.9	8839.9	8359.7	7888.6	8435.8	8527.8	8894.3	8031.7	6562.6	6883.0	8222.4
62.5°	10816.8	9971.8	9340.2	9020.6	9641.4	9944.2	9627.2	8199.9	6427.9	6770.0	7470.3
65°	12227.4	11145.6	10407.7	10220.3	11370.7	11815.8	10493.9	8240.8	6167.7	6148.4	6006.2
67.5°	13193.7	12140.4	11463.6	11777.3	13167.0	13202.9	11272.0	8253.4	5291.7	4814.0	3942.2
70°	13423.0	12295.2	11992.3	12916.0	14600.1	14147.5	11523.0	7617.6	3924.7	2857.1	1802.1
72.5°	11783.2	10697.2	11091.3	12700.9	14904.6	14697.2	10968.3	5495.9	2209.6	1142.8	553.0
75°	7227.7	6570.9	8320.3	10768.3	13083.3	12949.4	8557.1	2839.5	890.2	456.8	206.6
77.5°	3143.2	2919.0	4342.1	7144.9	9401.3	9281.6	5014.0	1045.8	460.1	321.3	104.6
80°	1039.9	1009.0	1644.8	3383.3	5506.7	5401.3	2112.5	435.0	328.0	257.7	58.6
82.5°	246.8	245.1	573.9	1557.0	2805.2	2717.4	648.4	240.1	237.6	203.3	31.0
85°	61.9	63.6	159.0	636.7	1139.5	1004.8	169.0	119.6	167.3	138.0	15.9
87.5°	0.0	0.0	41.0	91.2	172.3	107.9	18.4	31.8	46.9	49.4	8.4
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°	801.5	801.5	801.5	801.5	801.5	801.5	801.5	801.5	801.5	801.5	801.5
2.5°	972.2	963.0	887.7	906.1	934.5	932.0	950.4	936.2	923.6	985.6	979.7
5°	1236.5	1186.3	1162.9	1195.6	1178.0	1137.0	1171.3	1165.4	1155.4	1176.3	1192.2
7.5°	1434.8	1388.8	1367.9	1299.3	1199.7	1121.1	1133.6	1104.4	1076.7	1109.4	1142.8
10°	1500.1	1475.0	1472.5	1338.6	1244.9	1131.1	996.4	880.1	849.2	808.2	826.6
12.5°	1677.5	1692.5	1598.0	1441.5	1260.8	1042.4	803.2	638.4	571.4	527.9	530.4
15°	1823.0	1875.7	1738.5	1457.4	1109.4	794.8	534.6	386.5	344.7	333.8	330.5
17.5°	2039.7	2090.7	1782.0	1344.5	894.4	538.8	343.9	301.2	303.7	311.2	309.6
20°	2200.3	2192.8	1744.4	1144.5	659.3	353.1	287.8	281.9	295.3	317.1	312.1
22.5°	2355.1	2303.3	1721.0	959.6	426.7	283.6	277.8	276.9	289.5	310.4	316.2
25°	2465.6	2473.9	1681.6	751.3	310.4	263.5	268.6	276.1	288.6	311.2	307.9
27.5°	2781.8	2547.6	1517.7	545.5	261.9	252.7	265.2	280.3	284.5	312.9	313.7
30°	2986.8	2825.3	1410.6	367.3	241.8	233.4	258.5	278.6	283.6	320.4	322.9
32.5°	3344.0	2945.0	1286.7	272.7	225.1	227.6	243.5	270.2	293.7	333.0	334.7
35°	3788.3	3329.0	1062.5	245.1	219.2	215.0	222.5	253.5	292.0	334.7	343.0
37.5°	4634.1	3559.0	842.5	237.6	219.2	211.7	219.2	237.6	287.0	351.4	369.0
40°	5200.5	4027.6	607.4	235.9	215.0	208.3	210.8	229.2	272.7	341.3	367.3
42.5°	5898.3	4225.0	447.6	231.7	210.8	200.8	202.5	225.9	258.5	320.4	339.7
45°	6469.7	4368.9	352.2	230.1	200.8	197.4	200.8	223.4	245.1	275.3	292.8
47.5°	6903.9	4536.2	282.8	219.2	198.3	197.4	193.3	209.2	222.5	230.1	241.8
50°	7221.8	4498.6	234.3	202.5	189.9	194.9	187.4	189.9	193.3	189.1	202.5
52.5°	7416.8	4363.0	194.9	182.4	179.9	184.1	174.9	167.3	161.5	158.1	166.5
55°	7487.9	4091.1	165.7	156.5	162.3	164.0	156.5	143.1	133.0	128.0	134.7
57.5°	7353.2	3677.0	143.9	129.7	143.1	143.1	133.0	118.8	107.1	98.7	105.4
60°	7011.8	3219.4	128.0	107.9	122.1	123.0	111.3	96.2	87.0	78.6	82.8
62.5°	6376.0	2720.7	112.1	93.7	105.4	106.3	92.0	77.8	71.1	61.9	65.3
65°	5104.3	2080.7	95.4	82.8	91.2	88.7	76.1	66.1	57.7	49.4	51.0
67.5°	3313.1	1284.2	82.8	75.3	77.0	74.5	64.4	57.7	48.5	41.8	42.7
70°	1483.4	553.0	72.8	67.8	66.9	62.7	54.4	53.5	47.7	41.8	41.8
72.5°	457.6	208.3	62.7	61.1	57.7	52.7	47.7	51.0	46.9	40.2	39.3
75°	180.7	95.4	51.9	51.9	50.2	43.5	42.7	46.0	43.5	36.8	35.1
77.5°	94.5	60.2	42.7	44.3	43.5	33.5	38.5	41.8	40.2	31.0	25.9
80°	56.1	36.8	31.8	36.0	35.1	23.4	29.3	26.8	19.2	9.2	2.5
82.5°	31.0	16.7	14.2	20.9	20.9	8.4	15.1	13.4	7.5	0.0	0.0
85°	15.1	11.7	10.9	11.7	8.4	2.5	7.5	7.5	4.2	0.0	0.0
87.5°	7.5	6.7	5.0	4.2	3.3	0.0	2.5	3.3	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)