

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: P367905

Luminaire Tested: **MSA-SA3B-830-U-SL4-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367905
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-SA3B-830-U-SL4-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) 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: 9661 lumens
Efficiency: N/A
Efficacy: 76.7 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

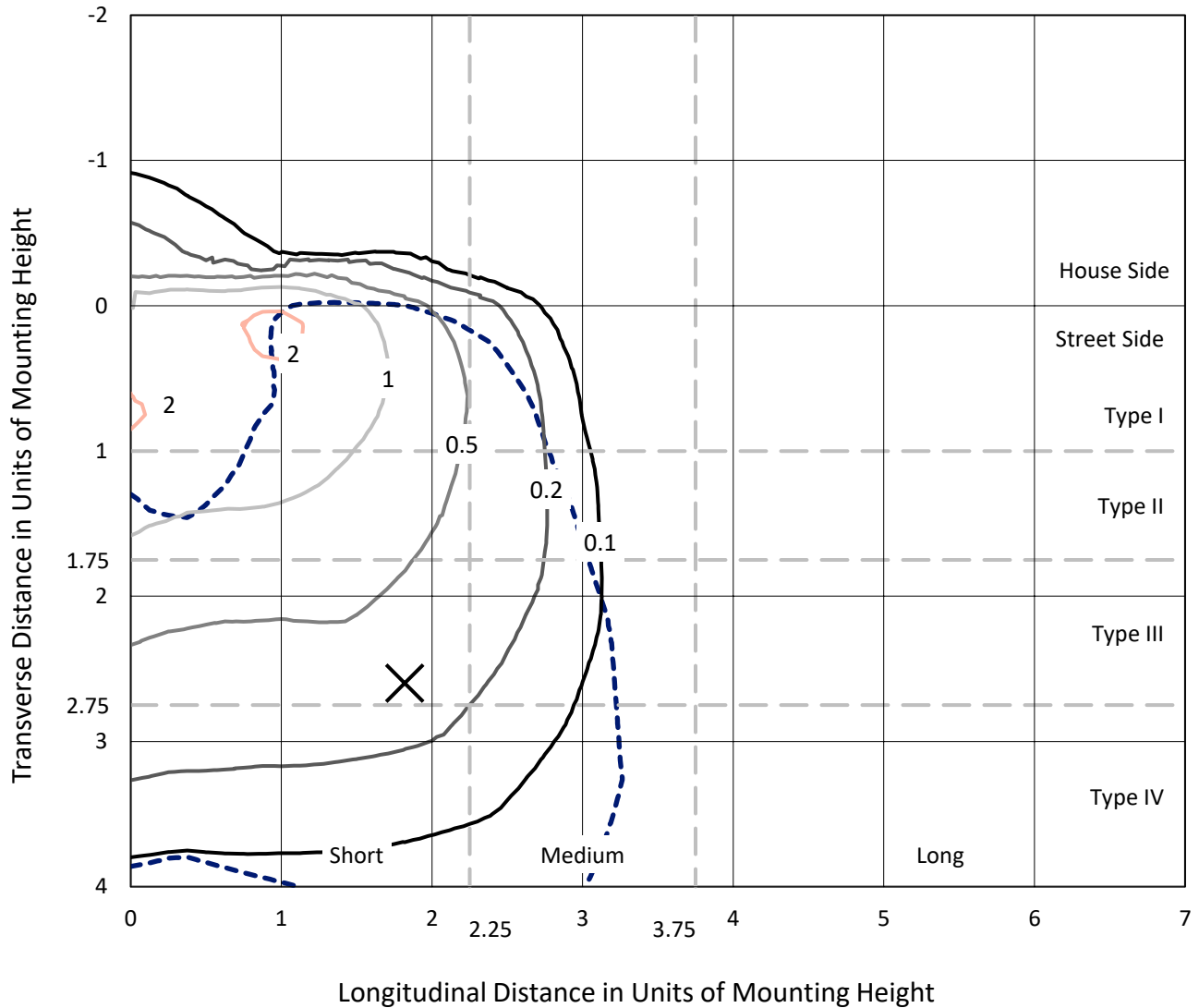
Input Watts (W): 126
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

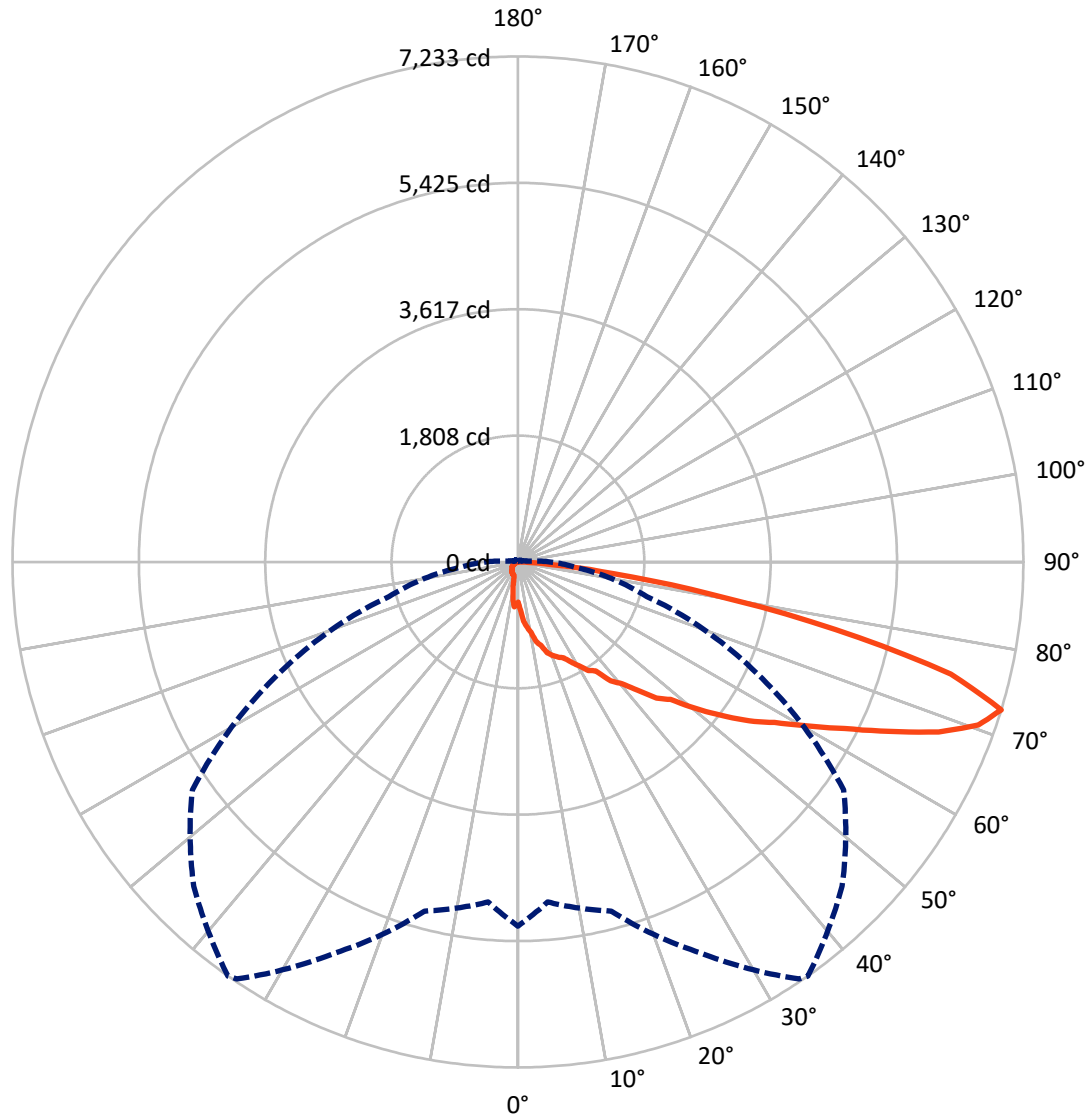
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.2 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	753.6	0.0	753.6
	% Fixture	7.8	0.0	7.8
Street Side	Lumens	8907.5	0.0	8907.5
	% Fixture	92.2	0.0	92.2
Total	Lumens	9661.0	0.0	9661.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	73.4	0.8
10°-20°	247.2	2.6
20°-30°	450.2	4.7
30°-40°	776.6	8.0
40°-50°	1380.6	14.3
50°-60°	2060.1	21.3
60°-70°	2632.1	27.2
70°-80°	1831.2	19.0
80°-90°	209.5	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°	9661.0	100.0
0°-180°	9661.0	100.0

Coefficient of Utilization

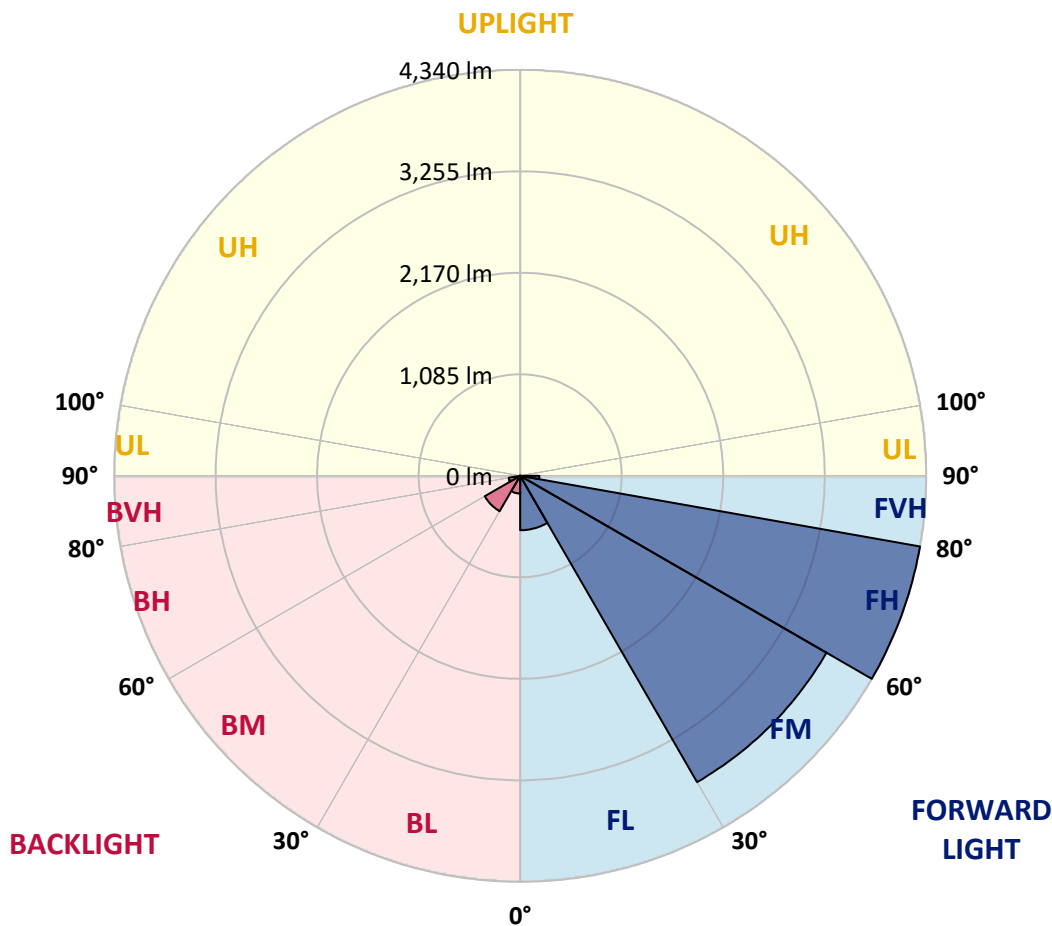


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	581.4	6.0			
FM (30°-60°)	3780.4	39.1			
FH (60°-80°)	4339.7	44.9			G2/5000
FVH (80°-90°)	206.0	2.1			G2/225
BL (0°-30°)	189.5	2.0	B1/500		
BM (30°-60°)	437.0	4.5	B1/1000		
BH (60°-80°)	123.5	1.3	B1/500		G1/500
BVH (80°-90°)	3.5	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-G2
 Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	34°	35°	45°	55°	65°	75°	85°
0°	575.5	575.5	575.5	575.5	575.5	575.5	575.5	575.5	575.5	575.5	575.5
2.5°	732.4	703.7	657.1	660.5	681.4	685.7	692.1	675.5	661.0	635.2	685.3
5°	938.3	897.0	870.8	862.5	850.4	851.4	821.7	832.4	829.5	848.4	871.3
7.5°	1054.4	1031.5	998.5	989.3	944.6	939.7	903.3	952.4	957.2	950.4	987.8
10°	1100.5	1070.4	1074.3	1039.8	1017.5	1023.3	1029.1	1033.0	1039.3	1045.6	1000.0
12.5°	1127.7	1133.0	1186.0	1150.0	1172.4	1172.4	1211.7	1169.9	1171.4	1125.8	1133.5
15°	1250.1	1279.7	1255.9	1255.4	1231.1	1237.5	1283.1	1250.1	1267.1	1253.5	1201.0
17.5°	1403.6	1409.4	1364.2	1344.3	1366.2	1366.6	1347.2	1345.8	1286.5	1386.6	1322.9
20°	1452.6	1485.6	1421.5	1343.8	1434.6	1430.3	1428.8	1406.0	1307.4	1446.3	1393.8
22.5°	1586.2	1539.0	1495.3	1444.3	1479.8	1479.8	1474.5	1424.4	1386.1	1440.9	1463.3
25°	1627.9	1633.8	1576.9	1560.4	1561.4	1517.7	1513.8	1492.4	1455.5	1549.2	1504.6
27.5°	1771.7	1769.3	1632.8	1678.9	1620.2	1620.6	1513.3	1561.4	1567.7	1554.6	1604.6
30°	1913.0	1952.3	1746.4	1804.7	1743.0	1724.6	1619.7	1662.4	1673.6	1658.5	1721.7
32.5°	2093.2	2151.0	1950.9	1893.6	1799.4	1851.8	1779.5	1678.4	1733.8	1868.3	1903.8
35°	2284.0	2312.2	2099.0	2018.9	1912.5	1912.0	1909.6	1917.9	1979.1	2130.6	2160.7
37.5°	2626.9	2560.4	2367.6	2184.0	2207.8	2154.9	2118.0	2156.8	2220.4	2470.1	2598.8
40°	2818.3	2770.2	2498.7	2389.9	2271.9	2291.3	2391.4	2387.0	2556.5	2817.8	3010.6
42.5°	3004.3	2958.6	2691.5	2603.6	2452.1	2505.0	2548.7	2604.1	2951.3	3372.9	3478.8
45°	3169.9	3035.8	2847.4	2850.8	2772.1	2778.4	2855.7	2906.7	3408.8	3841.1	3915.4
47.5°	3269.9	3159.7	2979.0	2975.6	2970.8	2941.1	3304.9	3351.5	3773.6	4286.9	4293.7
50°	3410.8	3272.8	3114.5	3117.4	3229.6	3292.3	3726.5	3721.6	4125.7	4658.9	4502.0
52.5°	3586.1	3417.6	3243.2	3372.9	3546.3	3648.3	4000.8	4144.6	4504.0	4892.5	4583.6
55°	3810.5	3599.7	3431.7	3597.8	3976.1	4015.4	4269.4	4573.0	4916.3	5131.0	4609.9
57.5°	4073.7	3822.1	3686.1	3953.7	4331.1	4332.1	4660.4	5029.5	5169.3	5228.1	4580.2
60°	4357.3	4064.0	3927.0	4167.9	4722.5	4762.4	5095.0	5281.5	5426.3	5277.2	4527.3
62.5°	4606.9	4283.0	4176.7	4459.8	5151.9	5246.1	5473.8	5447.1	5611.8	5338.8	4392.8
65°	4904.2	4566.6	4496.7	4914.9	5712.3	5842.0	5899.3	5741.0	5673.9	5291.2	4042.6
67.5°	5198.5	4882.8	4880.9	5419.5	6447.1	6491.8	6431.6	6155.2	5601.6	4871.6	3401.1
70°	5405.9	5066.9	5194.6	5972.1	7114.9	6989.6	6736.1	6350.9	5079.0	3733.7	2221.9
72.5°	5211.1	4884.3	5172.3	6168.8	7197.4	7233.4	6559.8	5689.0	3773.6	1909.6	804.2
75°	3960.1	3760.0	4490.9	5472.9	6390.3	6398.5	5475.3	4012.5	1858.1	518.7	222.4
77.5°	1994.6	1931.0	2842.6	3885.3	4662.3	4648.7	3761.9	2149.5	597.8	172.4	112.2
80°	1009.7	958.7	1209.8	2096.1	2768.7	2789.1	2148.1	962.6	301.6	93.7	77.7
82.5°	620.2	588.6	662.0	948.5	1343.8	1376.4	814.9	609.5	187.0	55.4	70.9
85°	120.0	126.3	380.3	475.0	536.7	524.0	241.4	501.7	56.3	33.0	51.5
87.5°	0.0	1.9	87.9	154.9	155.4	137.9	54.9	111.2	7.8	9.2	6.3
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°	575.5	575.5	575.5	575.5	575.5	575.5	575.5	575.5	575.5	575.5	575.5
2.5°	693.5	686.2	625.5	618.7	620.2	610.0	606.6	585.2	579.9	612.9	618.7
5°	861.6	813.0	756.7	736.3	704.7	651.3	643.5	629.9	614.8	620.7	616.3
7.5°	964.5	899.9	839.7	732.4	643.5	565.8	553.2	529.9	506.5	507.0	522.1
10°	981.0	926.6	843.6	712.9	611.4	514.3	429.8	368.6	340.9	316.2	323.4
12.5°	1076.7	1026.2	873.2	707.1	564.8	413.3	302.6	242.8	216.6	207.9	206.9
15°	1153.4	1113.6	923.7	689.1	461.4	290.9	216.6	199.1	194.3	202.5	200.1
17.5°	1267.6	1195.7	918.4	614.8	351.6	221.0	199.6	197.2	203.0	207.9	209.3
20°	1317.6	1214.1	882.0	498.3	263.2	202.5	194.7	189.9	200.6	215.1	212.2
22.5°	1368.1	1245.7	839.2	408.0	211.7	193.8	189.4	185.5	193.8	207.9	211.3
25°	1390.9	1296.2	791.6	318.6	196.7	183.6	180.7	182.1	188.9	201.5	200.1
27.5°	1506.0	1302.0	700.8	251.6	190.4	176.3	176.3	179.7	179.7	196.7	195.2
30°	1577.9	1400.6	627.0	211.7	183.1	166.1	171.9	173.4	171.0	189.4	190.9
32.5°	1704.2	1427.8	555.1	194.3	171.4	164.6	163.7	164.6	166.6	184.5	185.0
35°	1898.4	1561.9	457.0	187.5	165.6	157.4	150.6	155.9	160.8	173.9	176.3
37.5°	2278.2	1699.3	372.5	182.1	162.7	150.6	148.1	147.2	155.9	171.0	175.8
40°	2585.6	1942.6	303.1	177.8	156.9	146.7	140.4	140.8	148.6	159.8	167.1
42.5°	3020.8	2118.4	256.9	171.0	148.6	138.4	131.1	135.5	138.9	150.6	155.4
45°	3384.1	2254.9	226.3	166.6	140.4	130.6	124.8	129.7	126.3	132.1	138.9
47.5°	3673.0	2373.9	203.5	155.9	135.0	126.3	119.0	117.5	111.7	113.2	119.5
50°	3831.8	2354.0	184.5	145.2	128.2	121.9	111.7	101.5	93.7	93.2	97.1
52.5°	3888.2	2247.6	169.0	136.0	120.0	112.2	100.5	86.4	78.7	76.2	79.6
55°	3903.7	2094.6	154.9	125.8	112.2	100.0	87.9	72.8	64.6	60.7	64.1
57.5°	3853.2	1859.1	141.3	116.1	103.0	88.4	75.3	59.7	52.0	47.1	50.0
60°	3728.4	1559.9	129.2	103.9	93.2	78.2	63.6	48.1	39.8	35.5	36.9
62.5°	3452.1	1222.9	116.1	92.8	83.0	68.5	53.4	37.9	30.1	26.2	26.7
65°	3031.5	911.6	101.0	82.1	73.8	59.3	42.7	29.1	22.8	19.4	18.9
67.5°	2415.2	617.8	86.0	70.9	65.6	50.0	34.0	22.8	18.0	15.5	14.6
70°	1419.6	311.3	71.4	61.2	56.3	41.8	26.7	18.5	16.5	14.6	13.6
72.5°	468.2	134.5	55.9	50.5	46.6	33.5	20.9	17.0	16.0	14.1	13.1
75°	163.2	77.7	41.3	38.9	36.9	25.3	17.5	15.5	15.5	13.6	12.1
77.5°	106.8	60.2	30.6	28.2	27.7	18.5	15.1	14.6	13.6	11.2	9.2
80°	88.9	34.0	21.4	19.9	19.4	11.7	12.1	10.7	8.3	4.9	1.9
82.5°	82.1	20.4	11.2	12.1	11.2	4.4	6.8	5.8	4.4	1.9	0.0
85°	48.1	9.2	6.3	6.3	4.9	1.0	3.4	3.4	1.9	0.5	0.0
87.5°	5.3	4.4	3.4	3.4	2.4	0.0	1.5	1.0	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)