

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: P596723

Luminaire Tested: **MSA-SA3D-827-U-SL3-HSS**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596723
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-19)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA3D-827-U-SL3-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS
EACH AND TYPE III SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12016 lumens
Efficiency: N/A
Efficacy: 62.6 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G2

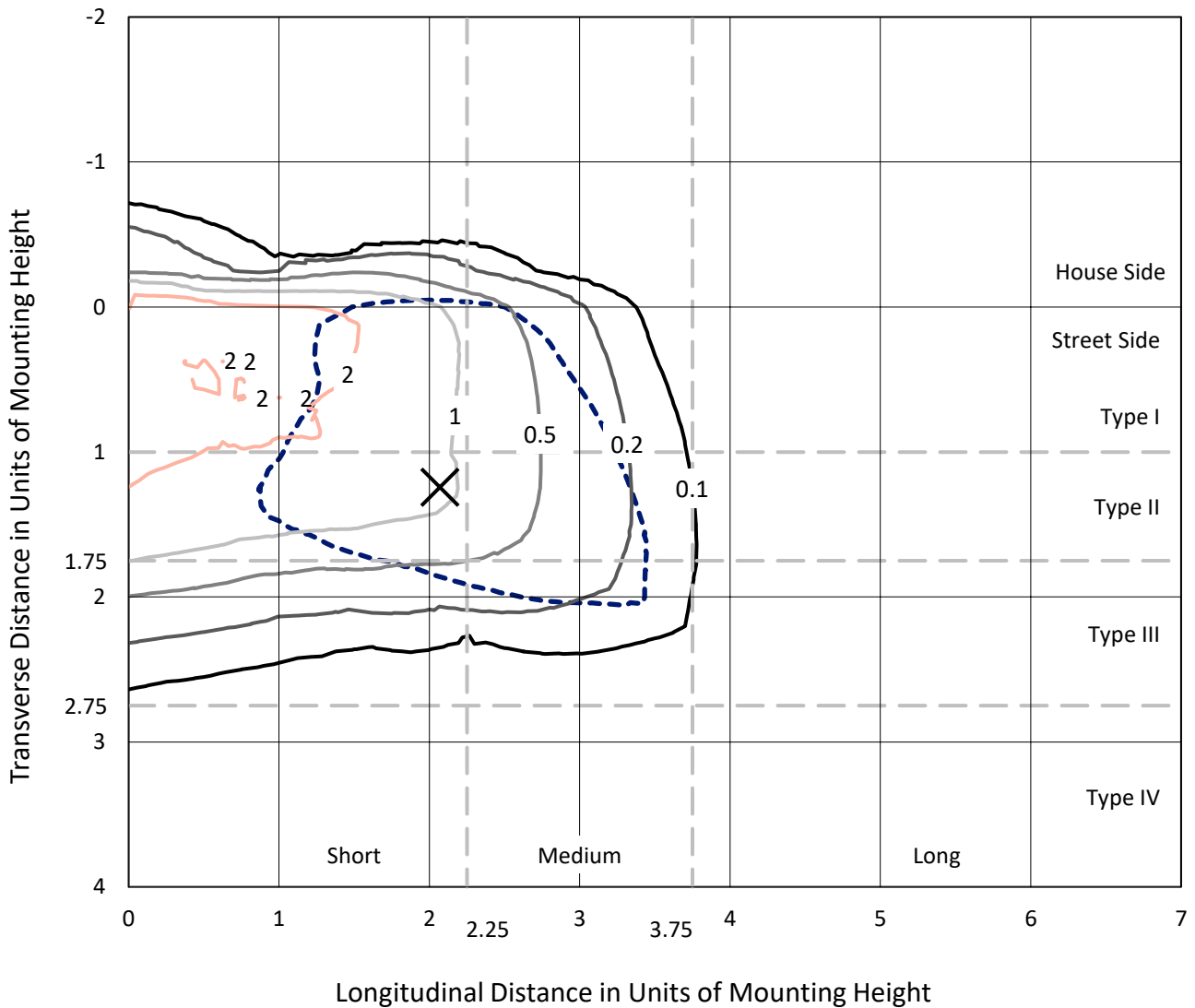
Input Watts (W): 192
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

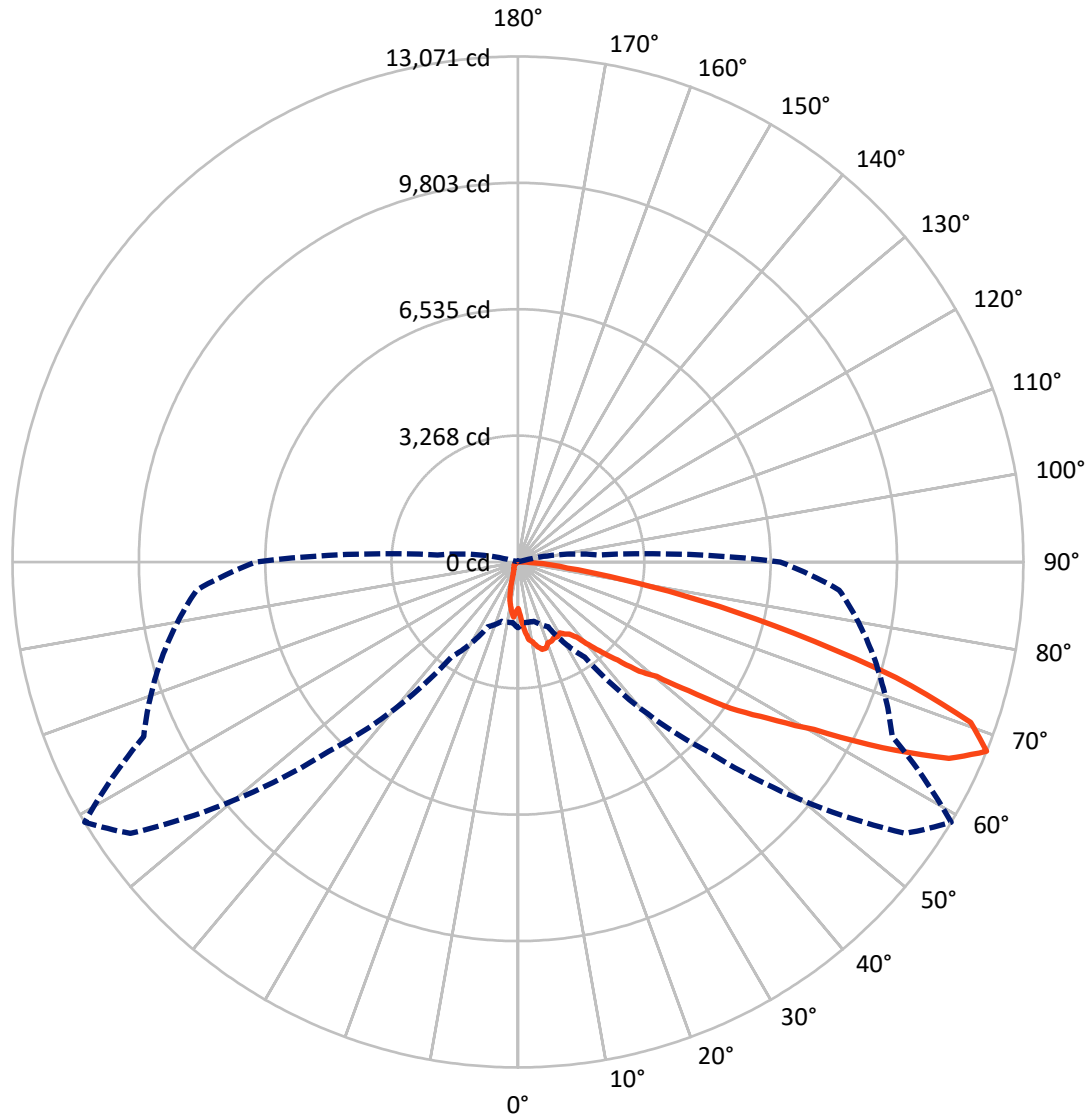
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.4 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1021.9	0.0	1021.9
	% Fixture	8.5	0.0	8.5
Street Side	Lumens	10994.1	0.0	10994.1
	% Fixture	91.5	0.0	91.5
Total	Lumens	12016.0	0.0	12016.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	146.2	1.2
10°-20°	411.6	3.4
20°-30°	612.2	5.1
30°-40°	944.5	7.9
40°-50°	1685.7	14.0
50°-60°	2999.7	25.0
60°-70°	3493.6	29.1
70°-80°	1553.7	12.9
80°-90°	168.7	1.4
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°	12016.0	100.0
0°-180°	12016.0	100.0

Coefficient of Utilization



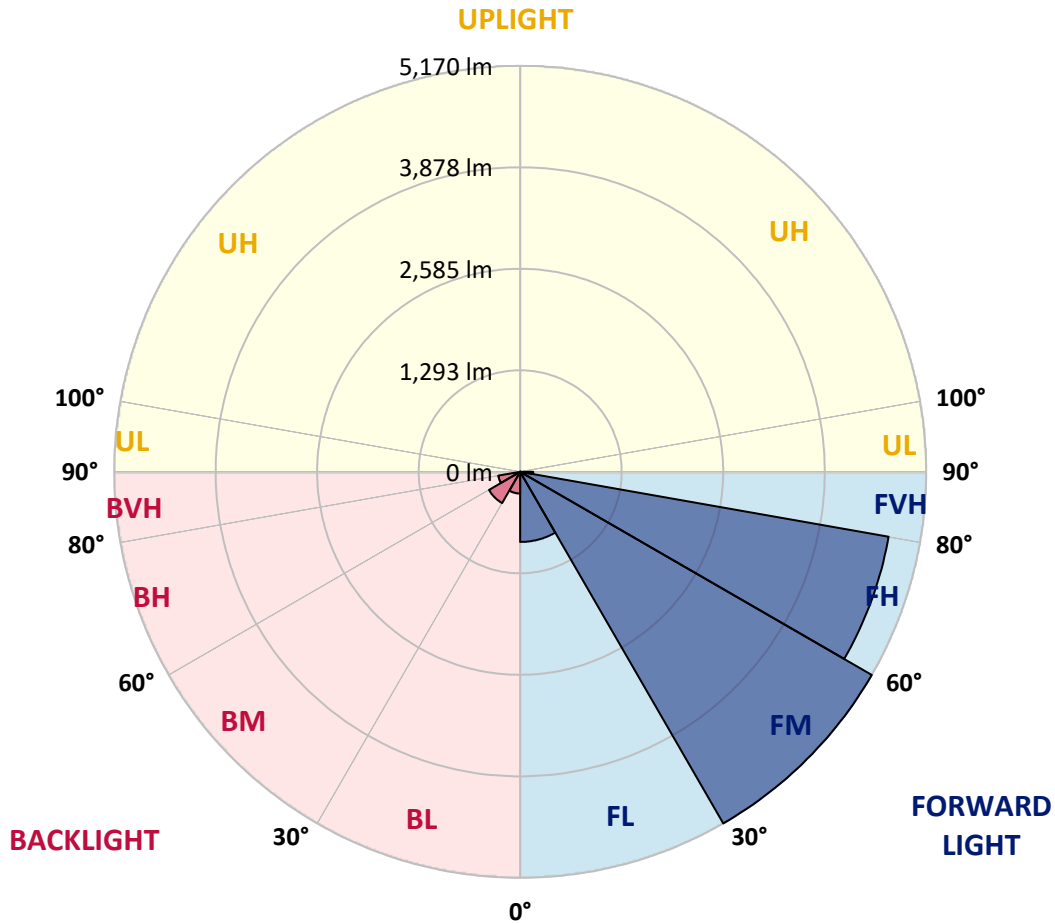
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	893.7	7.4			
FM (30°-60°)	5170.5	43.0			
FH (60°-80°)	4764.2	39.6			G2/5000
FVH (80°-90°)	165.7	1.4			G2/225
BL (0°-30°)	276.4	2.3	B1/500		
BM (30°-60°)	459.5	3.8	B1/1000		
BH (60°-80°)	283.1	2.4	B1/500		G1/500
BVH (80°-90°)	3.0	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 III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	1202.2	1202.2	1202.2	1202.2	1202.2	1202.2	1202.2	1202.2	1202.2	1202.2	1202.2
2.5°	1567.3	1508.3	1424.3	1449.3	1471.8	1493.1	1457.8	1437.7	1428.0	1341.6	1449.9
5°	1924.4	1850.8	1812.5	1802.8	1778.4	1724.3	1814.3	1774.2	1787.5	1804.6	1839.9
7.5°	2033.3	1999.9	1944.5	1965.2	1872.7	1864.8	1989.5	2024.2	2069.8	2038.8	2081.4
10°	1977.4	1919.6	1945.7	1938.4	1934.8	2016.3	2103.9	2105.7	2173.9	2206.7	2062.5
12.5°	1866.6	1873.3	1967.0	1959.7	2081.4	2244.5	2264.5	2243.2	2354.6	2297.4	2275.5
15°	1940.3	1995.0	1943.3	1960.9	2004.1	2208.0	2279.1	2344.9	2450.1	2484.2	2336.3
17.5°	2029.1	2034.6	1940.3	1918.4	2027.3	2122.2	2290.1	2344.2	2354.6	2653.3	2473.2
20°	1981.0	2027.9	1915.3	1777.2	1946.3	2075.3	2245.7	2228.6	2298.0	2703.2	2504.3
22.5°	2108.8	2041.9	1897.7	1793.6	1850.8	1968.2	2112.4	2223.8	2327.8	2584.0	2544.4
25°	2121.0	2096.6	1968.2	1875.8	1866.0	1895.8	2096.6	2168.4	2331.5	2691.0	2510.3
27.5°	2257.8	2229.9	1967.0	1976.2	1884.9	1793.0	2020.0	2188.5	2397.8	2625.9	2582.7
30°	2434.3	2436.7	2097.8	2126.4	1996.2	1848.4	2082.6	2128.9	2442.8	2730.0	2636.3
32.5°	2613.2	2686.8	2356.4	2204.9	2164.2	2058.3	2004.7	2218.3	2393.5	2907.6	2770.1
35°	2885.1	2935.0	2569.4	2433.7	2273.7	2153.2	2216.5	2293.1	2570.6	3143.1	2946.0
37.5°	3345.7	3255.7	2951.4	2715.4	2677.1	2499.4	2531.0	2462.3	2751.3	3420.5	3294.0
40°	3604.9	3523.4	3207.0	3092.0	2847.4	2874.8	2775.0	2815.2	3013.5	3709.5	3611.0
42.5°	3875.0	3797.2	3519.7	3438.2	3205.2	3092.0	3047.0	3191.2	3415.7	4190.8	4065.5
45°	4146.4	3948.7	3831.2	3872.0	3767.3	3543.4	3491.1	3619.5	3855.0	4782.2	4544.9
47.5°	4375.2	4208.4	4120.2	4101.4	4060.6	4371.5	4158.6	4215.1	4319.2	5305.4	5142.4
50°	4787.7	4623.4	4485.3	4446.9	4645.3	5086.4	4757.8	4648.3	4856.4	5937.6	5834.8
52.5°	5383.3	5174.0	4954.4	4955.0	5329.2	5571.3	5727.1	5534.8	5573.7	6633.0	6587.4
55°	5862.1	5596.3	5414.3	5557.9	6115.8	6251.5	6845.9	6677.4	6626.9	7277.9	7222.0
57.5°	5927.8	5609.0	5522.6	5774.5	6538.1	7404.5	8043.9	7622.9	7545.6	7817.6	7928.9
60°	5314.6	4976.3	5041.4	5446.6	6675.6	8107.2	9144.0	8800.2	8309.2	8449.7	8526.4
62.5°	3963.9	3693.7	3876.2	4412.9	6145.7	8578.1	10417.4	10576.8	9195.1	8924.3	8907.9
65°	2571.8	2402.7	2522.5	2962.4	4650.8	8524.6	11555.1	12246.3	9892.9	9311.3	9027.7
67.5°	1701.1	1572.8	1589.8	1850.2	3007.4	6933.0	12235.3	13070.7	10677.8	9530.9	8340.8
70°	1267.9	1167.0	1173.0	1314.2	1785.1	4572.3	11286.8	12420.3	10964.3	8769.8	6732.2
72.5°	914.5	846.9	903.5	1060.5	1422.5	2417.9	8412.6	10228.8	9560.7	6917.1	4535.8
75°	633.4	589.0	681.4	887.1	1298.4	1501.0	5559.1	7363.1	6701.1	4339.9	2050.4
77.5°	351.1	337.7	470.9	722.8	1178.5	1230.2	3405.3	4838.2	3716.8	1555.7	488.0
80°	153.3	148.5	228.2	542.7	990.5	1111.6	1917.1	2682.5	1462.0	277.4	157.6
82.5°	65.7	63.3	97.3	326.7	719.8	929.7	1182.2	1291.1	503.2	85.8	89.4
85°	11.6	12.8	38.9	172.2	438.1	472.1	856.0	764.2	253.1	40.8	63.9
87.5°	0.0	0.0	6.1	33.5	82.1	135.1	371.1	267.7	48.1	13.4	11.0
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°	1202.2	1202.2	1202.2	1202.2	1202.2	1202.2	1202.2	1202.2	1202.2	1202.2	1202.2
2.5°	1465.1	1431.0	1301.4	1285.0	1267.3	1241.2	1231.4	1175.5	1168.2	1240.0	1240.0
5°	1823.4	1701.8	1578.2	1480.9	1393.9	1273.4	1239.4	1204.1	1175.5	1168.2	1190.7
7.5°	2012.7	1864.2	1670.1	1422.5	1221.7	1047.1	974.1	923.0	865.8	882.8	891.9
10°	2002.3	1844.7	1597.1	1278.9	1056.2	863.3	677.8	569.5	509.2	479.4	475.8
12.5°	2103.9	1955.5	1547.8	1164.5	880.4	613.9	426.5	349.2	304.8	305.4	301.8
15°	2162.9	2001.1	1490.6	1019.7	620.0	394.9	295.7	278.7	272.6	279.3	275.6
17.5°	2267.0	2049.2	1361.0	803.7	426.5	298.1	272.0	265.3	273.2	287.2	283.5
20°	2259.1	1965.8	1176.7	566.4	315.2	268.3	257.4	247.0	263.4	278.0	275.6
22.5°	2251.8	1884.3	1003.3	418.0	263.4	244.6	235.5	231.2	239.7	256.8	260.4
25°	2187.3	1844.1	827.5	313.9	238.5	222.1	217.8	214.2	217.2	231.2	230.6
27.5°	2266.4	1742.5	638.8	263.4	220.9	201.4	197.7	191.7	185.6	197.7	199.6
30°	2249.9	1756.5	500.7	231.8	203.2	177.1	178.3	165.5	154.5	165.5	165.5
32.5°	2309.6	1654.3	400.9	210.5	185.6	166.7	151.5	138.1	130.2	136.9	138.1
35°	2396.6	1658.6	313.9	197.1	170.4	148.5	130.2	116.8	109.5	112.6	114.4
37.5°	2688.0	1629.4	262.2	186.8	164.9	137.5	118.6	101.0	96.1	99.8	101.6
40°	2877.8	1707.2	231.2	181.3	150.9	126.6	101.6	88.8	84.6	86.4	89.4
42.5°	3235.6	1750.4	216.0	175.2	138.1	108.3	87.0	79.7	73.6	76.1	78.5
45°	3618.3	1824.0	204.4	168.5	128.4	94.9	76.7	70.6	62.7	63.3	65.7
47.5°	4088.6	1999.3	191.0	157.0	115.0	86.4	68.1	59.0	51.7	51.1	54.1
50°	4720.1	2233.5	178.9	142.4	106.5	79.1	59.6	48.1	42.0	40.2	42.6
52.5°	5394.3	2536.5	166.1	132.0	96.1	69.4	51.1	38.9	33.5	32.2	34.1
55°	6062.3	2827.3	153.9	125.3	85.2	59.6	43.2	32.2	27.4	26.2	27.4
57.5°	6823.4	3141.9	138.1	111.9	74.8	51.7	35.9	26.8	22.5	21.3	21.9
60°	7396.6	3252.6	124.7	97.3	65.1	45.6	30.4	21.3	18.3	17.0	17.6
62.5°	7668.5	3071.9	111.9	84.6	57.2	39.5	25.6	17.6	15.2	14.0	14.0
65°	7598.0	2671.6	99.2	72.4	49.3	32.9	20.1	15.2	13.4	11.6	11.0
67.5°	6782.7	2090.5	84.6	60.8	41.4	26.8	17.0	14.6	12.2	11.0	9.1
70°	5379.0	1513.8	68.8	50.5	34.7	21.9	13.4	13.4	11.6	11.0	8.5
72.5°	3525.8	952.8	56.0	40.8	28.6	17.0	10.3	12.2	11.0	11.0	7.9
75°	1527.7	340.7	45.0	32.9	23.7	11.6	9.1	11.0	11.6	11.0	9.1
77.5°	357.8	105.9	35.3	26.2	19.5	7.9	9.1	11.0	11.6	10.3	7.9
80°	134.5	45.0	23.1	17.0	15.2	4.9	7.9	6.7	6.1	4.3	1.2
82.5°	81.5	18.9	12.2	8.5	7.3	1.2	3.7	2.4	1.2	1.2	0.0
85°	57.8	9.1	6.7	6.1	3.7	0.0	0.6	0.0	0.0	0.6	0.0
87.5°	7.9	2.4	3.0	3.0	2.4	0.0	0.0	0.0	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)