

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: P368511

Luminaire Tested: **MSA-SA4C-740-U-T4W-HSS**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P368511  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-15)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA4C-740-U-T4W-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 18140 lumens  
Efficiency: N/A  
Efficacy: 80.6 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B2 - U0 - G4

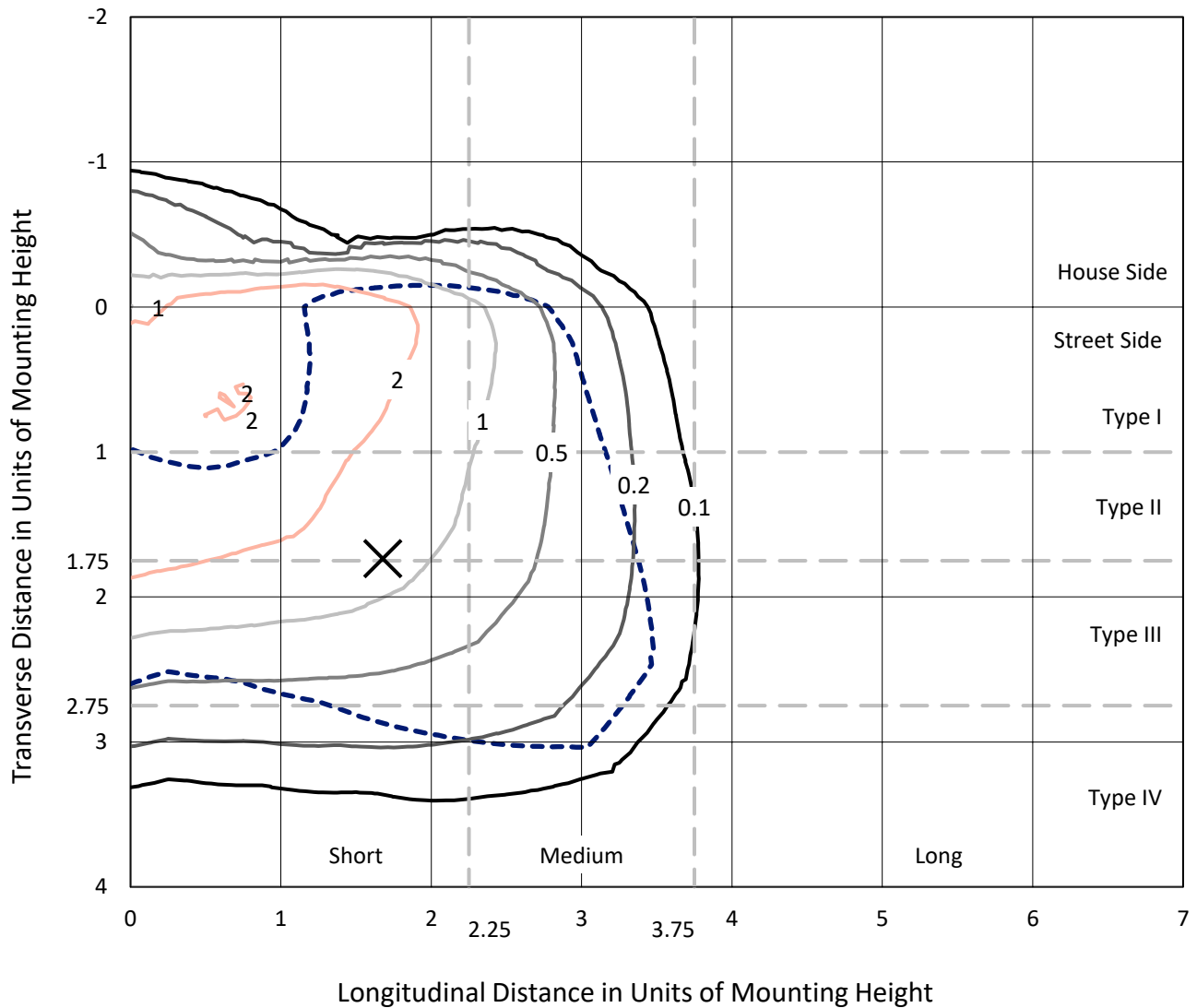
Input Watts (W): 225  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

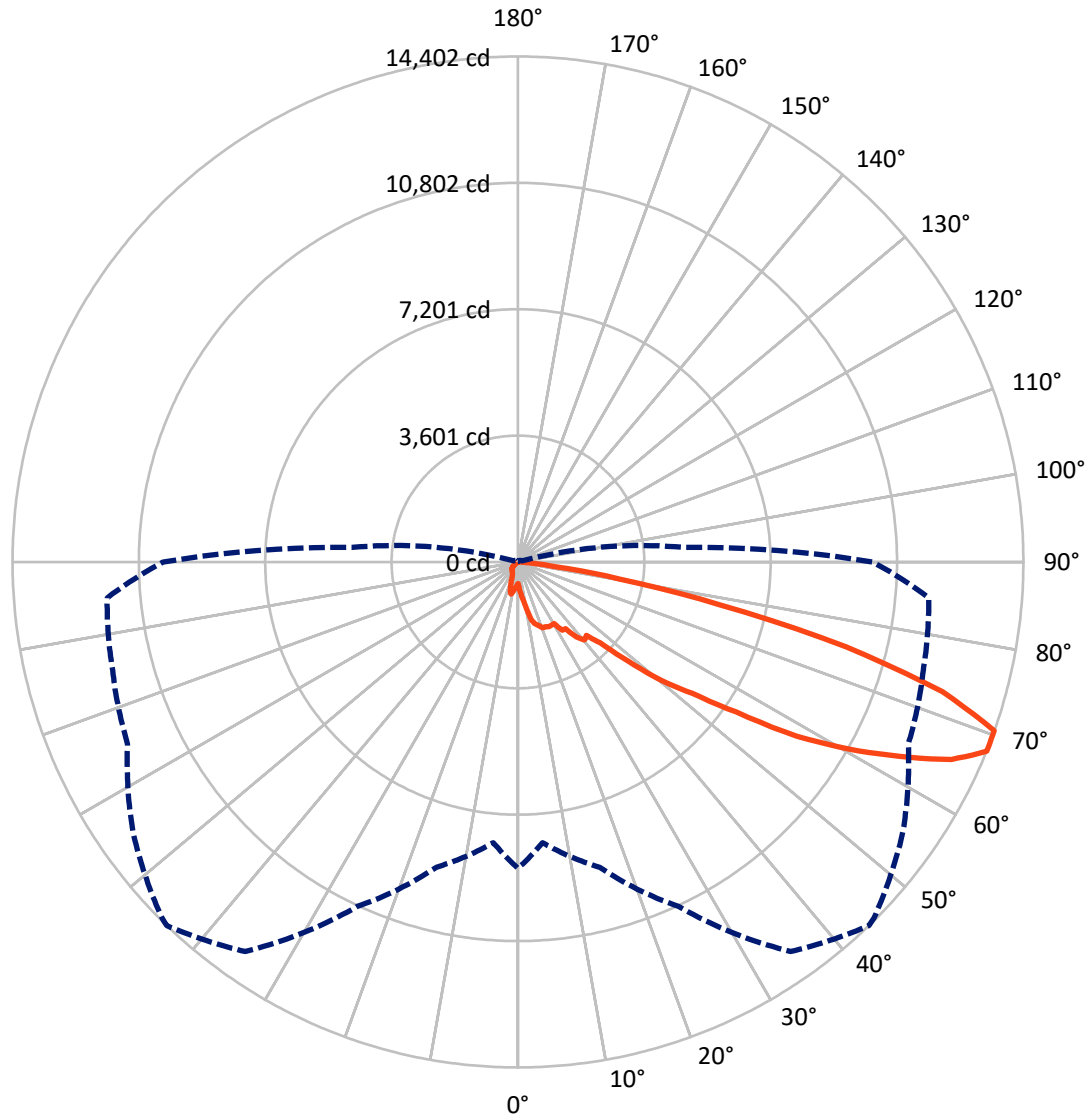
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.2 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 44-Deg Lateral    - - - Horizontal Cone Through 67.5-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1842.7	0.0	1842.7
	% Fixture	10.2	0.0	10.2
<b>Street Side</b>	Lumens	16297.3	0.0	16297.3
	% Fixture	89.8	0.0	89.8
<b>Total</b>	Lumens	18140.0	0.0	18140.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	90.6	0.5
10°-20°	379.2	2.1
20°-30°	671.8	3.7
30°-40°	1092.0	6.0
40°-50°	2185.2	12.0
50°-60°	4483.0	24.7
60°-70°	6158.3	33.9
70°-80°	2894.5	16.0
80°-90°	185.4	1.0
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°	18140.0	100.0
0°-180°	18140.0	100.0

**Coefficient of Utilization**

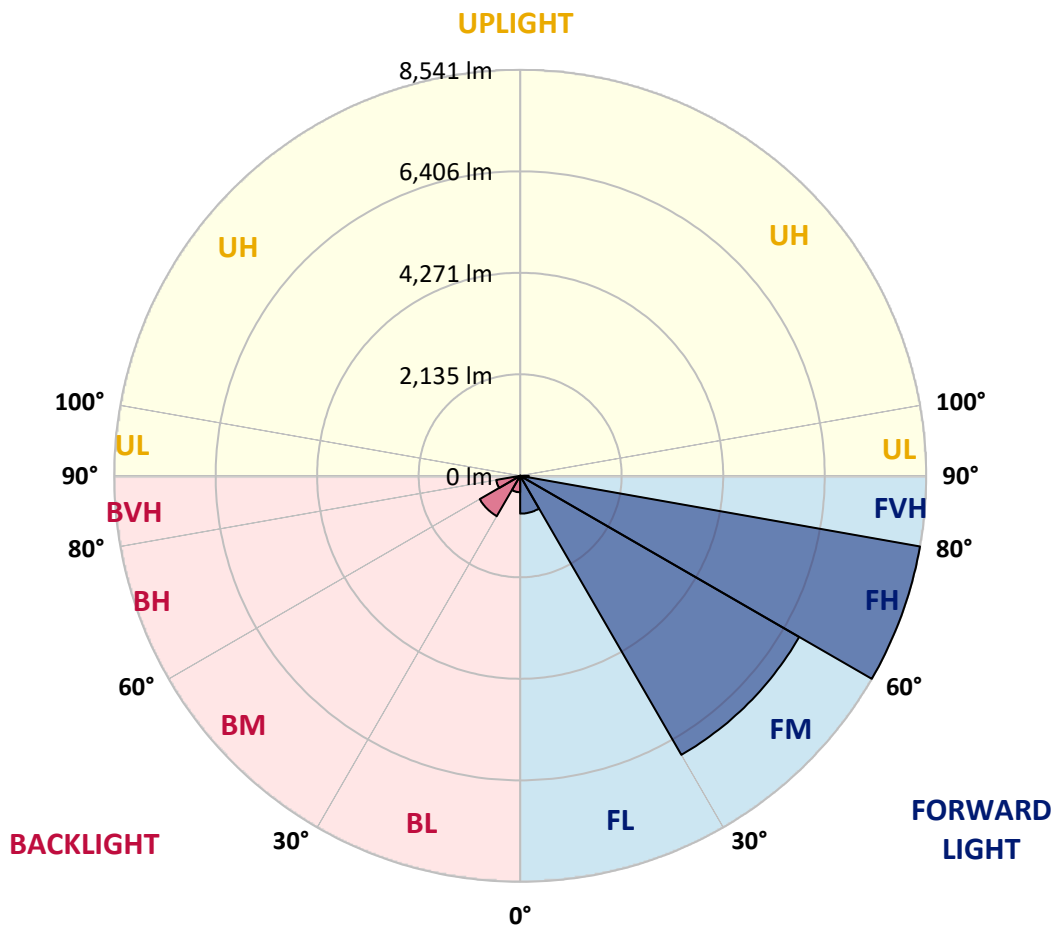


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	795.7	4.4			
FM (30°-60°)	6778.6	37.4			
FH (60°-80°)	8541.4	47.1			G4/12000
FVH (80°-90°)	181.6	1.0			G2/225
BL (0°-30°)	346.0	1.9	B1/500		
BM (30°-60°)	981.6	5.4	B1/1000		
BH (60°-80°)	511.3	2.8	B2/1000		G2/1000
BVH (80°-90°)	3.8	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G4**  
 Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	611.2	611.2	611.2	611.2	611.2	611.2	611.2	611.2	611.2	611.2	611.2
2.5°	777.2	752.2	716.2	724.2	728.2	739.2	740.2	726.2	686.2	675.2	724.2
5°	1089.3	1028.3	1017.3	994.3	948.3	923.3	917.3	942.3	910.3	900.3	913.3
7.5°	1391.4	1339.4	1282.4	1251.4	1155.3	1096.3	1093.3	1103.3	1109.3	1074.3	1092.3
10°	1592.4	1535.4	1523.4	1450.4	1367.4	1353.4	1347.4	1309.4	1278.4	1252.4	1165.3
12.5°	1774.5	1773.5	1795.5	1690.5	1677.5	1691.5	1686.5	1550.4	1519.4	1410.4	1385.4
15°	2016.6	2076.6	1981.6	1893.5	1781.5	1829.5	1816.5	1729.5	1708.5	1634.5	1527.4
17.5°	2267.6	2283.6	2124.6	1989.6	1960.6	1897.5	1910.5	1879.5	1773.5	1832.5	1726.5
20°	2273.6	2308.7	2138.6	1915.5	2004.6	2001.6	2002.6	1972.6	1832.5	1970.6	1873.5
22.5°	2357.7	2271.6	2113.6	1971.6	1987.6	2002.6	2018.6	1981.6	1951.6	1985.6	2003.6
25°	2323.7	2289.6	2137.6	2043.6	2028.6	2040.6	2044.6	2091.6	2072.6	2154.6	2109.6
27.5°	2411.7	2362.7	2090.6	2107.6	2054.6	2040.6	2016.6	2173.6	2229.6	2164.6	2284.6
30°	2562.7	2555.7	2171.6	2196.6	2155.6	2032.6	2096.6	2301.6	2371.7	2331.7	2477.7
32.5°	2798.8	2822.8	2408.7	2246.6	2267.6	2322.7	2298.6	2301.6	2478.7	2567.7	2683.8
35°	3133.9	3120.9	2639.7	2436.7	2326.7	2335.7	2369.7	2532.7	2761.8	2755.8	2878.8
37.5°	3792.1	3650.0	3048.9	2630.7	2663.8	2708.8	2683.8	2902.8	2924.8	2932.8	3226.9
40°	4762.3	4573.3	3694.0	3039.9	2721.8	2920.8	2908.8	2962.8	3109.9	3164.9	3594.0
42.5°	6040.7	5786.6	4829.4	3792.1	3001.8	2864.8	2938.8	3040.9	3535.0	3692.0	4162.2
45°	7453.1	6939.0	5961.7	4864.4	3704.0	3278.9	3334.9	3525.0	4210.2	4470.3	4989.4
47.5°	8368.4	7916.2	7083.0	5814.6	4436.3	4213.2	4218.2	4259.2	5003.4	5485.5	6181.7
50°	9163.6	8682.4	7909.2	6807.9	5731.6	5309.5	5213.5	5024.4	6013.7	6672.9	7445.1
52.5°	10285.9	9723.7	8735.5	7973.2	7209.0	6214.8	6180.7	6244.8	7205.0	7898.2	8740.5
55°	11298.2	10615.0	9671.7	9191.6	8893.5	7545.1	7574.1	7681.2	8734.5	9101.6	9892.8
57.5°	11745.3	11005.1	10520.0	10303.9	10144.9	9362.6	9264.6	9200.6	9940.8	10080.8	11100.1
60°	12038.4	11334.2	11114.1	11164.1	11646.3	10816.0	10727.0	10354.9	10939.1	11054.1	12182.4
62.5°	11853.3	11211.2	11258.2	11675.3	12745.6	12199.4	11942.4	11320.2	11755.3	11848.3	12959.7
65°	10688.0	10018.8	10623.0	11632.3	13583.8	13570.8	13451.8	12211.4	12207.4	12326.5	13019.7
67.5°	8730.5	8028.3	9005.5	10826.1	13548.8	14402.1	14346.0	13393.8	12272.5	11954.4	11749.3
70°	6069.7	5460.5	6568.9	8940.5	12341.5	14396.1	14306.0	14188.0	11758.3	10289.9	9109.6
72.5°	3153.9	2818.8	3851.1	6160.7	9837.8	12648.6	12945.6	12751.6	10039.8	7476.1	5364.5
75°	1071.3	961.3	1588.4	3269.9	6539.8	9658.7	10006.8	9809.8	6818.9	4011.1	2121.6
77.5°	415.1	386.1	569.2	1327.4	3280.9	5885.7	6263.8	6062.7	3657.0	1469.4	499.1
80°	236.1	228.1	314.1	598.2	1446.4	2927.8	3193.9	2896.8	1318.4	495.1	130.0
82.5°	100.0	103.0	175.0	323.1	727.2	1033.3	1152.3	1051.3	552.2	339.1	48.0
85°	22.0	27.0	83.0	180.1	305.1	295.1	309.1	343.1	339.1	249.1	21.0
87.5°	0.0	0.0	26.0	49.0	73.0	48.0	38.0	67.0	104.0	100.0	9.0
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°	611.2	611.2	611.2	611.2	611.2	611.2	611.2	611.2	611.2	611.2	611.2
2.5°	733.2	723.2	660.2	656.2	660.2	649.2	648.2	625.2	627.2	679.2	683.2
5°	913.3	863.2	809.2	792.2	776.2	740.2	760.2	760.2	760.2	793.2	803.2
7.5°	1076.3	1009.3	933.3	869.2	807.2	762.2	793.2	815.2	828.2	871.2	891.3
10°	1150.3	1084.3	1016.3	925.3	877.2	860.2	824.2	805.2	828.2	819.2	830.2
12.5°	1308.4	1248.4	1131.3	1037.3	1001.3	943.3	837.2	763.2	714.2	706.2	704.2
15°	1462.4	1425.4	1268.4	1142.3	1017.3	883.2	702.2	604.2	552.2	543.2	544.2
17.5°	1657.5	1604.5	1373.4	1192.3	980.3	739.2	542.2	458.1	454.1	476.1	478.1
20°	1787.5	1700.5	1426.4	1151.3	858.2	559.2	424.1	404.1	436.1	476.1	472.1
22.5°	1911.5	1817.5	1496.4	1115.3	665.2	424.1	390.1	392.1	419.1	462.1	473.1
25°	1993.6	1959.6	1582.4	1031.3	507.1	367.1	373.1	388.1	411.1	452.1	452.1
27.5°	2240.6	2081.6	1572.4	868.2	390.1	342.1	356.1	375.1	387.1	436.1	441.1
30°	2390.7	2338.7	1624.5	702.2	342.1	310.1	337.1	354.1	362.1	418.1	420.1
32.5°	2574.7	2459.7	1687.5	518.1	318.1	308.1	302.1	315.1	338.1	387.1	390.1
35°	2798.8	2764.8	1597.5	407.1	310.1	288.1	276.1	283.1	298.1	331.1	338.1
37.5°	3255.9	3053.9	1543.4	349.1	310.1	281.1	268.1	250.1	252.1	275.1	288.1
40°	3641.0	3579.0	1392.4	339.1	296.1	271.1	239.1	217.1	202.1	209.1	214.1
42.5°	4348.2	4061.1	1197.3	334.1	283.1	245.1	203.1	180.1	157.0	159.0	167.0
45°	5206.5	4587.3	1023.3	329.1	274.1	219.1	171.0	144.0	120.0	121.0	129.0
47.5°	6352.8	5354.5	812.2	314.1	258.1	195.1	138.0	110.0	96.0	99.0	106.0
50°	7655.2	6027.7	642.2	291.1	239.1	172.0	112.0	89.0	84.0	87.0	95.0
52.5°	8818.5	6523.8	530.1	270.1	212.1	140.0	94.0	79.0	77.0	79.0	85.0
55°	9852.8	6811.9	443.1	246.1	182.1	113.0	85.0	73.0	72.0	71.0	75.0
57.5°	10823.1	6894.9	346.1	208.1	148.0	98.0	79.0	68.0	66.0	63.0	66.0
60°	11530.3	6752.9	254.1	167.0	121.0	89.0	74.0	61.0	58.0	53.0	55.0
62.5°	11871.3	6363.8	192.1	134.0	103.0	81.0	66.0	53.0	49.0	43.0	44.0
65°	11547.3	5722.6	151.0	113.0	88.0	68.0	56.0	45.0	40.0	34.0	34.0
67.5°	10111.9	4747.3	128.0	98.0	74.0	58.0	46.0	41.0	33.0	28.0	27.0
70°	7422.1	3415.0	110.0	86.0	64.0	50.0	39.0	37.0	32.0	27.0	25.0
72.5°	4189.2	1932.5	94.0	76.0	54.0	42.0	33.0	34.0	31.0	25.0	23.0
75°	1598.5	651.2	78.0	63.0	44.0	32.0	28.0	28.0	28.0	21.0	18.0
77.5°	396.1	166.0	62.0	51.0	35.0	21.0	23.0	24.0	24.0	18.0	13.0
80°	109.0	56.0	37.0	37.0	25.0	12.0	16.0	16.0	13.0	6.0	0.0
82.5°	40.0	21.0	13.0	16.0	11.0	4.0	6.0	4.0	3.0	0.0	0.0
85°	17.0	11.0	8.0	9.0	5.0	0.0	1.0	2.0	0.0	0.0	0.0
87.5°	7.0	5.0	4.0	4.0	2.0	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)