

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: P368621

Luminaire Tested: **MSA-SA4D-730-U-T4W-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368621
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-SA4D-730-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: 18062 lumens
Efficiency: N/A
Efficacy: 69.7 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G4

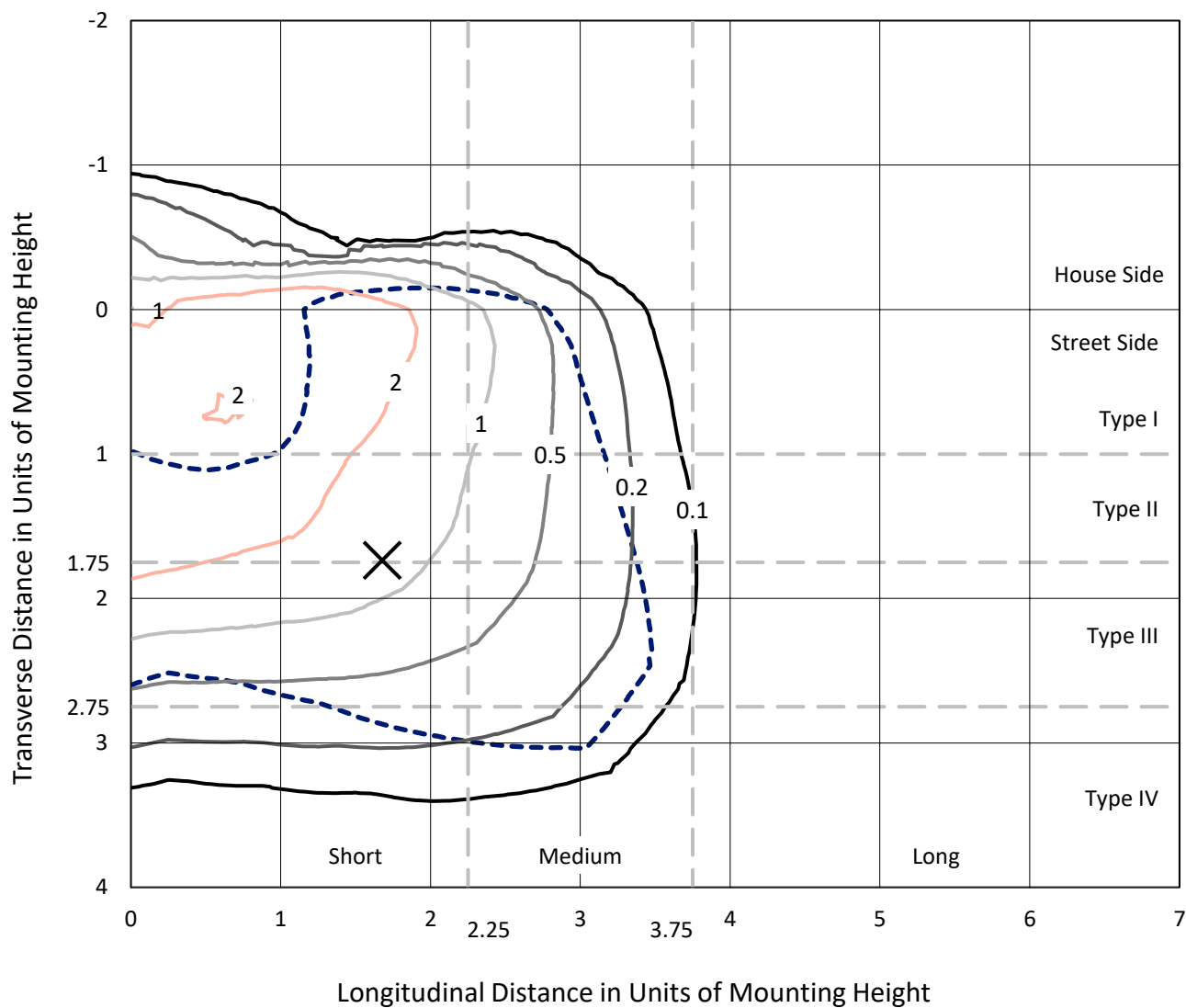
Input Watts (W): 259
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

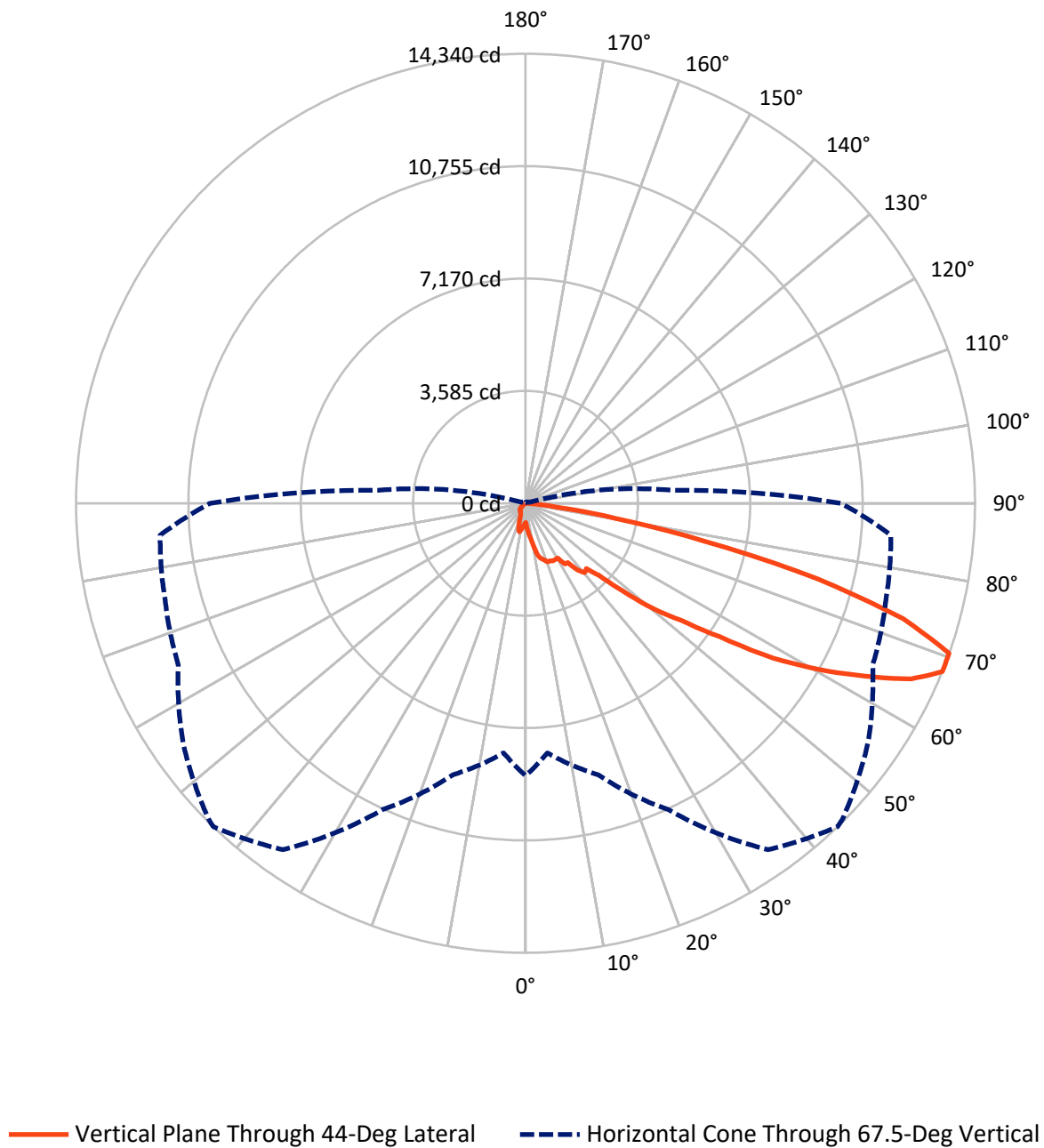
✕ Max cd
 --- 1/2 Max cd



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

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Luminous Intensity Polar Plot



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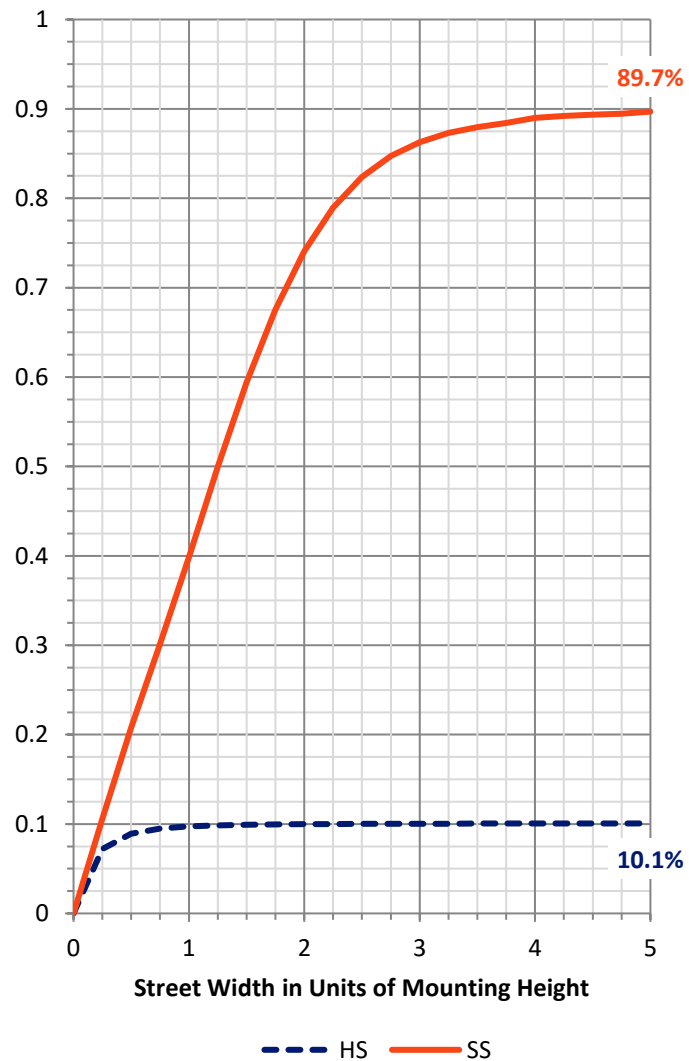
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1834.8	0.0	1834.8
	% Fixture	10.2	0.0	10.2
Street Side	Lumens	16227.2	0.0	16227.2
	% Fixture	89.8	0.0	89.8
Total	Lumens	18062.0	0.0	18062.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	90.2	0.5
10°-20°	377.6	2.1
20°-30°	668.9	3.7
30°-40°	1087.3	6.0
40°-50°	2175.8	12.0
50°-60°	4463.7	24.7
60°-70°	6131.8	33.9
70°-80°	2882.0	16.0
80°-90°	184.6	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°	18062.0	100.0
0°-180°	18062.0	100.0

Coefficient of Utilization



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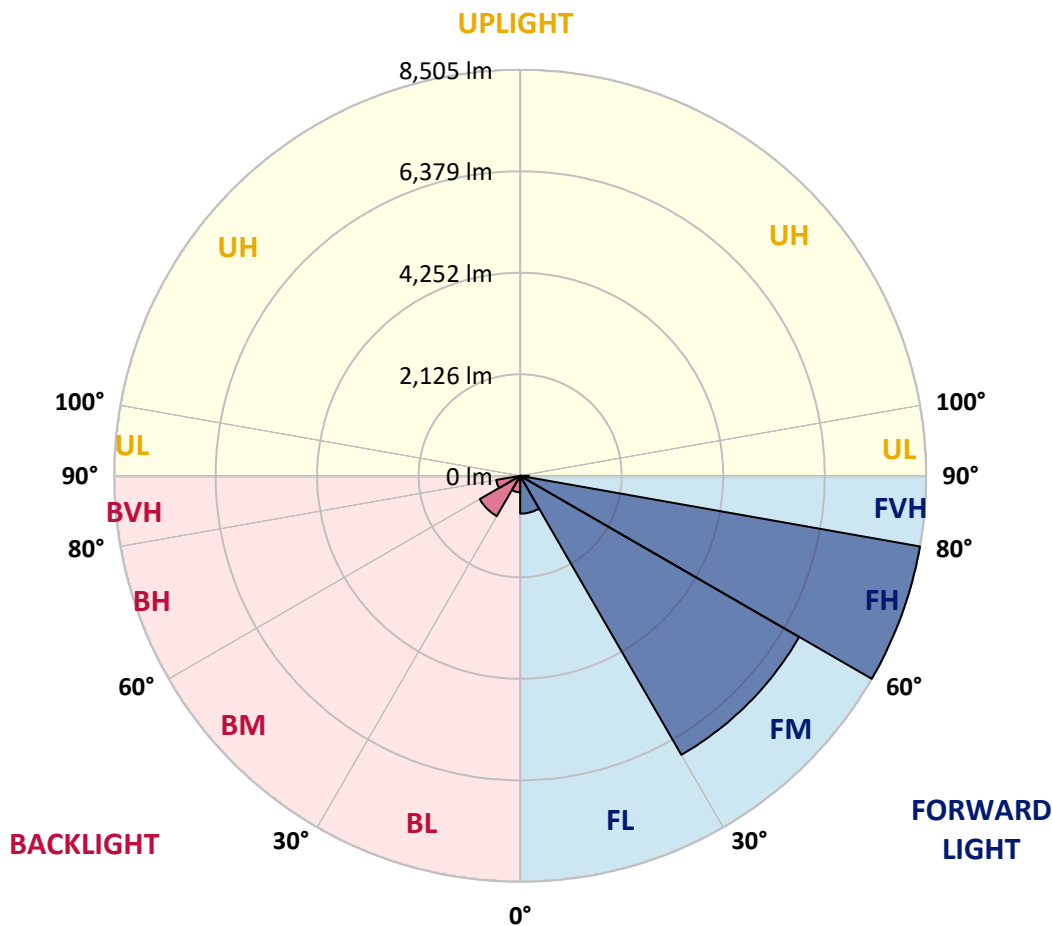
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	792.2	4.4			
FM	(30°-60°)	6749.5	37.4			
FH	(60°-80°)	8504.7	47.1			G4/12000
FVH	(80°-90°)	180.8	1.0			G2/225
BL	(0°-30°)	344.5	1.9	B1/500		
BM	(30°-60°)	977.3	5.4	B1/1000		
BH	(60°-80°)	509.1	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°	608.5	608.5	608.5	608.5	608.5	608.5	608.5	608.5	608.5	608.5	608.5
2.5°	773.9	749.0	713.1	721.1	725.1	736.0	737.0	723.1	683.2	672.3	721.1
5°	1084.6	1023.9	1012.9	990.0	944.2	919.3	913.3	938.2	906.3	896.4	909.3
7.5°	1385.4	1333.6	1276.8	1246.0	1150.4	1091.6	1088.6	1098.6	1104.5	1069.7	1087.6
10°	1585.6	1528.8	1516.9	1444.2	1361.5	1347.6	1341.6	1303.7	1272.9	1247.0	1160.3
12.5°	1766.9	1765.9	1787.8	1683.2	1670.3	1684.2	1679.2	1543.8	1512.9	1404.3	1379.4
15°	2007.9	2067.7	1973.0	1885.4	1773.8	1821.6	1808.7	1722.1	1701.1	1627.4	1520.9
17.5°	2257.9	2273.8	2115.5	1981.0	1952.1	1889.4	1902.3	1871.4	1765.9	1824.6	1719.1
20°	2263.9	2298.7	2129.4	1907.3	1995.9	1993.0	1994.0	1964.1	1824.6	1962.1	1865.5
22.5°	2347.5	2261.9	2104.5	1963.1	1979.0	1994.0	2009.9	1973.0	1943.2	1977.0	1994.9
25°	2313.7	2279.8	2128.4	2034.8	2019.8	2031.8	2035.8	2082.6	2063.7	2145.3	2100.5
27.5°	2401.3	2352.5	2081.6	2098.5	2045.7	2031.8	2007.9	2164.3	2220.0	2155.3	2274.8
30°	2551.7	2544.7	2162.3	2187.2	2146.3	2023.8	2087.6	2291.8	2361.5	2321.6	2467.0
32.5°	2786.8	2810.7	2398.3	2237.0	2257.9	2312.7	2288.8	2291.8	2468.0	2556.7	2672.2
35°	3120.4	3107.5	2628.4	2426.2	2316.7	2325.6	2359.5	2521.8	2749.9	2743.9	2866.4
37.5°	3775.8	3634.3	3035.7	2619.4	2652.3	2697.1	2672.2	2890.3	2912.2	2920.2	3213.0
40°	4741.9	4553.6	3678.2	3026.8	2710.1	2908.3	2896.3	2950.1	3096.5	3151.3	3578.6
42.5°	6014.7	5761.7	4808.6	3775.8	2988.9	2852.5	2926.2	3027.8	3519.8	3676.2	4144.3
45°	7421.1	6909.1	5936.0	4843.5	3688.1	3264.8	3320.6	3509.8	4192.1	4451.0	4968.0
47.5°	8332.4	7882.2	7052.5	5789.6	4417.2	4195.1	4200.1	4240.9	4981.9	5462.0	6155.2
50°	9124.2	8645.1	7875.2	6778.6	5707.0	5286.7	5191.1	5002.8	5987.8	6644.2	7413.1
52.5°	10241.7	9681.9	8697.9	7939.0	7178.0	6188.0	6154.2	6217.9	7174.1	7864.3	8702.9
55°	11249.6	10569.3	9630.1	9152.1	8855.3	7512.7	7541.6	7648.1	8696.9	9062.4	9850.3
57.5°	11694.8	10957.8	10474.7	10259.6	10101.2	9322.4	9224.8	9161.0	9898.1	10037.5	11052.4
60°	11986.6	11285.5	11066.3	11116.1	11596.2	10769.5	10680.9	10310.4	10892.0	11006.6	12130.1
62.5°	11802.4	11163.0	11209.8	11625.1	12690.8	12147.0	11891.0	11271.5	11704.8	11797.4	12903.9
65°	10642.1	9975.7	10577.3	11582.3	13525.4	13512.5	13394.0	12158.9	12155.0	12273.5	12963.7
67.5°	8692.9	7993.7	8966.8	10779.5	13490.6	14340.1	14284.4	13336.2	12219.7	11903.0	11698.8
70°	6043.6	5437.1	6540.6	8902.1	12288.4	14334.2	14244.5	14127.0	11707.8	10245.7	9070.4
72.5°	3140.3	2806.7	3834.5	6134.2	9795.5	12594.2	12890.0	12696.8	9996.7	7444.0	5341.4
75°	1066.7	957.1	1581.6	3255.9	6511.7	9617.2	9963.8	9767.6	6789.6	3993.9	2112.5
77.5°	413.3	384.4	566.7	1321.7	3266.8	5860.4	6236.8	6036.6	3641.3	1463.1	497.0
80°	235.1	227.1	312.7	595.6	1440.2	2915.2	3180.2	2884.4	1312.7	493.0	129.5
82.5°	99.6	102.6	174.3	321.7	724.1	1028.8	1147.4	1046.8	549.8	337.6	47.8
85°	21.9	26.9	82.7	179.3	303.8	293.8	307.8	341.6	337.6	248.0	20.9
87.5°	0.0	0.0	25.9	48.8	72.7	47.8	37.8	66.7	103.6	99.6	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°	608.5	608.5	608.5	608.5	608.5	608.5	608.5	608.5	608.5	608.5	608.5
2.5°	730.1	720.1	657.3	653.4	657.3	646.4	645.4	622.5	624.5	676.3	680.3
5°	909.3	859.5	805.7	788.8	772.9	737.0	756.9	756.9	756.9	789.8	799.8
7.5°	1071.7	1004.9	929.3	865.5	803.8	758.9	789.8	811.7	824.7	867.5	887.4
10°	1145.4	1079.6	1011.9	921.3	873.5	856.5	820.7	801.8	824.7	815.7	826.7
12.5°	1302.7	1243.0	1126.5	1032.8	997.0	939.2	833.6	759.9	711.1	703.2	701.2
15°	1456.1	1419.3	1262.9	1137.4	1012.9	879.5	699.2	601.6	549.8	540.8	541.8
17.5°	1650.3	1597.6	1367.5	1187.2	976.1	736.0	539.8	456.2	452.2	474.1	476.1
20°	1779.8	1693.2	1420.3	1146.4	854.6	556.8	422.3	402.4	434.2	474.1	470.1
22.5°	1903.3	1809.7	1490.0	1110.5	662.3	422.3	388.4	390.4	417.3	460.1	471.1
25°	1985.0	1951.1	1575.6	1026.9	505.0	365.5	371.5	386.4	409.3	450.2	450.2
27.5°	2231.0	2072.6	1565.7	864.5	388.4	340.6	354.6	373.5	385.4	434.2	439.2
30°	2380.4	2328.6	1617.5	699.2	340.6	308.8	335.6	352.6	360.5	416.3	418.3
32.5°	2563.7	2449.1	1680.2	515.9	316.7	306.8	300.8	313.7	336.6	385.4	388.4
35°	2786.8	2752.9	1590.6	405.4	308.8	286.8	274.9	281.9	296.8	329.7	336.6
37.5°	3241.9	3040.7	1536.8	347.6	308.8	279.9	266.9	249.0	251.0	273.9	286.8
40°	3625.4	3563.6	1386.4	337.6	294.8	269.9	238.0	216.1	201.2	208.2	213.1
42.5°	4329.5	4043.7	1192.2	332.7	281.9	244.0	202.2	179.3	156.4	158.4	166.3
45°	5184.1	4567.6	1018.9	327.7	272.9	218.1	170.3	143.4	119.5	120.5	128.5
47.5°	6325.5	5331.5	808.7	312.7	257.0	194.2	137.4	109.6	95.6	98.6	105.6
50°	7622.2	6001.8	639.4	289.8	238.0	171.3	111.5	88.6	83.7	86.7	94.6
52.5°	8780.6	6495.8	527.9	268.9	211.1	139.4	93.6	78.7	76.7	78.7	84.7
55°	9810.4	6782.6	441.2	245.0	181.3	112.5	84.7	72.7	71.7	70.7	74.7
57.5°	10776.5	6865.3	344.6	207.2	147.4	97.6	78.7	67.7	65.7	62.7	65.7
60°	11480.7	6723.9	253.0	166.3	120.5	88.6	73.7	60.8	57.8	52.8	54.8
62.5°	11820.3	6336.4	191.2	133.5	102.6	80.7	65.7	52.8	48.8	42.8	43.8
65°	11497.6	5698.0	150.4	112.5	87.6	67.7	55.8	44.8	39.8	33.9	33.9
67.5°	10068.4	4726.9	127.5	97.6	73.7	57.8	45.8	40.8	32.9	27.9	26.9
70°	7390.2	3400.3	109.6	85.7	63.7	49.8	38.8	36.9	31.9	26.9	24.9
72.5°	4171.2	1924.2	93.6	75.7	53.8	41.8	32.9	33.9	30.9	24.9	22.9
75°	1591.6	648.4	77.7	62.7	43.8	31.9	27.9	27.9	27.9	20.9	17.9
77.5°	394.4	165.3	61.8	50.8	34.9	20.9	22.9	23.9	23.9	17.9	12.9
80°	108.6	55.8	36.9	36.9	24.9	12.0	15.9	15.9	12.9	6.0	0.0
82.5°	39.8	20.9	12.9	15.9	11.0	4.0	6.0	4.0	3.0	0.0	0.0
85°	16.9	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)