

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: STREETWORKS

Report Number: P231360

Luminaire Tested: **ARCH-M-AF48-160-D-U-T4W-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P231360
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29625)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: ARCH-M-AF48-160-D-U-T4W-HSS
Description: ARCHEON-M ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 4000K, 1030mA LIGHT ENGINES WITH 24 LEDS AND TYPE IV WIDE OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14096.3 lumens
Efficiency: N/A
Efficacy: 87.6 lumens/watt
Luminous Opening: Rectangular (W 0.75' x L: 1' x H: 0')
IES Classification: Type IV - Medium - Non-Cutoff
BUG Rating: B1 - U0 - G3

Input Watts (W): 161
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

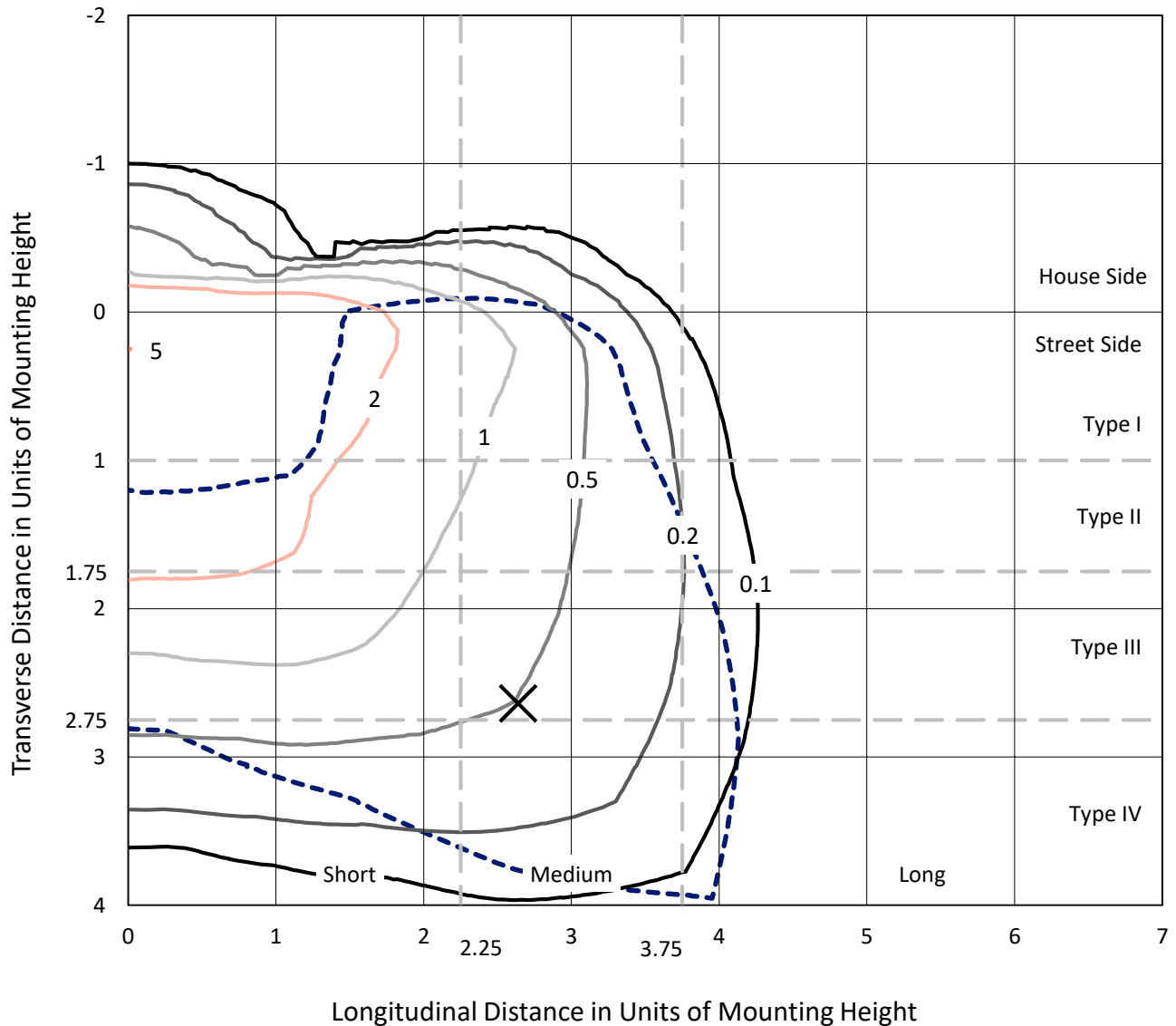


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

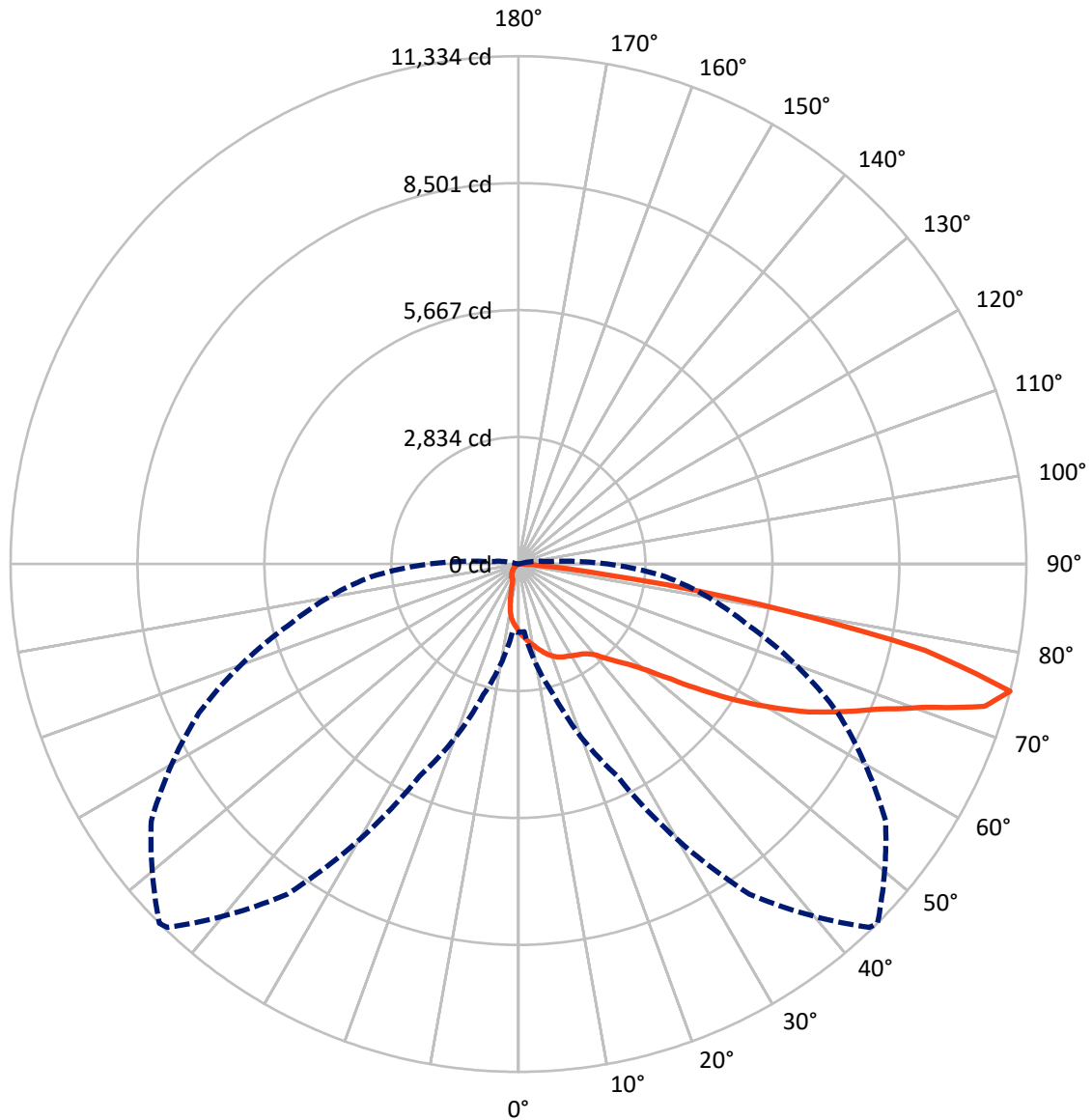


Based on 20 foot mounting height. Maximum calculated value = 5 fc
 Type IV - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 75-Deg Vertical

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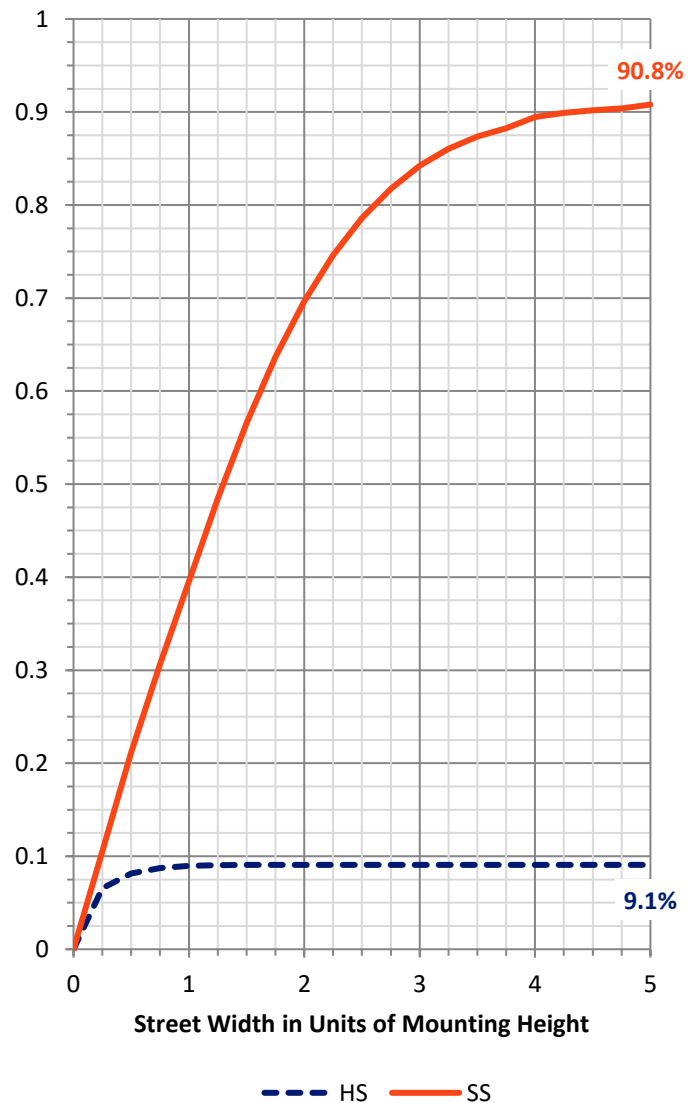
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1289.4	0.0	1289.4
	% Fixture	9.1	0.0	9.1
Street Side	Lumens	12806.9	0.0	12806.9
	% Fixture	90.9	0.0	90.9
Total	Lumens	14096.3	0.0	14096.3
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	142.3	1.0
10°-20°	403.1	2.9
20°-30°	667.6	4.7
30°-40°	966.2	6.9
40°-50°	1582.1	11.2
50°-60°	2819.0	20.0
60°-70°	4144.2	29.4
70°-80°	3126.5	22.2
80°-90°	245.3	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°	14096.3	100.0
0°-180°	14096.3	100.0



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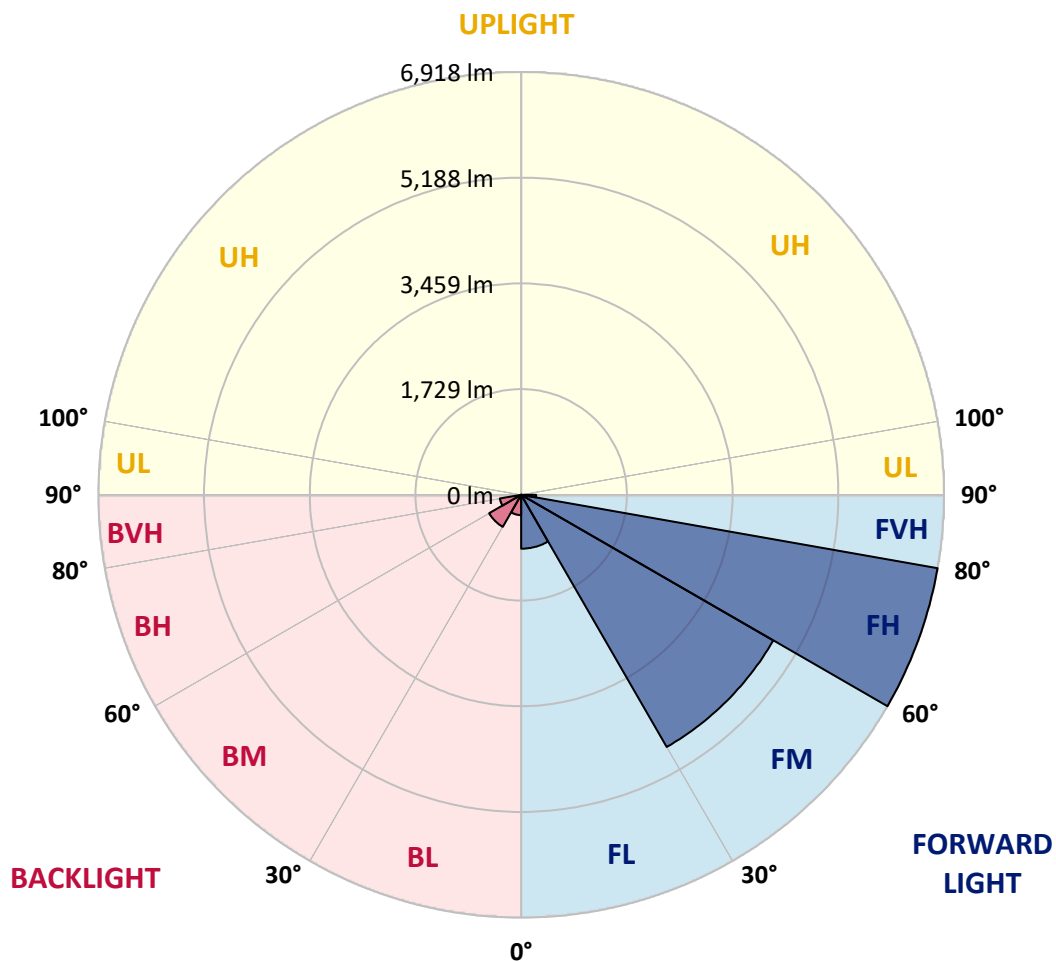
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	881.7	6.3			
FM	(30°-60°)	4763.0	33.8			
FH	(60°-80°)	6917.5	49.1			G3/7500
FVH	(80°-90°)	244.6	1.7			G3/500
BL	(0°-30°)	331.3	2.4	B1/500		
BM	(30°-60°)	604.2	4.3	B1/1000		
BH	(60°-80°)	353.2	2.5	B1/500		G1/500
BVH	(80°-90°)	0.7	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 Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	1507.6	1507.6	1507.6	1507.6	1507.6	1507.6	1507.6	1507.6	1507.6	1507.6	1507.6
2.5°	1637.7	1637.7	1634.5	1631.1	1614.4	1597.7	1594.4	1584.3	1554.4	1534.3	1514.4
5°	1774.5	1777.9	1771.1	1754.5	1717.8	1681.1	1677.7	1651.1	1594.4	1554.4	1511.0
7.5°	1904.6	1911.3	1894.6	1864.5	1821.3	1767.9	1764.5	1714.5	1641.1	1584.3	1521.0
10°	2014.7	2014.7	1991.4	1954.7	1907.9	1851.2	1844.6	1787.8	1704.4	1634.5	1551.0
12.5°	2134.8	2131.4	2098.1	2048.0	1994.7	1941.3	1938.0	1867.9	1787.8	1697.8	1594.4
15°	2244.9	2238.1	2194.8	2148.1	2091.4	2034.6	2031.4	1961.3	1877.9	1771.1	1657.8
17.5°	2304.9	2301.5	2261.5	2214.8	2168.1	2124.8	2121.4	2048.0	1957.9	1847.9	1721.1
20°	2314.8	2318.2	2284.9	2244.9	2218.2	2194.8	2194.8	2128.0	2031.4	1914.7	1787.8
22.5°	2318.2	2328.2	2304.9	2251.5	2244.9	2248.1	2254.8	2201.5	2101.4	1991.4	1857.9
25°	2341.5	2354.9	2338.3	2274.8	2268.2	2291.5	2298.2	2274.8	2184.8	2074.7	1938.0
27.5°	2388.3	2401.6	2388.3	2308.2	2298.2	2321.6	2328.2	2341.5	2274.8	2154.7	2021.4
30°	2481.7	2485.0	2455.0	2354.9	2334.9	2365.0	2374.9	2411.6	2358.2	2231.5	2101.4
32.5°	2645.1	2611.7	2521.7	2388.3	2371.6	2405.0	2415.0	2455.0	2434.9	2304.9	2184.8
35°	2978.6	2805.2	2598.4	2434.9	2418.3	2451.6	2465.0	2521.7	2531.7	2408.2	2288.2
37.5°	2975.4	2818.5	2778.5	2525.1	2501.6	2525.1	2541.7	2611.7	2651.8	2545.0	2438.3
40°	3185.5	3118.8	3118.8	2695.2	2618.4	2651.8	2668.5	2738.5	2808.5	2725.1	2615.1
42.5°	3845.9	3802.5	3755.9	3022.0	2781.8	2875.2	2885.2	2928.6	3012.0	2985.3	2855.3
45°	4583.0	4543.0	4362.9	3575.7	3062.0	3078.7	3102.1	3172.1	3292.2	3342.2	3188.7
47.5°	5160.1	5120.1	4966.6	4242.8	3499.0	3352.2	3352.2	3489.0	3675.8	3802.5	3655.7
50°	5623.8	5577.0	5483.6	4953.3	4216.2	3745.8	3725.8	3885.9	4162.8	4359.6	4259.5
52.5°	6074.1	5937.3	5880.6	5687.1	5026.7	4316.2	4262.8	4376.3	4759.8	5003.4	4920.0
55°	6374.2	6354.3	6294.2	6360.9	5877.3	5010.0	4963.4	4986.7	5467.0	5630.4	5527.0
57.5°	6654.4	6651.1	6784.5	7094.8	6804.6	5803.9	5730.5	5693.7	6150.8	6110.7	6200.8
60°	7001.4	6941.3	7251.5	7695.1	7655.2	6577.7	6494.3	6421.0	6674.4	6561.0	7008.0
62.5°	7018.1	7001.4	7631.7	8268.8	8499.0	7364.9	7268.2	7004.7	7131.4	7001.4	7778.5
65°	6381.0	6464.3	7791.8	8572.4	9206.1	8055.3	7938.6	7528.3	7538.3	7451.6	8685.8
67.5°	6237.4	6280.8	7351.5	8899.3	9716.5	8752.5	8642.4	8132.0	8012.1	8018.7	9222.8
70°	5880.6	5947.3	6804.6	8875.9	10120.1	9683.2	9573.1	9019.4	8729.1	8405.6	8809.2
72.5°	4493.0	4606.4	5733.8	7781.9	10010.0	10900.6	10870.6	10143.5	9016.0	7718.5	6664.4
75°	1521.0	1517.6	3012.0	5226.8	8992.7	11274.1	11334.2	10003.3	7865.3	5323.5	3308.8
77.5°	326.9	330.2	620.4	2118.1	5974.0	9052.7	9282.9	7545.0	5073.4	2371.6	757.2
80°	160.1	163.5	256.9	560.4	2388.3	5076.7	5437.0	3879.2	1874.6	473.6	126.7
82.5°	80.1	83.4	133.4	296.9	883.9	1804.5	1928.0	1427.6	537.0	266.9	63.4
85°	30.0	30.0	66.7	176.8	403.6	423.6	520.4	413.6	323.6	216.8	16.7
87.5°	6.6	6.6	36.7	86.7	180.1	133.4	133.4	126.7	196.8	146.8	6.6
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°	1507.6	1507.6	1507.6	1507.6	1507.6	1507.6	1507.6	1507.6	1507.6	1507.6	1507.6
2.5°	1504.4	1491.0	1467.6	1444.3	1427.6	1407.6	1397.6	1387.6	1384.3	1380.9	1387.6
5°	1487.7	1467.6	1424.3	1387.6	1354.3	1327.6	1307.5	1287.5	1277.6	1270.8	1274.2
7.5°	1487.7	1457.6	1394.3	1337.5	1284.2	1227.4	1170.8	1127.4	1094.0	1074.1	1077.4
10°	1504.4	1464.4	1380.9	1304.2	1204.1	1084.0	960.7	867.3	803.8	767.2	767.2
12.5°	1541.1	1487.7	1384.3	1264.2	1094.0	883.9	697.1	583.7	537.0	510.4	513.7
15°	1591.1	1527.7	1400.9	1210.8	940.6	657.1	487.0	413.6	413.6	420.3	423.6
17.5°	1647.8	1577.7	1414.2	1130.8	743.8	470.4	383.6	377.0	386.9	403.6	403.6
20°	1704.4	1627.7	1421.0	1004.0	557.0	373.6	363.6	363.6	370.2	386.9	390.3
22.5°	1774.5	1691.1	1414.2	847.2	417.0	353.5	350.3	350.3	350.3	370.2	370.2
25°	1847.9	1764.5	1387.6	680.5	353.5	340.2	336.9	333.6	333.6	350.3	353.5
27.5°	1931.3	1841.2	1324.2	520.4	333.6	326.9	323.6	316.9	316.9	330.2	330.2
30°	2014.7	1928.0	1227.4	393.6	316.9	313.5	306.9	300.2	293.5	306.9	306.9
32.5°	2104.7	2018.0	1100.7	313.5	293.5	293.5	290.2	280.2	273.5	280.2	283.6
35°	2224.8	2121.4	957.3	273.5	263.5	263.5	263.5	260.1	246.8	253.5	253.5
37.5°	2384.9	2264.8	790.5	253.5	240.2	233.5	233.5	233.5	223.5	226.8	226.8
40°	2588.4	2431.7	630.4	236.8	223.5	206.8	200.1	203.5	196.8	196.8	193.4
42.5°	2865.3	2611.7	473.6	223.5	210.1	186.8	173.5	170.1	163.5	160.1	160.1
45°	3262.2	2831.9	340.2	210.1	200.1	163.5	150.1	140.1	123.4	113.4	113.4
47.5°	3775.8	3082.0	253.5	196.8	190.2	143.4	126.7	106.7	83.4	76.7	76.7
50°	4403.0	3362.2	213.5	176.8	173.5	126.7	100.0	70.1	46.7	40.0	43.4
52.5°	5013.4	3625.7	190.2	156.8	153.4	110.1	73.3	36.7	20.0	20.0	20.0
55°	5527.0	3812.5	173.5	140.1	133.4	86.7	40.0	16.7	10.0	10.0	10.0
57.5°	5990.7	3919.2	156.8	123.4	106.7	60.0	16.7	6.6	6.6	3.4	3.4
60°	6414.3	3982.7	136.8	106.7	83.4	33.3	6.6	3.4	3.4	0.0	0.0
62.5°	6831.3	4029.4	116.7	86.7	63.4	13.3	3.4	3.4	0.0	0.0	0.0
65°	7148.1	4012.6	93.4	70.1	40.0	6.6	3.4	0.0	0.0	0.0	0.0
67.5°	7138.0	3785.8	70.1	53.4	20.0	3.4	0.0	0.0	0.0	0.0	0.0
70°	6384.2	3188.7	46.7	33.3	6.6	3.4	0.0	0.0	0.0	0.0	0.0
72.5°	4529.7	2044.7	30.0	20.0	3.4	0.0	0.0	0.0	0.0	0.0	0.0
75°	1994.7	620.4	16.7	10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	390.3	143.4	10.0	6.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	93.4	16.7	3.4	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	40.0	6.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	10.0	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	6.6	3.4	0.0	0.0	0.0	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)