

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: P231347

Luminaire Tested: **ARCH-M-AF48-160-D-U-T4W-7030-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P231347
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-7030-HSS
Description: ARCHEON-M ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 3000K, 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: 12198 lumens
Efficiency: N/A
Efficacy: 75.8 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

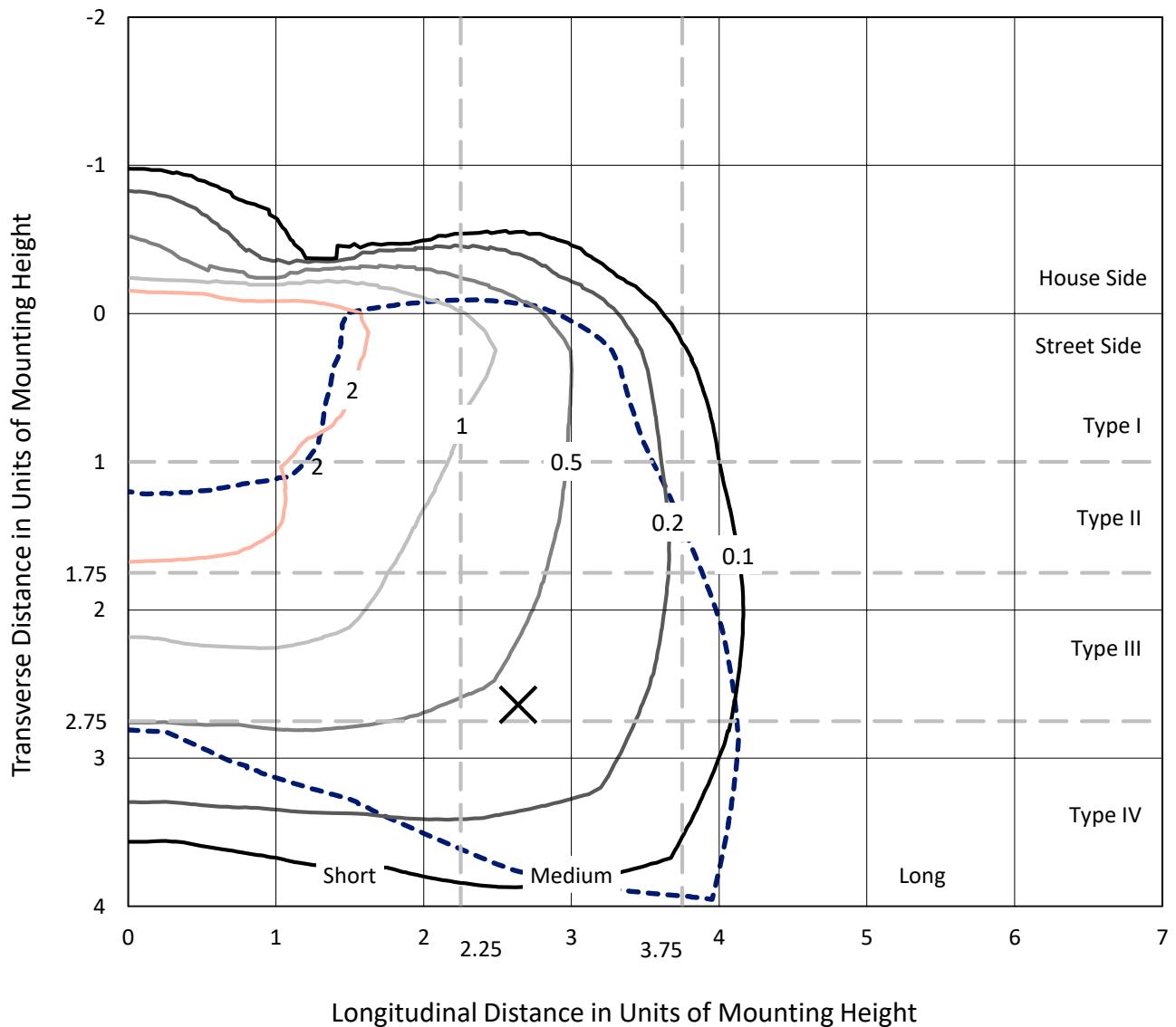


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

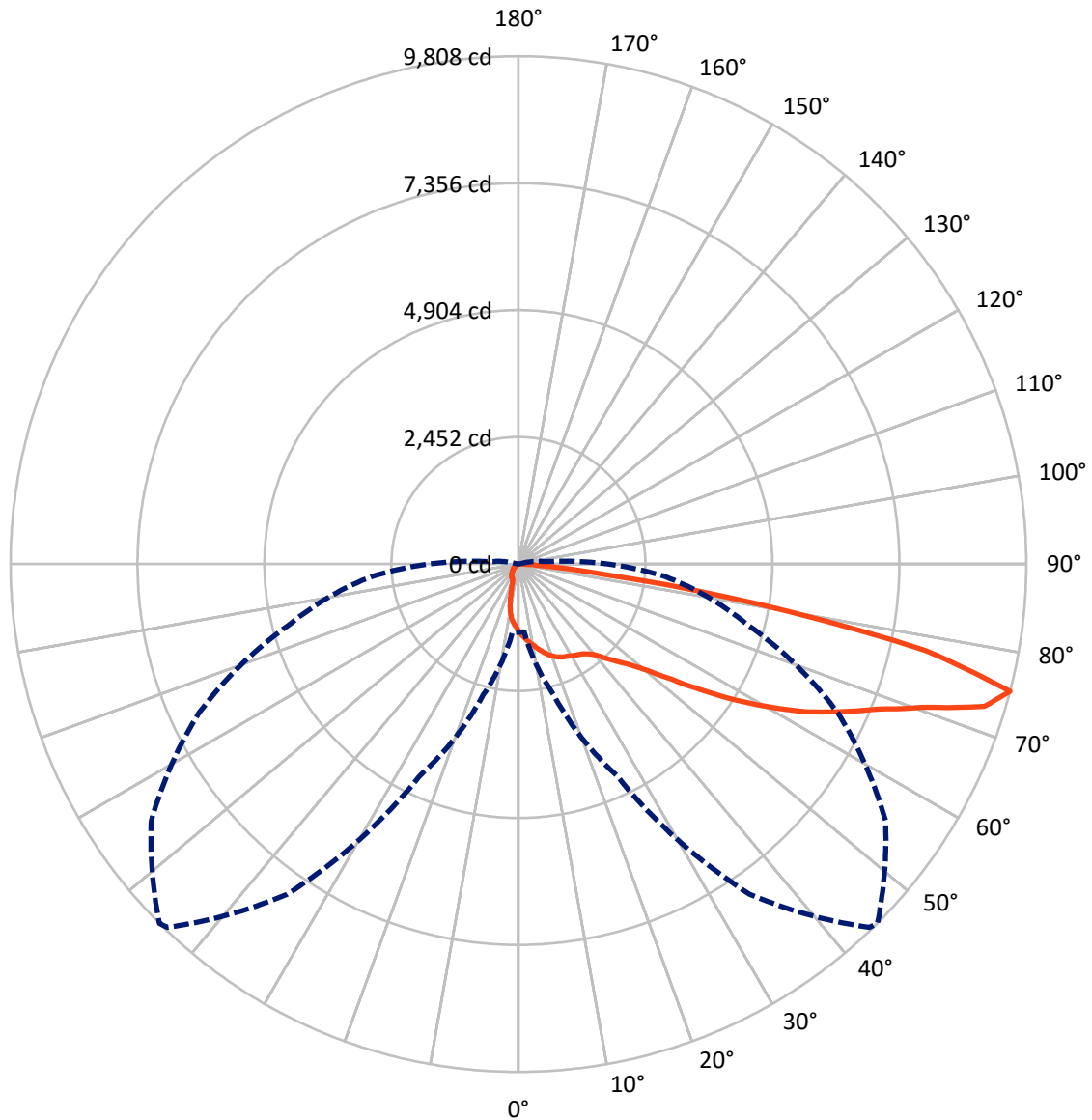


Based on 20 foot mounting height. Maximum calculated value = 4.4 fc
 Type IV - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



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

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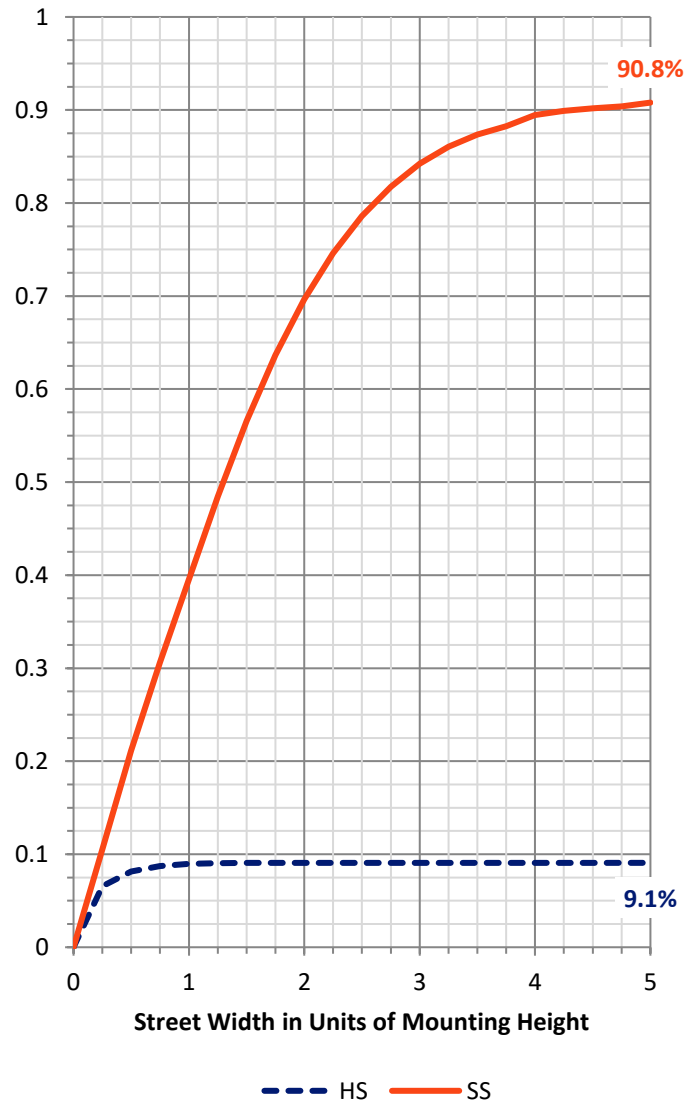
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1115.7	0.0	1115.7
	% Fixture	9.1	0.0	9.1
Street Side	Lumens	11082.3	0.0	11082.3
	% Fixture	90.9	0.0	90.9
Total	Lumens	12198.0	0.0	12198.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	123.1	1.0
10°-20°	348.8	2.9
20°-30°	577.7	4.7
30°-40°	836.1	6.9
40°-50°	1369.0	11.2
50°-60°	2439.4	20.0
60°-70°	3586.2	29.4
70°-80°	2705.4	22.2
80°-90°	212.3	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°	12198.0	100.0
0°-180°	12198.0	100.0



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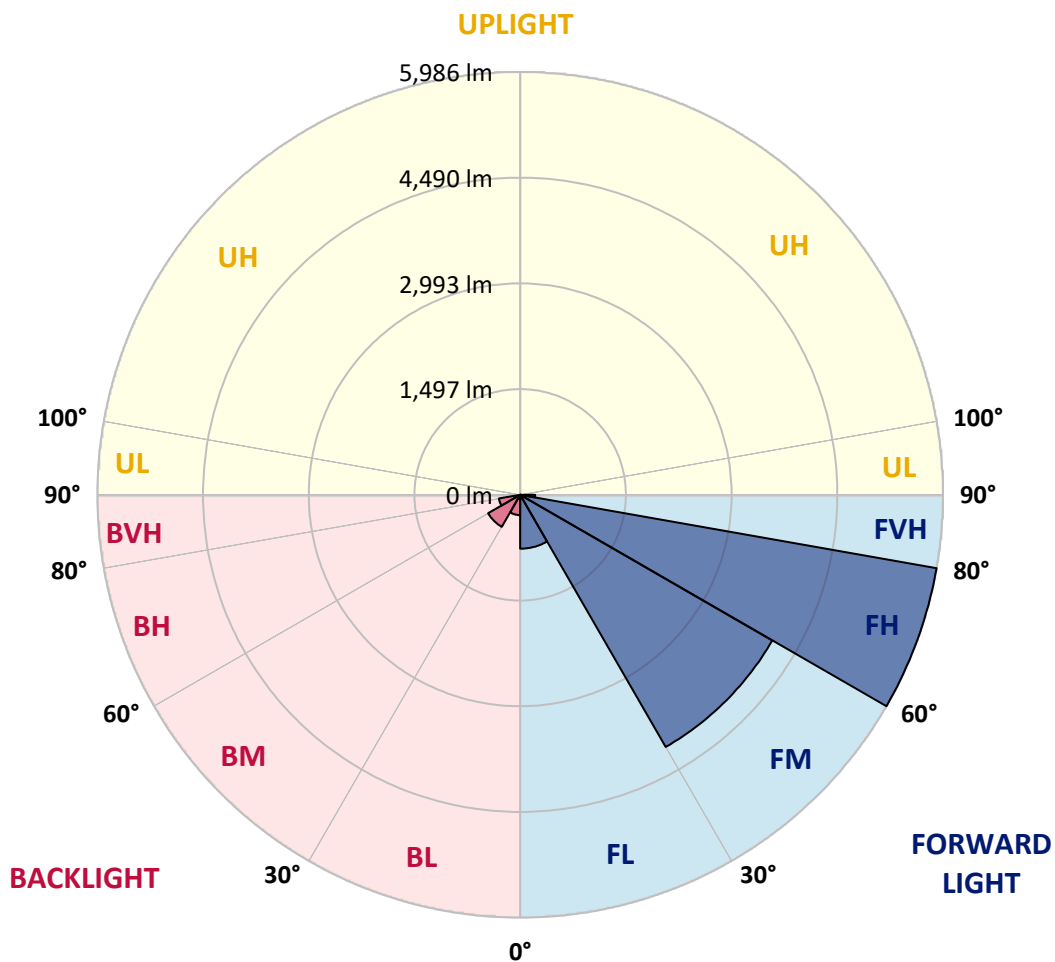
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	763.0	6.3			
FM	(30°-60°)	4121.6	33.8			
FH	(60°-80°)	5986.0	49.1			G3/7500
FVH	(80°-90°)	211.7	1.7			G2/225
BL	(0°-30°)	286.7	2.4	B1/500		
BM	(30°-60°)	522.8	4.3	B1/1000		
BH	(60°-80°)	305.6	2.5	B1/500		G1/500
BVH	(80°-90°)	0.6	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°	1304.6	1304.6	1304.6	1304.6	1304.6	1304.6	1304.6	1304.6	1304.6	1304.6	1304.6
2.5°	1417.2	1417.2	1414.3	1411.4	1397.0	1382.6	1379.7	1371.0	1345.1	1327.7	1310.4
5°	1535.6	1538.4	1532.7	1518.2	1486.5	1454.7	1451.8	1428.8	1379.7	1345.1	1307.5
7.5°	1648.1	1653.9	1639.5	1613.5	1576.0	1529.8	1526.9	1483.6	1420.1	1371.0	1316.2
10°	1743.4	1743.4	1723.2	1691.4	1651.0	1601.9	1596.2	1547.1	1474.9	1414.3	1342.2
12.5°	1847.3	1844.4	1815.5	1772.2	1726.1	1679.9	1677.0	1616.4	1547.1	1469.2	1379.7
15°	1942.5	1936.8	1899.2	1858.8	1809.8	1760.7	1757.8	1697.2	1625.0	1532.7	1434.5
17.5°	1994.5	1991.6	1957.0	1916.6	1876.1	1838.6	1835.7	1772.2	1694.3	1599.1	1489.4
20°	2003.1	2006.0	1977.2	1942.5	1919.4	1899.2	1899.2	1841.5	1757.8	1656.8	1547.1
22.5°	2006.0	2014.7	1994.5	1948.3	1942.5	1945.4	1951.2	1905.0	1818.4	1723.2	1607.7
25°	2026.2	2037.8	2023.3	1968.5	1962.7	1982.9	1988.7	1968.5	1890.6	1795.3	1677.0
27.5°	2066.6	2078.2	2066.6	1997.4	1988.7	2008.9	2014.7	2026.2	1968.5	1864.6	1749.1
30°	2147.5	2150.4	2124.4	2037.8	2020.5	2046.4	2055.1	2086.9	2040.7	1931.0	1818.4
32.5°	2288.9	2260.0	2182.1	2066.6	2052.2	2081.1	2089.7	2124.4	2107.1	1994.5	1890.6
35°	2577.5	2427.4	2248.5	2107.1	2092.6	2121.5	2133.0	2182.1	2190.8	2084.0	1980.1
37.5°	2574.6	2439.0	2404.4	2185.0	2164.8	2185.0	2199.4	2260.0	2294.7	2202.3	2109.9
40°	2756.5	2698.8	2698.8	2332.2	2265.8	2294.7	2309.1	2369.7	2430.3	2358.2	2262.9
42.5°	3328.0	3290.5	3250.1	2615.1	2407.2	2488.1	2496.7	2534.2	2606.4	2583.3	2470.7
45°	3965.9	3931.2	3775.4	3094.2	2649.7	2664.1	2684.3	2744.9	2848.9	2892.1	2759.4
47.5°	4465.2	4430.6	4297.8	3671.5	3027.8	2900.8	2900.8	3019.1	3180.8	3290.5	3163.5
50°	4866.4	4826.0	4745.2	4286.3	3648.4	3241.4	3224.1	3362.6	3602.2	3772.5	3685.9
52.5°	5256.1	5137.8	5088.7	4921.3	4349.8	3735.0	3688.8	3786.9	4118.9	4329.6	4257.4
55°	5515.9	5498.5	5446.6	5504.3	5085.8	4335.3	4294.9	4315.1	4730.8	4872.2	4782.7
57.5°	5758.3	5755.4	5870.9	6139.3	5888.2	5022.3	4958.8	4927.0	5322.5	5287.8	5365.8
60°	6058.5	6006.5	6275.0	6658.9	6624.2	5691.9	5619.8	5556.3	5775.6	5677.5	6064.3
62.5°	6072.9	6058.5	6604.0	7155.3	7354.5	6373.1	6289.4	6061.4	6171.1	6058.5	6731.0
65°	5521.6	5593.8	6742.6	7418.0	7966.4	6970.6	6869.6	6514.6	6523.2	6448.2	7516.1
67.5°	5397.5	5435.0	6361.6	7700.9	8408.0	7573.9	7478.6	7037.0	6933.1	6938.8	7980.8
70°	5088.7	5146.4	5888.2	7680.6	8757.3	8379.2	8283.9	7804.8	7553.6	7273.7	7622.9
72.5°	3887.9	3986.1	4961.7	6733.9	8662.0	9432.7	9406.7	8777.5	7801.9	6679.1	5767.0
75°	1316.2	1313.3	2606.4	4523.0	7781.7	9756.0	9807.9	8656.2	6806.1	4606.7	2863.3
77.5°	282.9	285.8	536.9	1832.8	5169.5	7833.6	8032.8	6529.0	4390.2	2052.2	655.2
80°	138.5	141.4	222.3	484.9	2066.6	4393.1	4704.8	3356.9	1622.1	409.9	109.7
82.5°	69.3	72.2	115.5	256.9	764.9	1561.5	1668.3	1235.4	464.7	230.9	54.8
85°	26.0	26.0	57.7	153.0	349.3	366.6	450.3	357.9	280.0	187.6	14.4
87.5°	5.8	5.8	31.8	75.0	155.9	115.5	115.5	109.7	170.3	127.0	5.8
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°	1304.6	1304.6	1304.6	1304.6	1304.6	1304.6	1304.6	1304.6	1304.6	1304.6	1304.6
2.5°	1301.8	1290.2	1270.0	1249.8	1235.4	1218.1	1209.4	1200.7	1197.8	1195.0	1200.7
5°	1287.3	1270.0	1232.5	1200.7	1171.9	1148.8	1131.5	1114.1	1105.5	1099.7	1102.6
7.5°	1287.3	1261.3	1206.5	1157.4	1111.3	1062.2	1013.1	975.6	946.7	929.4	932.3
10°	1301.8	1267.1	1195.0	1128.6	1042.0	938.1	831.3	750.5	695.6	663.9	663.9
12.5°	1333.5	1287.3	1197.8	1093.9	946.7	764.9	603.3	505.1	464.7	441.6	444.5
15°	1376.8	1322.0	1212.3	1047.8	814.0	568.6	421.4	357.9	357.9	363.7	366.6
17.5°	1425.9	1365.3	1223.8	978.5	643.7	407.0	331.9	326.2	334.8	349.3	349.3
20°	1474.9	1408.6	1229.6	868.8	482.0	323.3	314.6	314.6	320.4	334.8	337.7
22.5°	1535.6	1463.4	1223.8	733.1	360.8	306.0	303.1	303.1	303.1	320.4	320.4
25°	1599.1	1526.9	1200.7	588.8	306.0	294.4	291.5	288.6	288.6	303.1	306.0
27.5°	1671.2	1593.3	1145.9	450.3	288.6	282.9	280.0	274.2	274.2	285.8	285.8
30°	1743.4	1668.3	1062.2	340.6	274.2	271.3	265.5	259.8	254.0	265.5	265.5
32.5°	1821.3	1746.3	952.5	271.3	254.0	254.0	251.1	242.5	236.7	242.5	245.3
35°	1925.2	1835.7	828.4	236.7	228.0	228.0	228.0	225.1	213.6	219.4	219.4
37.5°	2063.8	1959.8	684.1	219.4	207.8	202.0	202.0	202.0	193.4	196.3	196.3
40°	2239.8	2104.2	545.5	204.9	193.4	179.0	173.2	176.1	170.3	170.3	167.4
42.5°	2479.4	2260.0	409.9	193.4	181.8	161.6	150.1	147.2	141.4	138.5	138.5
45°	2822.9	2450.5	294.4	181.8	173.2	141.4	129.9	121.2	106.8	98.1	98.1
47.5°	3267.4	2667.0	219.4	170.3	164.5	124.1	109.7	92.4	72.2	66.4	66.4
50°	3810.0	2909.5	184.7	153.0	150.1	109.7	86.6	60.6	40.4	34.6	37.5
52.5°	4338.2	3137.5	164.5	135.7	132.8	95.3	63.5	31.8	17.3	17.3	17.3
55°	4782.7	3299.1	150.1	121.2	115.5	75.0	34.6	14.4	8.7	8.7	8.7
57.5°	5183.9	3391.5	135.7	106.8	92.4	52.0	14.4	5.8	5.8	2.9	2.9
60°	5550.5	3446.3	118.3	92.4	72.2	28.9	5.8	2.9	2.9	0.0	0.0
62.5°	5911.3	3486.7	101.0	75.0	54.8	11.5	2.9	2.9	0.0	0.0	0.0
65°	6185.5	3472.3	80.8	60.6	34.6	5.8	2.9	0.0	0.0	0.0	0.0
67.5°	6176.8	3276.0	60.6	46.2	17.3	2.9	0.0	0.0	0.0	0.0	0.0
70°	5524.5	2759.4	40.4	28.9	5.8	2.9	0.0	0.0	0.0	0.0	0.0
72.5°	3919.7	1769.3	26.0	17.3	2.9	0.0	0.0	0.0	0.0	0.0	0.0
75°	1726.1	536.9	14.4	8.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	337.7	124.1	8.7	5.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	80.8	14.4	2.9	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	34.6	5.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	8.7	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	5.8	2.9	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)