

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: P231354

Luminaire Tested: **ARCH-M-AF48-100-D-U-T4W-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P231354
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-AF48-100-D-U-T4W-HSS
Description: ARCHEON-M ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 4000K, 660mA 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: 10116 lumens
Efficiency: N/A
Efficacy: 100.2 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 - G2

Input Watts (W): 101
Input Voltage (V): NR
Input Current (A_{in}): 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

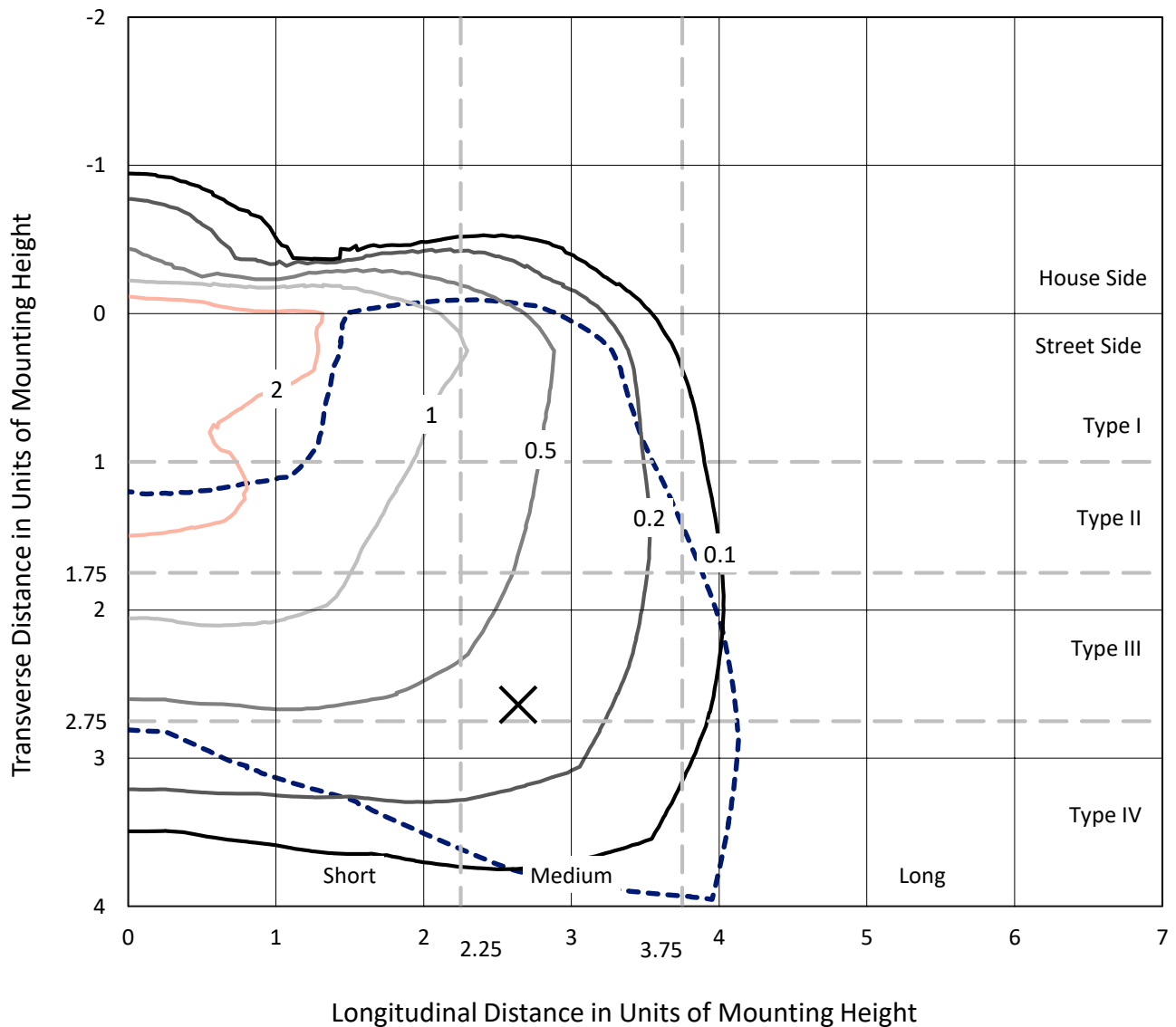


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

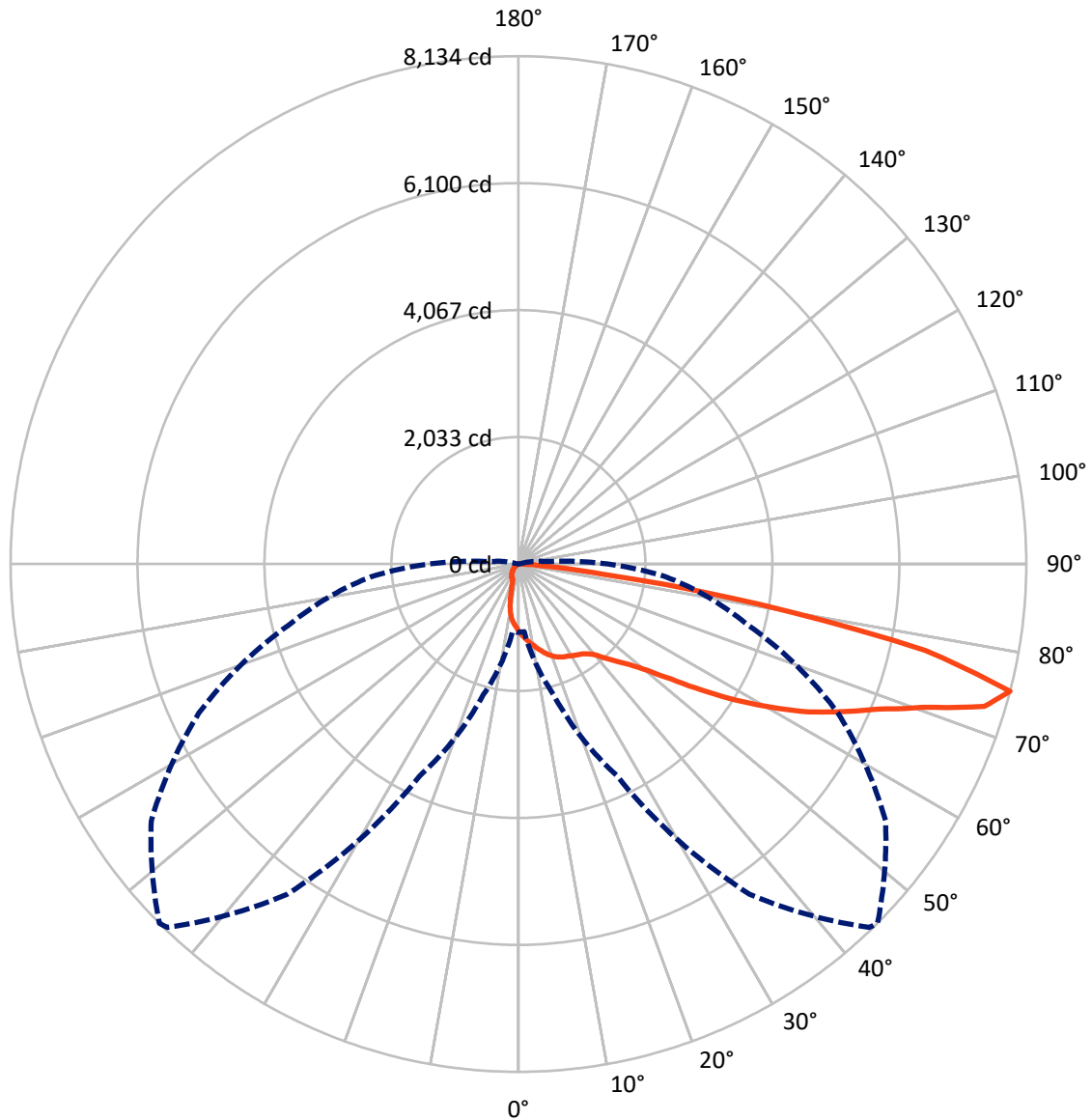


Based on 20 foot mounting height. Maximum calculated value = 3.6 fc
 Type IV - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



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



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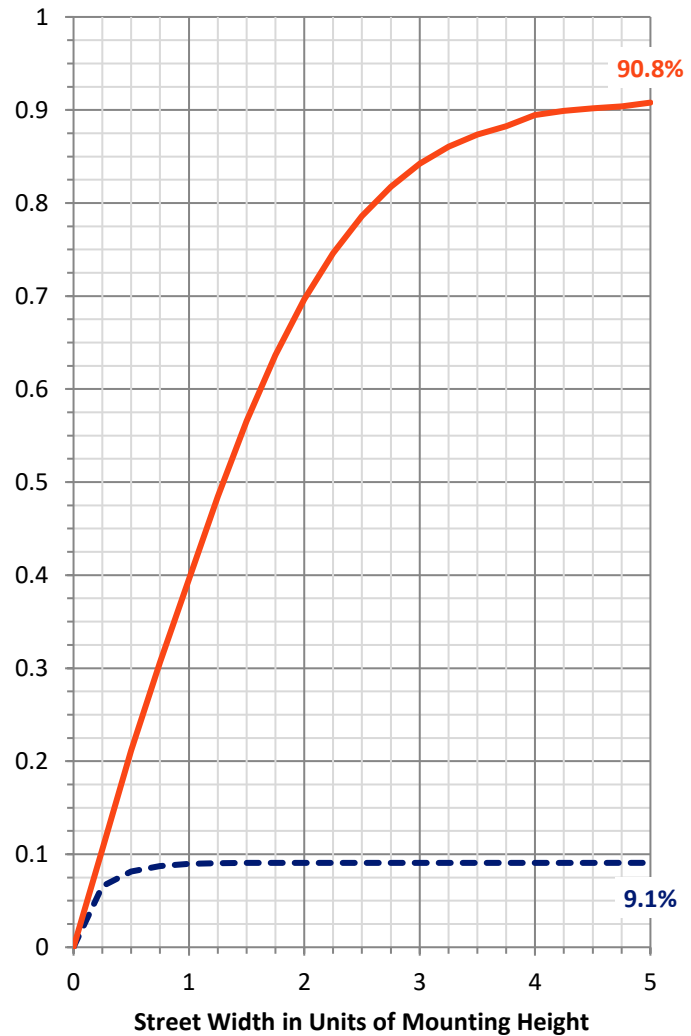
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	925.3	0.0	925.3
	% Fixture	9.1	0.0	9.1
Street Side	Lumens	9190.7	0.0	9190.7
	% Fixture	90.9	0.0	90.9
Total	Lumens	10116.0	0.0	10116.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	102.1	1.0
10°-20°	289.3	2.9
20°-30°	479.1	4.7
30°-40°	693.4	6.9
40°-50°	1135.4	11.2
50°-60°	2023.0	20.0
60°-70°	2974.0	29.4
70°-80°	2243.7	22.2
80°-90°	176.0	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°	10116.0	100.0
0°-180°	10116.0	100.0



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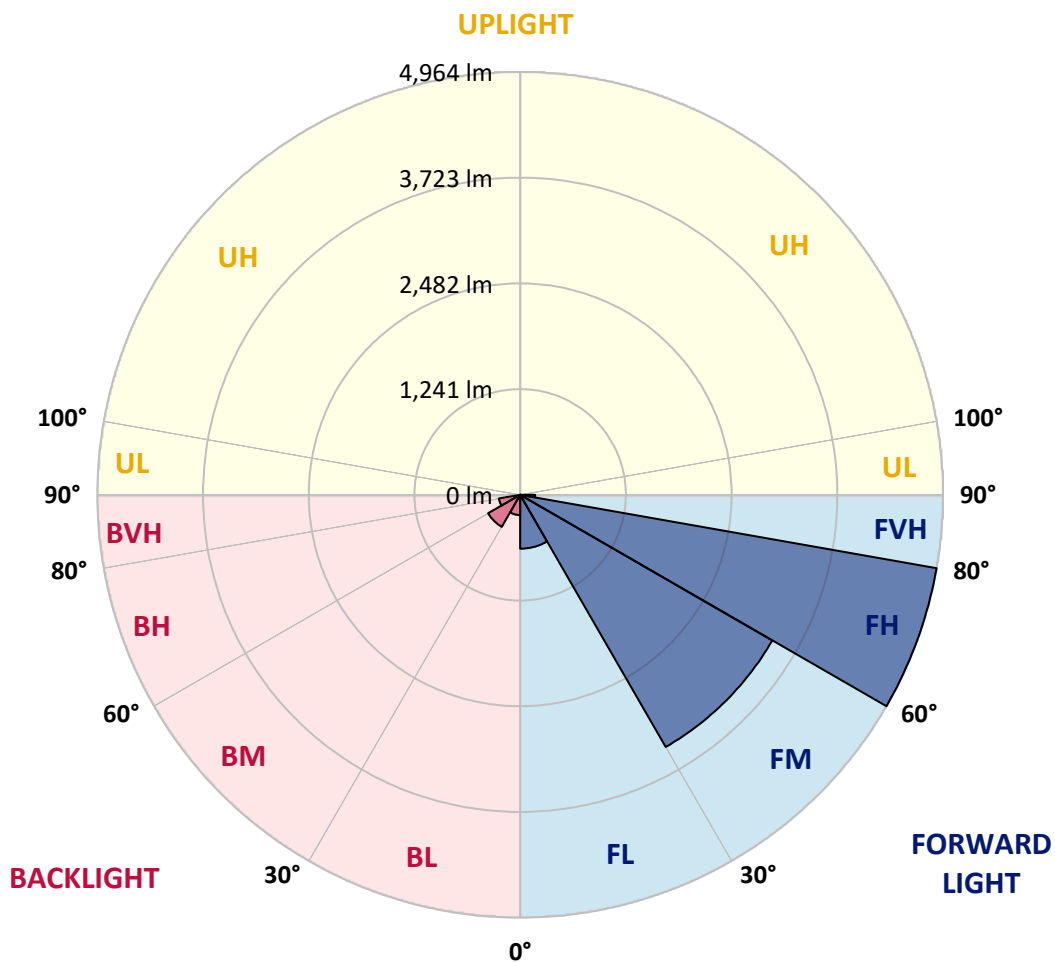
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	632.7	6.3			
FM	(30°-60°)	3418.1	33.8			
FH	(60°-80°)	4964.3	49.1			G2/5000
FVH	(80°-90°)	175.5	1.7			G2/225
BL	(0°-30°)	237.8	2.4	B1/500		
BM	(30°-60°)	433.6	4.3	B1/1000		
BH	(60°-80°)	253.4	2.5	B1/500		G1/500
BVH	(80°-90°)	0.5	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 IV Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	1082.0	1082.0	1082.0	1082.0	1082.0	1082.0	1082.0	1082.0	1082.0	1082.0	1082.0
2.5°	1175.3	1175.3	1172.9	1170.6	1158.6	1146.6	1144.2	1137.0	1115.4	1101.1	1086.8
5°	1273.5	1275.8	1271.0	1259.0	1232.8	1206.5	1204.0	1184.9	1144.2	1115.4	1084.3
7.5°	1366.8	1371.6	1359.6	1338.1	1306.9	1268.7	1266.3	1230.4	1177.7	1137.0	1091.5
10°	1445.8	1445.8	1429.1	1402.7	1369.2	1328.5	1323.7	1283.0	1223.1	1172.9	1113.1
12.5°	1532.0	1529.6	1505.7	1469.8	1431.4	1393.2	1390.7	1340.5	1283.0	1218.4	1144.2
15°	1610.9	1606.1	1575.0	1541.6	1500.9	1460.2	1457.8	1407.5	1347.6	1271.0	1189.7
17.5°	1654.0	1651.7	1622.9	1589.5	1555.9	1524.8	1522.4	1469.8	1405.1	1326.2	1235.1
20°	1661.3	1663.6	1639.7	1610.9	1591.8	1575.0	1575.0	1527.2	1457.8	1374.0	1283.0
22.5°	1663.6	1670.8	1654.0	1615.8	1610.9	1613.4	1618.1	1579.8	1508.0	1429.1	1333.3
25°	1680.4	1689.9	1677.9	1632.5	1627.7	1644.5	1649.3	1632.5	1567.9	1488.9	1390.7
27.5°	1713.9	1723.5	1713.9	1656.5	1649.3	1666.0	1670.8	1680.4	1632.5	1546.3	1450.5
30°	1781.0	1783.3	1761.7	1689.9	1675.6	1697.2	1704.3	1730.6	1692.4	1601.4	1508.0
32.5°	1898.2	1874.3	1809.6	1713.9	1701.9	1725.8	1733.1	1761.7	1747.4	1654.0	1567.9
35°	2137.6	2013.1	1864.7	1747.4	1735.4	1759.4	1769.0	1809.6	1816.9	1728.3	1642.0
37.5°	2135.2	2022.7	1993.9	1812.1	1795.3	1812.1	1824.0	1874.3	1903.0	1826.4	1749.8
40°	2286.0	2238.1	2238.1	1934.1	1879.1	1903.0	1915.0	1965.2	2015.5	1955.7	1876.7
42.5°	2759.9	2728.8	2695.3	2168.7	1996.4	2063.4	2070.6	2101.7	2161.5	2142.4	2049.0
45°	3289.0	3260.2	3130.9	2566.1	2197.4	2209.4	2226.1	2276.4	2362.6	2398.5	2288.3
47.5°	3703.1	3674.3	3564.3	3044.8	2511.0	2405.7	2405.7	2503.8	2637.9	2728.8	2623.5
50°	4035.7	4002.3	3935.3	3554.7	3025.7	2688.1	2673.8	2788.7	2987.3	3128.6	3056.8
52.5°	4358.9	4260.8	4220.1	4081.3	3607.3	3097.5	3059.1	3140.6	3415.8	3590.6	3530.7
55°	4574.3	4560.0	4516.9	4564.8	4217.7	3595.4	3561.8	3578.6	3923.3	4040.6	3966.4
57.5°	4775.4	4773.1	4868.8	5091.4	4883.2	4165.0	4112.4	4086.1	4414.0	4385.3	4449.9
60°	5024.4	4981.3	5204.0	5522.3	5493.6	4720.4	4660.6	4607.9	4789.8	4708.4	5029.1
62.5°	5036.4	5024.4	5476.8	5934.0	6099.1	5285.3	5215.9	5026.8	5117.7	5024.4	5582.1
65°	4579.1	4639.0	5591.8	6151.8	6606.6	5780.8	5697.0	5402.6	5409.8	5347.6	6233.2
67.5°	4476.2	4507.3	5275.8	6386.4	6972.8	6281.1	6202.2	5835.8	5749.7	5754.5	6618.6
70°	4220.1	4268.0	4883.2	6369.7	7262.5	6948.9	6869.9	6472.6	6264.3	6032.1	6321.8
72.5°	3224.3	3305.7	4114.8	5584.5	7183.6	7822.6	7801.1	7279.3	6470.2	5539.1	4782.6
75°	1091.5	1089.1	2161.5	3751.0	6453.5	8090.7	8133.8	7178.8	5644.3	3820.3	2374.6
77.5°	234.6	237.0	445.2	1520.0	4287.1	6496.6	6661.7	5414.6	3640.8	1701.9	543.4
80°	114.9	117.3	184.3	402.1	1713.9	3643.2	3901.7	2783.9	1345.3	339.9	90.9
82.5°	57.5	59.8	95.7	213.1	634.3	1295.0	1383.5	1024.5	385.3	191.5	45.5
85°	21.6	21.6	47.9	126.8	289.6	304.0	373.4	296.9	232.2	155.6	12.0
87.5°	4.8	4.8	26.3	62.2	129.3	95.7	95.7	90.9	141.3	105.4	4.8
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°	1082.0	1082.0	1082.0	1082.0	1082.0	1082.0	1082.0	1082.0	1082.0	1082.0	1082.0
2.5°	1079.5	1070.0	1053.2	1036.5	1024.5	1010.2	1003.0	995.7	993.4	991.0	995.7
5°	1067.6	1053.2	1022.1	995.7	971.8	952.7	938.4	923.9	916.8	912.0	914.4
7.5°	1067.6	1046.1	1000.5	959.8	921.6	880.9	840.1	809.1	785.1	770.8	773.1
10°	1079.5	1050.9	991.0	935.9	864.1	778.0	689.4	622.4	576.8	550.6	550.6
12.5°	1105.9	1067.6	993.4	907.3	785.1	634.3	500.3	418.9	385.3	366.2	368.7
15°	1141.8	1096.3	1005.4	868.9	675.0	471.6	349.4	296.9	296.9	301.6	304.0
17.5°	1182.5	1132.2	1015.0	811.5	533.8	337.5	275.3	270.5	277.6	289.6	289.6
20°	1223.1	1168.1	1019.7	720.5	399.8	268.1	261.0	261.0	265.7	277.6	280.1
22.5°	1273.5	1213.6	1015.0	608.0	299.2	253.7	251.3	251.3	251.3	265.7	265.7
25°	1326.2	1266.3	995.7	488.4	253.7	244.2	241.7	239.4	239.4	251.3	253.7
27.5°	1386.0	1321.3	950.3	373.4	239.4	234.6	232.2	227.4	227.4	237.0	237.0
30°	1445.8	1383.5	880.9	282.4	227.4	225.0	220.2	215.4	210.6	220.2	220.2
32.5°	1510.4	1448.2	789.9	225.0	210.6	210.6	208.3	201.1	196.3	201.1	203.5
35°	1596.6	1522.4	687.0	196.3	189.1	189.1	189.1	186.7	177.2	181.9	181.9
37.5°	1711.5	1625.4	567.3	181.9	172.4	167.6	167.6	167.6	160.4	162.8	162.8
40°	1857.5	1745.1	452.5	169.9	160.4	148.4	143.6	146.0	141.3	141.3	138.8
42.5°	2056.2	1874.3	339.9	160.4	150.8	134.0	124.5	122.0	117.3	114.9	114.9
45°	2341.0	2032.3	244.2	150.8	143.6	117.3	107.7	100.6	88.6	81.4	81.4
47.5°	2709.7	2211.8	181.9	141.3	136.5	102.9	90.9	76.6	59.8	55.0	55.0
50°	3159.7	2412.8	153.2	126.8	124.5	90.9	71.8	50.2	33.6	28.7	31.1
52.5°	3597.7	2602.0	136.5	112.5	110.1	79.0	52.7	26.3	14.3	14.3	14.3
55°	3966.4	2736.0	124.5	100.6	95.7	62.2	28.7	12.0	7.2	7.2	7.2
57.5°	4299.1	2812.6	112.5	88.6	76.6	43.1	12.0	4.8	4.8	2.4	2.4
60°	4603.1	2858.1	98.1	76.6	59.8	23.9	4.8	2.4	2.4	0.0	0.0
62.5°	4902.3	2891.6	83.8	62.2	45.5	9.6	2.4	2.4	0.0	0.0	0.0
65°	5129.7	2879.6	67.0	50.2	28.7	4.8	2.4	0.0	0.0	0.0	0.0
67.5°	5122.5	2716.9	50.2	38.3	14.3	2.4	0.0	0.0	0.0	0.0	0.0
70°	4581.6	2288.3	33.6	23.9	4.8	2.4	0.0	0.0	0.0	0.0	0.0
72.5°	3250.6	1467.3	21.6	14.3	2.4	0.0	0.0	0.0	0.0	0.0	0.0
75°	1431.4	445.2	12.0	7.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	280.1	102.9	7.2	4.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	67.0	12.0	2.4	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	28.7	4.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	7.2	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	4.8	2.4	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)