

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: P231355

Luminaire Tested: **ARCH-M-AF48-110-D-U-T4W-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P231355
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-AF48-110-D-U-T4W-HSS
Description: ARCHEON-M ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 4000K, 720mA 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: 10820.8 lumens
Efficiency: N/A
Efficacy: 97.5 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): 111
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

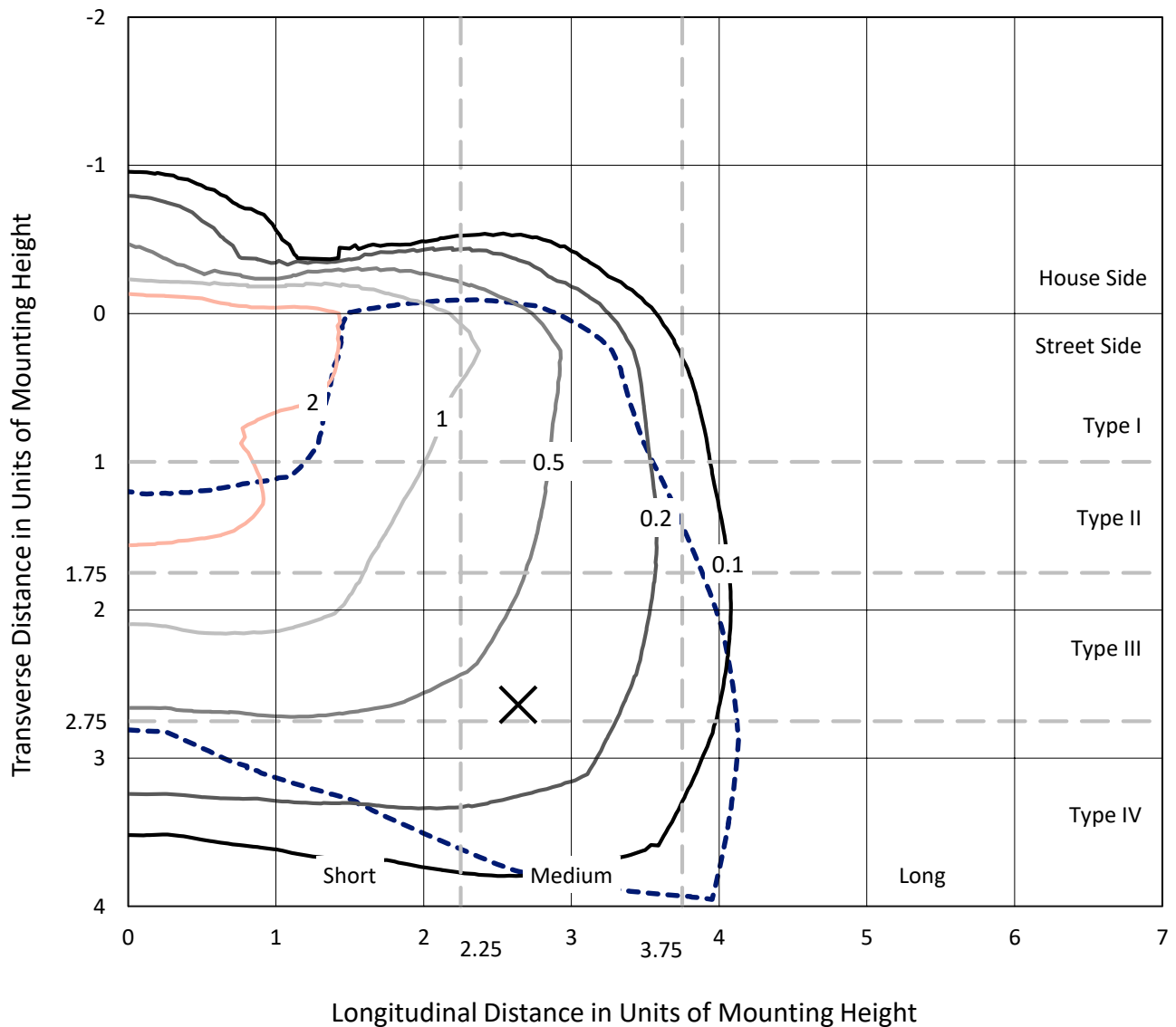


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

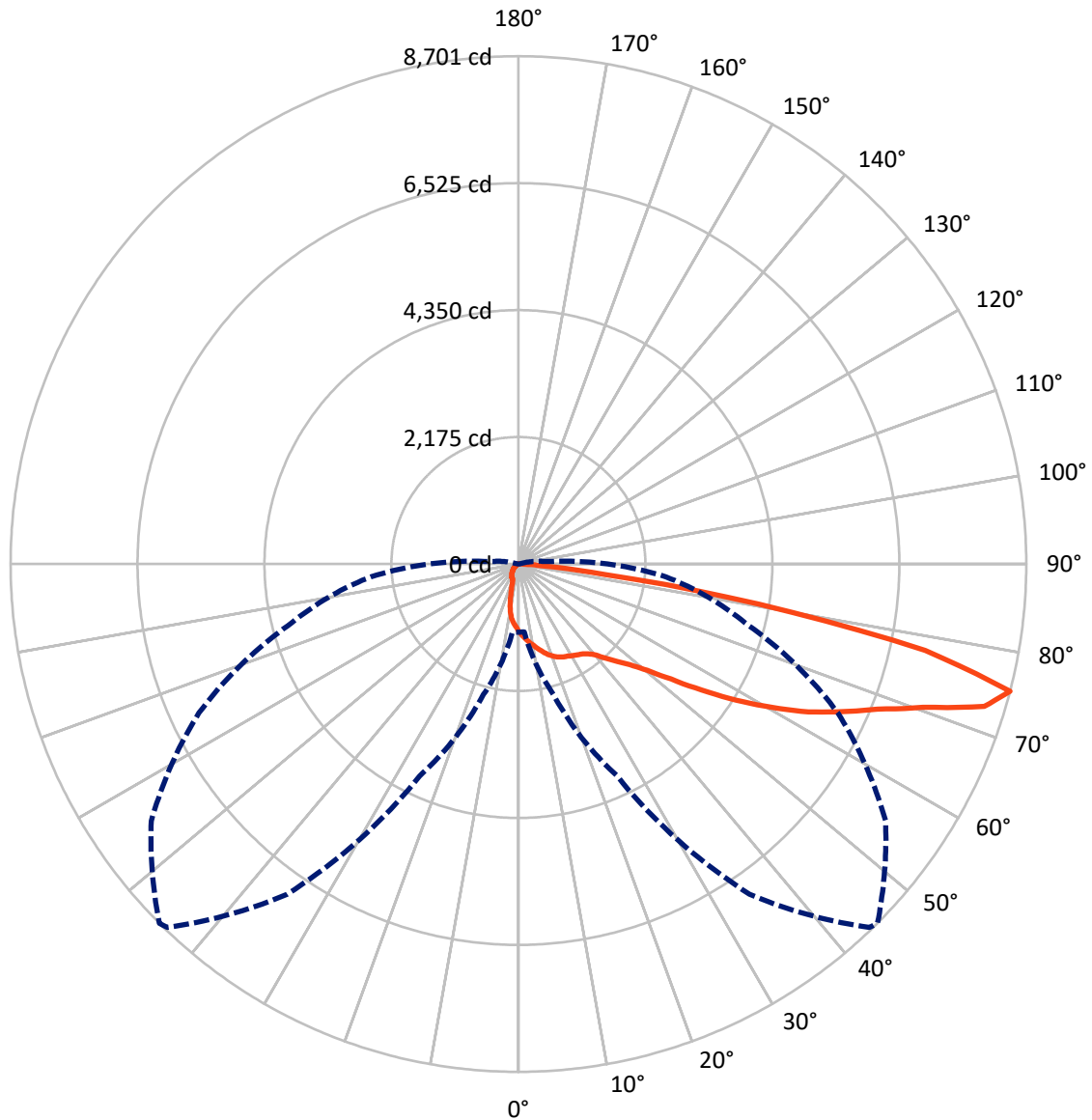


Based on 20 foot mounting height. Maximum calculated value = 3.9 fc
 Type IV - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



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

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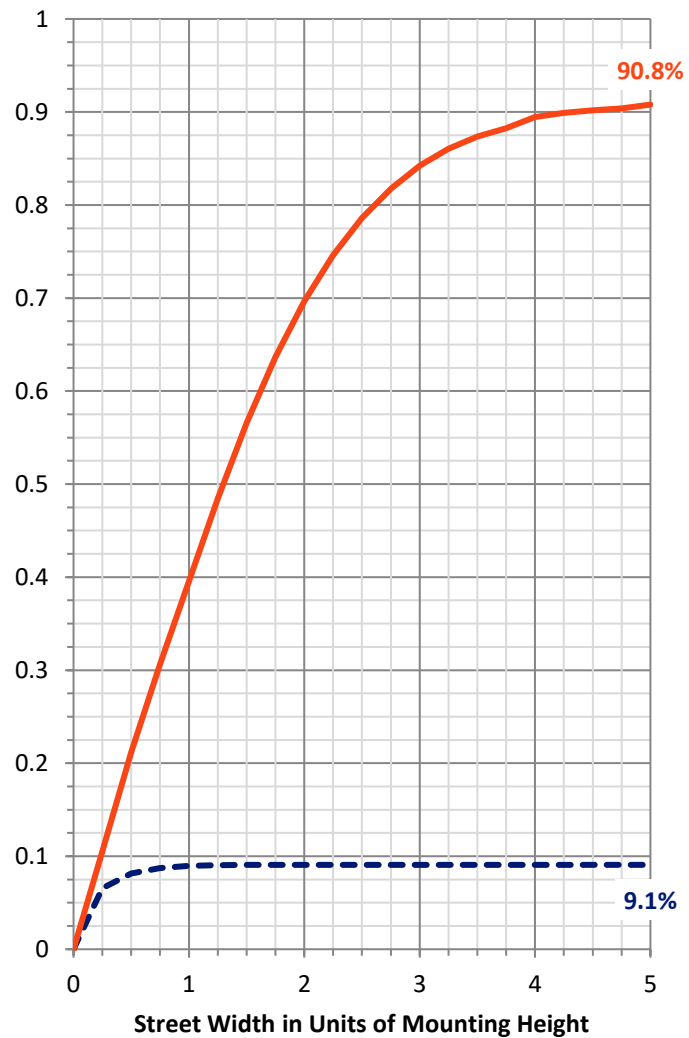
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	989.8	0.0	989.8
	% Fixture	9.1	0.0	9.1
Street Side	Lumens	9831.0	0.0	9831.0
	% Fixture	90.9	0.0	90.9
Total	Lumens	10820.8	0.0	10820.8
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	109.2	1.0
10°-20°	309.4	2.9
20°-30°	512.5	4.7
30°-40°	741.7	6.9
40°-50°	1214.5	11.2
50°-60°	2163.9	20.0
60°-70°	3181.3	29.4
70°-80°	2400.0	22.2
80°-90°	188.3	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°	10820.8	100.0
0°-180°	10820.8	100.0



--- HS — SS

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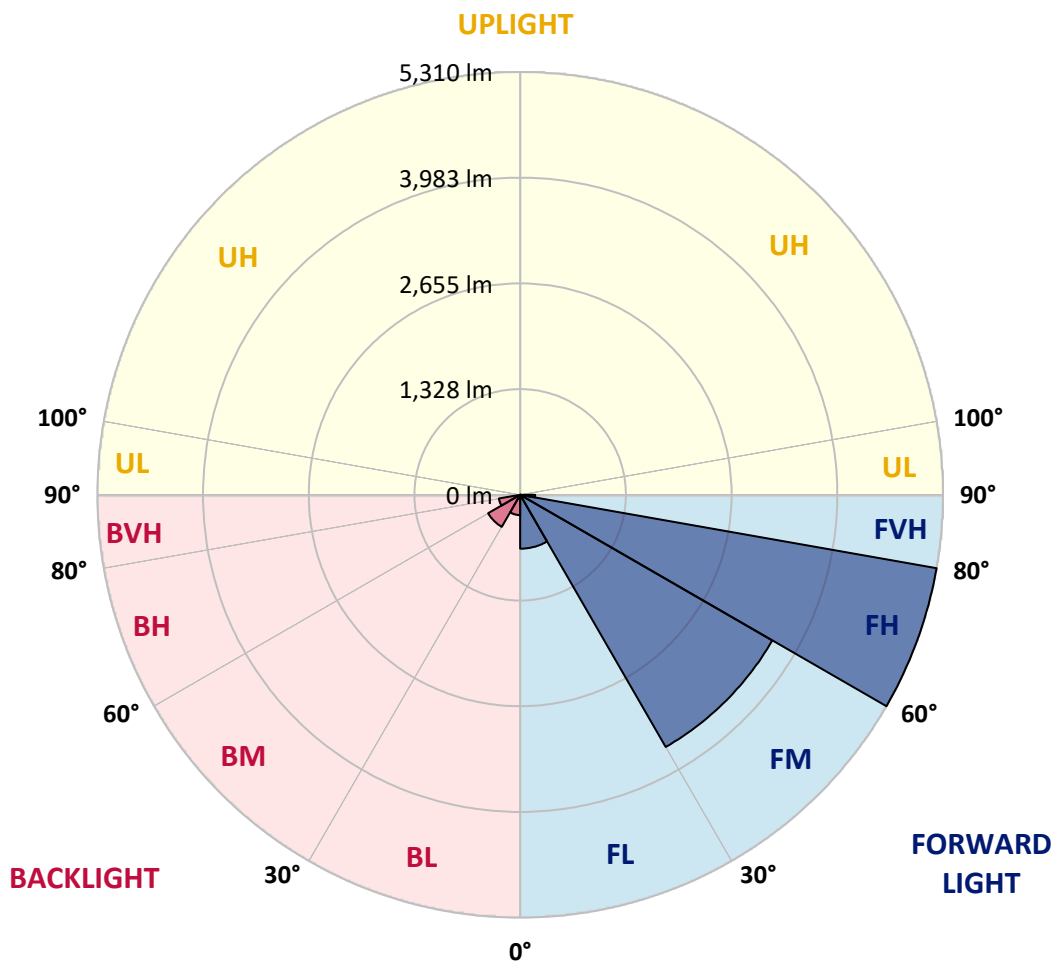
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	676.8	6.3			
FM (30°-60°)	3656.3	33.8			
FH (60°-80°)	5310.1	49.1			G3/7500
FVH (80°-90°)	187.8	1.7			G2/225
BL (0°-30°)	254.3	2.4	B1/500		
BM (30°-60°)	463.8	4.3	B1/1000		
BH (60°-80°)	271.1	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-G3

Type IV Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	1157.4	1157.4	1157.4	1157.4	1157.4	1157.4	1157.4	1157.4	1157.4	1157.4	1157.4
2.5°	1257.2	1257.2	1254.6	1252.1	1239.3	1226.5	1224.0	1216.2	1193.2	1177.8	1162.5
5°	1362.2	1364.7	1359.6	1346.8	1318.7	1290.5	1287.9	1267.4	1224.0	1193.2	1159.9
7.5°	1462.0	1467.1	1454.3	1431.3	1398.1	1357.0	1354.5	1316.1	1259.8	1216.2	1167.6
10°	1546.5	1546.5	1528.6	1500.5	1464.6	1421.1	1416.0	1372.4	1308.5	1254.6	1190.6
12.5°	1638.7	1636.1	1610.5	1572.2	1531.2	1490.2	1487.7	1433.9	1372.4	1303.2	1224.0
15°	1723.2	1718.0	1684.8	1649.0	1605.4	1561.9	1559.4	1505.6	1441.5	1359.6	1272.6
17.5°	1769.3	1766.7	1736.0	1700.1	1664.3	1631.0	1628.4	1572.2	1503.0	1418.5	1321.2
20°	1777.0	1779.5	1754.0	1723.2	1702.7	1684.8	1684.8	1633.6	1559.4	1469.7	1372.4
22.5°	1779.5	1787.2	1769.3	1728.4	1723.2	1725.7	1730.9	1689.9	1613.1	1528.6	1426.2
25°	1797.4	1807.7	1794.9	1746.3	1741.2	1759.1	1764.2	1746.3	1677.1	1592.6	1487.7
27.5°	1833.3	1843.6	1833.3	1771.9	1764.2	1782.1	1787.2	1797.4	1746.3	1654.1	1551.6
30°	1905.0	1907.6	1884.5	1807.7	1792.3	1815.4	1823.1	1851.2	1810.2	1712.9	1613.1
32.5°	2030.5	2004.9	1935.7	1833.3	1820.5	1846.1	1853.8	1884.5	1869.1	1769.3	1677.1
35°	2286.5	2153.4	1994.7	1869.1	1856.3	1881.9	1892.2	1935.7	1943.4	1848.7	1756.5
37.5°	2283.9	2163.6	2132.9	1938.3	1920.4	1938.3	1951.1	2004.9	2035.6	1953.6	1871.7
40°	2445.3	2394.0	2394.0	2068.9	2010.0	2035.6	2048.4	2102.2	2156.0	2091.9	2007.4
42.5°	2952.2	2919.0	2883.1	2319.8	2135.4	2207.1	2214.8	2248.1	2312.1	2291.6	2191.8
45°	3518.1	3487.3	3349.1	2744.9	2350.5	2363.3	2381.2	2435.0	2527.2	2565.6	2447.8
47.5°	3961.1	3930.4	3812.5	3257.0	2686.0	2573.3	2573.3	2678.3	2821.7	2919.0	2806.3
50°	4317.0	4281.2	4209.4	3802.3	3236.4	2875.4	2860.1	2982.9	3195.5	3346.6	3269.8
52.5°	4662.6	4557.7	4514.2	4365.6	3858.7	3313.2	3272.3	3359.4	3653.8	3840.8	3776.7
55°	4893.1	4877.7	4831.6	4882.9	4511.6	3845.9	3810.0	3827.9	4196.7	4322.1	4242.7
57.5°	5108.2	5105.6	5208.0	5446.2	5223.4	4455.3	4398.9	4370.8	4721.5	4690.8	4760.0
60°	5374.5	5328.3	5566.5	5907.0	5876.3	5049.3	4985.2	4929.0	5123.6	5036.5	5379.6
62.5°	5387.3	5374.5	5858.4	6347.4	6524.1	5653.5	5579.3	5377.0	5474.3	5374.5	5971.1
65°	4898.2	4962.2	5981.3	6580.4	7067.0	6183.5	6093.9	5779.1	5786.7	5720.1	6667.5
67.5°	4788.1	4821.4	5643.3	6831.4	7458.7	6718.7	6634.2	6242.5	6150.3	6155.4	7079.7
70°	4514.2	4565.3	5223.4	6813.5	7768.5	7433.1	7348.6	6923.5	6700.8	6452.5	6762.2
72.5°	3449.0	3536.0	4401.5	5973.6	7684.0	8367.6	8344.6	7786.4	6921.0	5924.9	5115.9
75°	1167.6	1165.0	2312.1	4012.3	6903.1	8654.5	8700.5	7678.9	6037.7	4086.6	2540.0
77.5°	250.9	253.5	476.3	1625.9	4585.8	6949.2	7125.9	5791.8	3894.5	1820.5	581.2
80°	122.9	125.4	197.1	430.2	1833.3	3897.0	4173.6	2977.8	1439.0	363.6	97.3
82.5°	61.5	64.0	102.4	227.9	678.5	1385.2	1480.0	1095.9	412.2	204.8	48.7
85°	23.0	23.0	51.2	135.7	309.9	325.2	399.5	317.5	248.4	166.4	12.8
87.5°	5.1	5.1	28.1	66.6	138.3	102.4	102.4	97.3	151.1	112.6	5.1
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°	1157.4	1157.4	1157.4	1157.4	1157.4	1157.4	1157.4	1157.4	1157.4	1157.4	1157.4
2.5°	1154.8	1144.6	1126.6	1108.7	1095.9	1080.5	1072.9	1065.2	1062.6	1060.1	1065.2
5°	1142.0	1126.6	1093.3	1065.2	1039.5	1019.1	1003.7	988.4	980.7	975.6	978.1
7.5°	1142.0	1118.9	1070.3	1026.7	985.8	942.2	898.8	865.4	839.8	824.5	827.1
10°	1154.8	1124.0	1060.1	1001.2	924.3	832.2	737.4	665.7	617.0	588.9	588.9
12.5°	1182.9	1142.0	1062.6	970.5	839.8	678.5	535.1	448.1	412.2	391.8	394.3
15°	1221.4	1172.7	1075.4	929.5	722.1	504.4	373.8	317.5	317.5	322.6	325.2
17.5°	1264.9	1211.1	1085.7	868.0	571.0	361.0	294.4	289.3	297.1	309.9	309.9
20°	1308.5	1249.5	1090.8	770.7	427.6	286.7	279.1	279.1	284.2	297.1	299.6
22.5°	1362.2	1298.1	1085.7	650.4	320.1	271.4	268.8	268.8	268.8	284.2	284.2
25°	1418.5	1354.5	1065.2	522.3	271.4	261.2	258.6	256.0	256.0	268.8	271.4
27.5°	1482.6	1413.4	1016.5	399.5	256.0	250.9	248.4	243.3	243.3	253.5	253.5
30°	1546.5	1480.0	942.2	302.2	243.3	240.7	235.6	230.5	225.4	235.6	235.6
32.5°	1615.6	1549.1	845.0	240.7	225.4	225.4	222.8	215.1	209.9	215.1	217.7
35°	1707.8	1628.4	734.9	209.9	202.2	202.2	202.2	199.7	189.5	194.6	194.6
37.5°	1830.8	1738.6	606.8	194.6	184.3	179.2	179.2	179.2	171.5	174.1	174.1
40°	1987.0	1866.6	484.0	181.8	171.5	158.8	153.6	156.2	151.1	151.1	148.5
42.5°	2199.4	2004.9	363.6	171.5	161.3	143.4	133.2	130.6	125.4	122.9	122.9
45°	2504.2	2173.9	261.2	161.3	153.6	125.4	115.2	107.5	94.7	87.1	87.1
47.5°	2898.4	2365.9	194.6	151.1	146.0	110.1	97.3	81.9	64.0	58.9	58.9
50°	3379.8	2581.0	163.9	135.7	133.2	97.3	76.8	53.8	35.8	30.7	33.2
52.5°	3848.4	2783.2	146.0	120.3	117.7	84.5	56.4	28.1	15.3	15.3	15.3
55°	4242.7	2926.7	133.2	107.5	102.4	66.6	30.7	12.8	7.7	7.7	7.7
57.5°	4598.7	3008.6	120.3	94.7	81.9	46.1	12.8	5.1	5.1	2.6	2.6
60°	4923.8	3057.2	105.0	81.9	64.0	25.6	5.1	2.6	2.6	0.0	0.0
62.5°	5243.9	3093.1	89.6	66.6	48.7	10.2	2.6	2.6	0.0	0.0	0.0
65°	5487.1	3080.3	71.7	53.8	30.7	5.1	2.6	0.0	0.0	0.0	0.0
67.5°	5479.4	2906.2	53.8	40.9	15.3	2.6	0.0	0.0	0.0	0.0	0.0
70°	4900.8	2447.8	35.8	25.6	5.1	2.6	0.0	0.0	0.0	0.0	0.0
72.5°	3477.1	1569.6	23.0	15.3	2.6	0.0	0.0	0.0	0.0	0.0	0.0
75°	1531.2	476.3	12.8	7.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	299.6	110.1	7.7	5.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	71.7	12.8	2.6	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	30.7	5.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	7.7	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	5.1	2.6	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)