

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: P231101

Luminaire Tested: **ARCH-M-AF48-40-D-U-T2R-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P231101
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29623)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: ARCH-M-AF48-40-D-U-T2R-HSS
Description: ARCHEON-M ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 4000K, 240mA LIGHT ENGINES WITH 24 LEDS AND TYPE II ROADWAY OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4526.6 lumens
Efficiency: N/A
Efficacy: 119.1 lumens/watt
Luminous Opening: Rectangular (W 0.75' x L: 1' x H: 0')
IES Classification: Type II - Medium - Full Cutoff
BUG Rating: B0 - U0 - G1

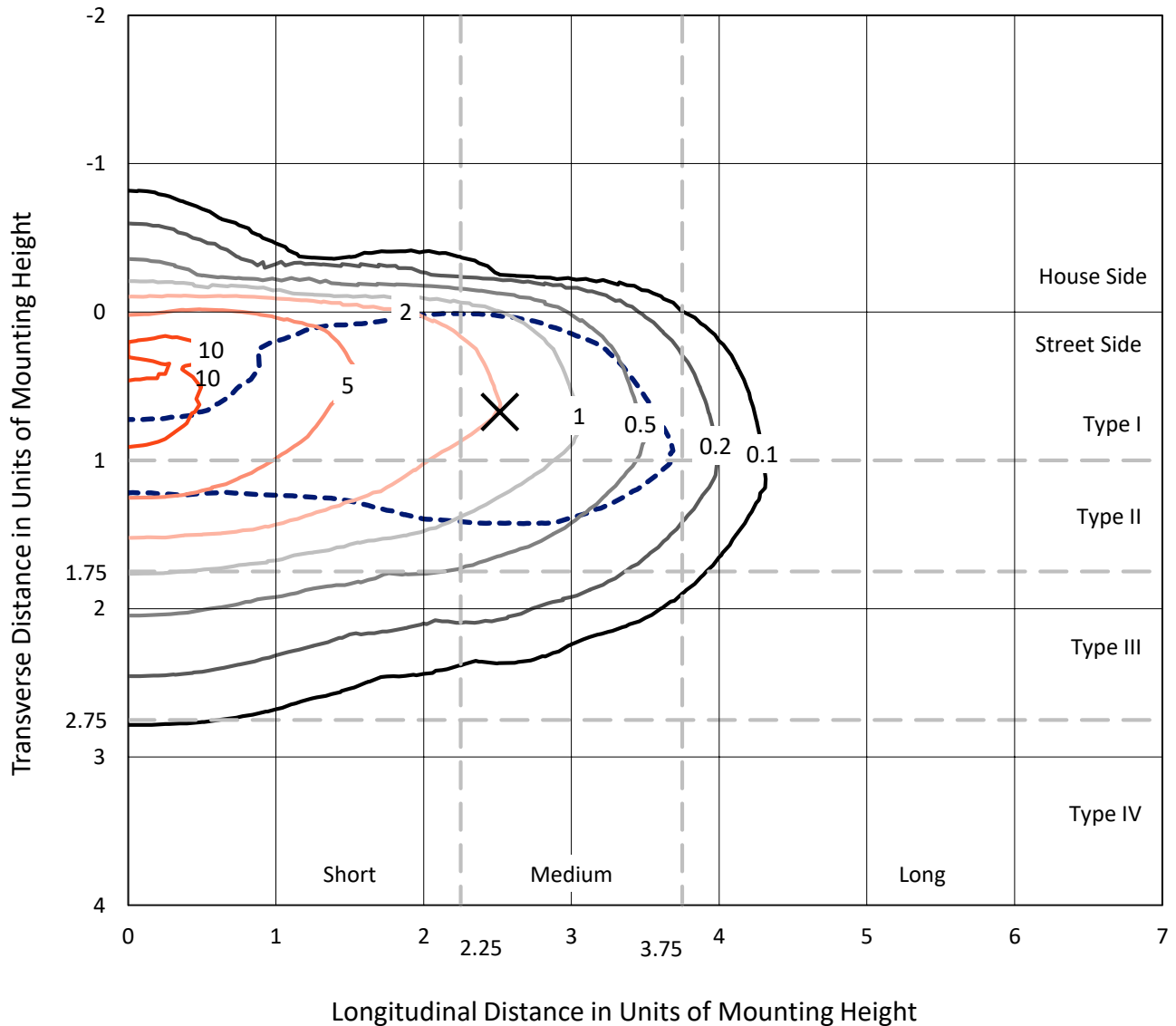
Input Watts (W): 38
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

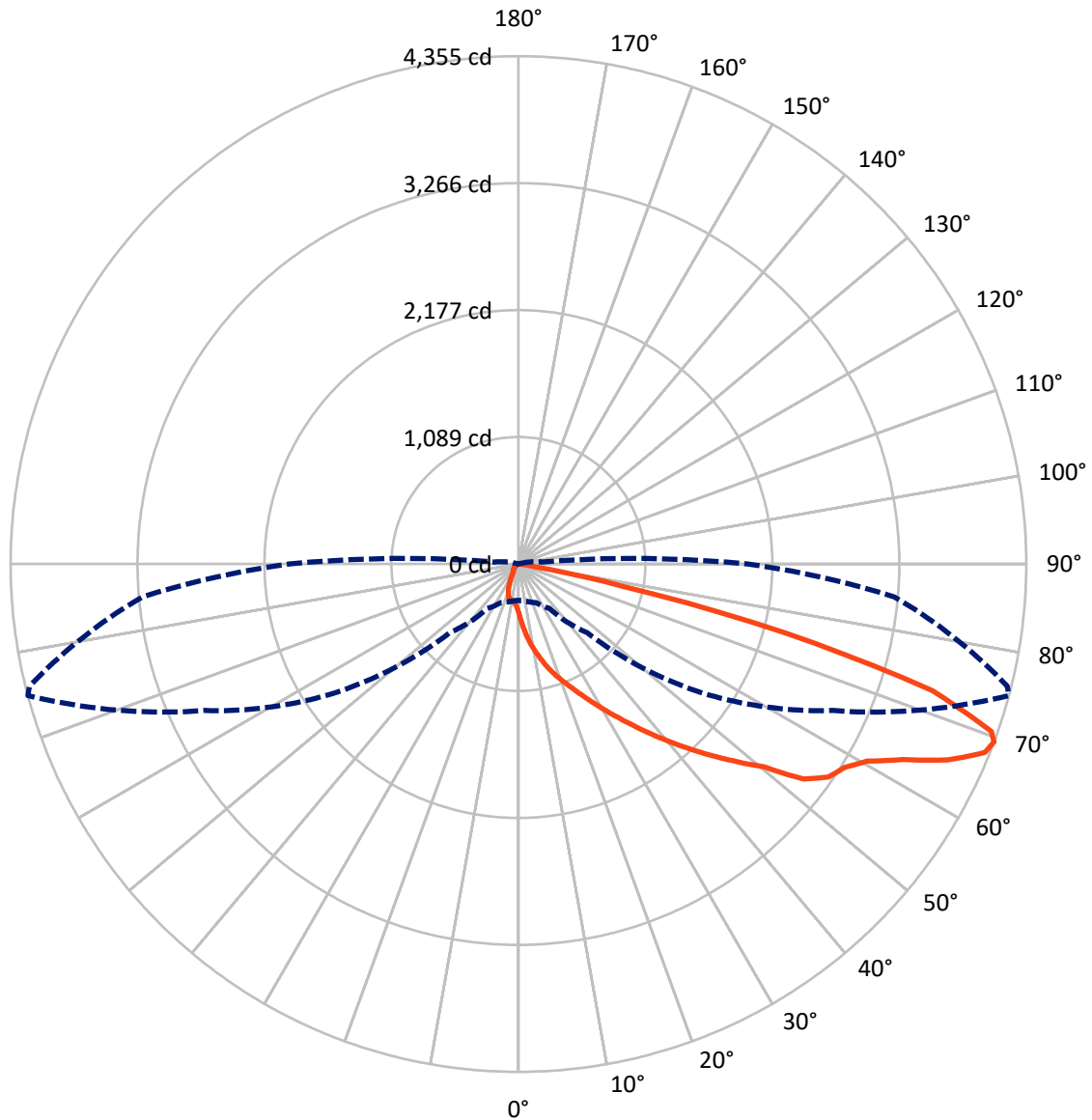
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 11.5 fc
 Type II - Medium - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 75-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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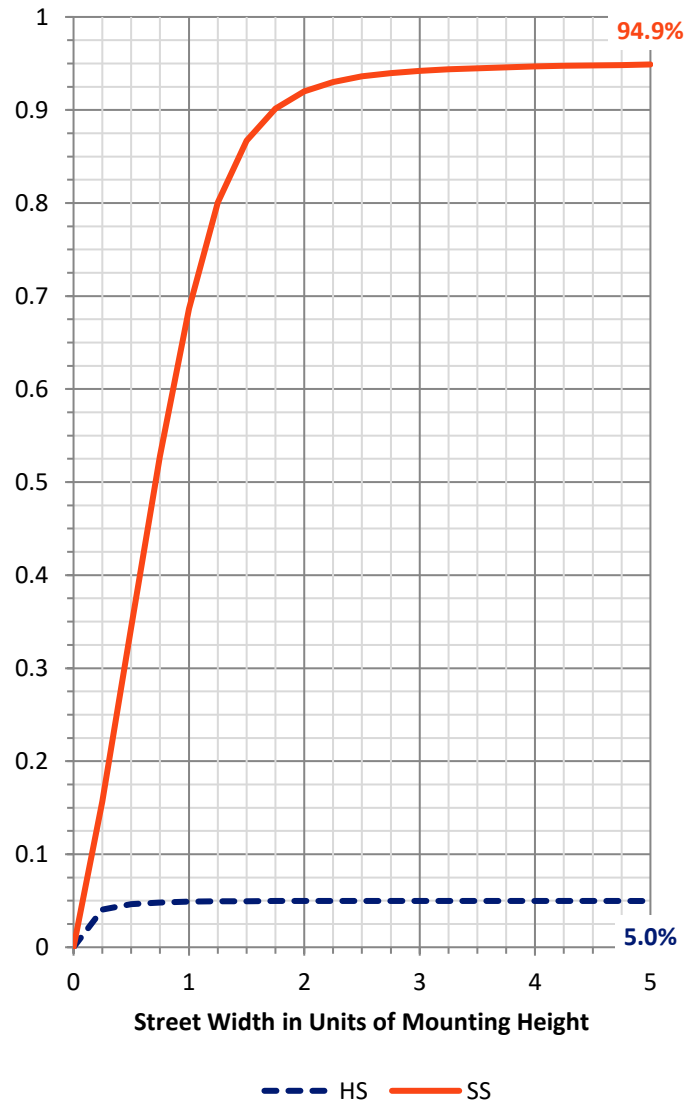
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	225.9	0.0	225.9
	% Fixture	5.0	0.0	5.0
Street Side	Lumens	4300.7	0.0	4300.7
	% Fixture	95.0	0.0	95.0
Total	Lumens	4526.6	0.0	4526.6
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	49.1	1.1
10°-20°	175.6	3.9
20°-30°	335.2	7.4
30°-40°	601.3	13.3
40°-50°	921.2	20.4
50°-60°	1070.7	23.7
60°-70°	948.1	20.9
70°-80°	409.0	9.0
80°-90°	16.4	0.4
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°	4526.6	100.0
0°-180°	4526.6	100.0

Coefficient of Utilization



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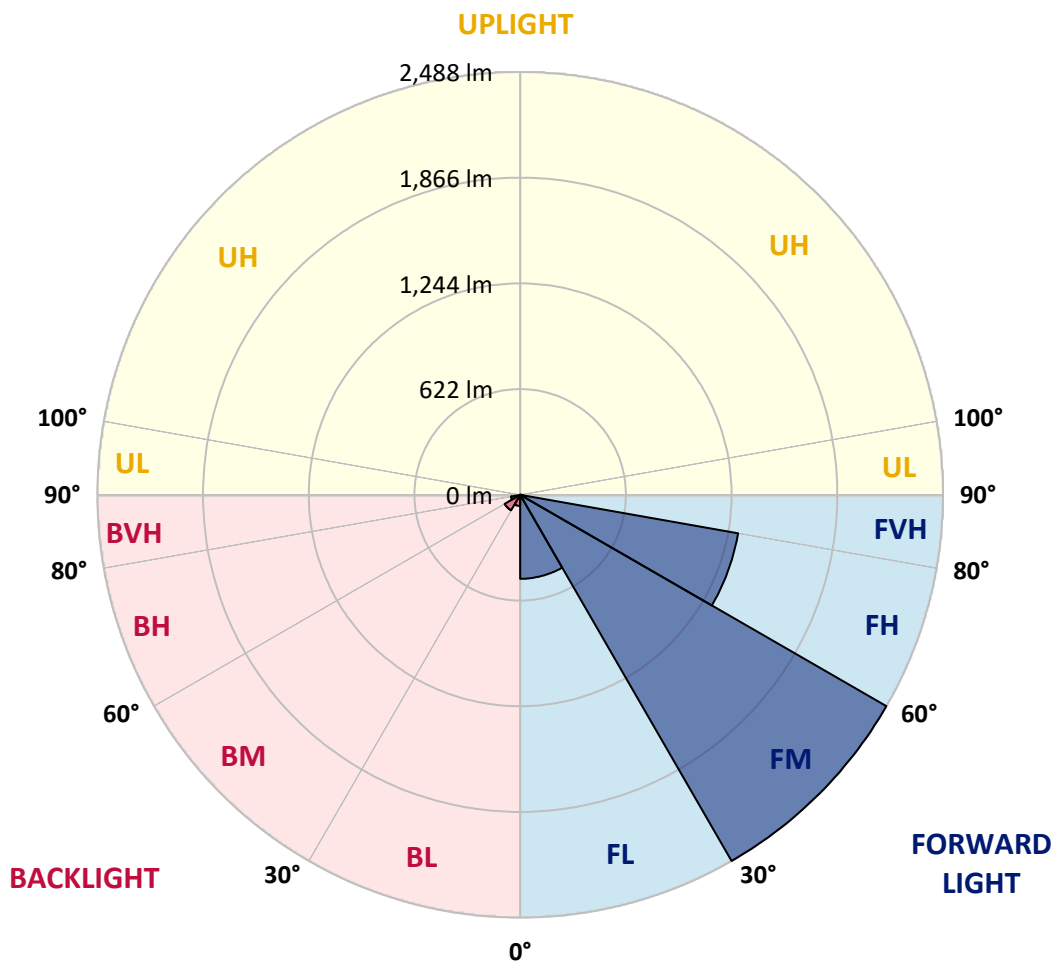
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	494.3	10.9			
FM	(30°-60°)	2487.9	55.0			
FH	(60°-80°)	1302.3	28.8			G1/1800
FVH	(80°-90°)	16.2	0.4			G1/100
BL	(0°-30°)	65.6	1.4	B0/110		
BM	(30°-60°)	105.3	2.3	B0/220		
BH	(60°-80°)	54.7	1.2	B0/110		G0/110
BVH	(80°-90°)	0.2	0.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B0-U0-G1

Type II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	76°	85°
0°	421.1	421.1	421.1	421.1	421.1	421.1	421.1	421.1	421.1	421.1	421.1
2.5°	693.9	687.0	680.2	672.4	654.8	624.5	586.4	545.3	494.5	485.7	444.7
5°	842.4	839.4	832.6	821.8	802.3	769.1	726.1	665.5	580.5	565.8	478.8
7.5°	946.9	945.0	939.2	926.4	908.9	875.6	830.6	765.2	666.5	649.9	521.8
10°	1040.8	1039.8	1034.9	1023.2	1005.6	969.5	921.6	853.1	748.6	730.0	571.7
12.5°	1125.8	1126.8	1124.8	1118.9	1106.2	1072.1	1017.3	943.1	827.8	807.2	631.3
15°	1175.7	1178.5	1186.4	1198.1	1202.0	1174.7	1118.0	1035.8	908.9	891.3	699.7
17.5°	1159.0	1162.0	1186.4	1226.4	1264.6	1268.5	1217.6	1123.8	989.0	971.4	767.1
20°	1118.9	1122.9	1148.3	1203.0	1277.3	1329.0	1308.6	1219.6	1065.2	1043.7	831.7
22.5°	1163.9	1163.9	1171.7	1204.9	1272.3	1353.5	1380.9	1315.4	1143.4	1117.0	896.1
25°	1318.3	1315.4	1298.7	1285.1	1306.6	1378.9	1435.6	1413.1	1235.2	1204.9	964.5
27.5°	1513.8	1527.5	1496.2	1446.4	1397.5	1428.8	1484.4	1509.9	1336.9	1305.6	1034.9
30°	1732.7	1738.5	1701.4	1635.0	1549.0	1518.7	1542.1	1592.9	1447.3	1413.1	1108.2
32.5°	1930.1	1925.2	1893.9	1824.5	1718.0	1652.6	1616.4	1659.3	1567.5	1528.4	1183.5
35°	2105.0	2108.9	2070.8	1990.7	1886.1	1816.7	1730.7	1734.6	1702.4	1657.4	1270.4
37.5°	2262.4	2255.5	2219.3	2139.2	2044.4	1969.2	1878.2	1812.8	1849.9	1803.1	1368.2
40°	2390.3	2383.5	2345.4	2267.3	2178.3	2116.7	2045.4	1917.3	2005.3	1951.6	1472.7
42.5°	2492.0	2484.1	2451.9	2376.6	2290.7	2236.0	2201.7	2046.3	2171.4	2117.7	1590.0
45°	2541.8	2535.0	2515.4	2458.8	2383.5	2335.6	2352.3	2194.9	2349.3	2304.4	1719.0
47.5°	2483.2	2480.2	2502.8	2492.9	2450.0	2424.6	2482.2	2357.1	2536.0	2492.0	1867.5
50°	2305.3	2310.2	2375.7	2456.8	2477.3	2507.7	2588.8	2528.1	2736.3	2689.4	2038.5
52.5°	1866.6	1899.7	2097.2	2292.6	2444.1	2558.4	2713.8	2772.5	3062.7	3016.8	2305.3
55°	1393.6	1407.3	1622.2	1956.5	2310.2	2554.5	2806.7	2916.1	3223.9	3177.1	2375.7
57.5°	1105.3	1110.1	1216.7	1557.7	2034.6	2466.5	2855.6	2967.9	3294.3	3255.2	2480.2
60°	867.8	873.7	950.8	1185.4	1646.6	2229.1	2785.2	3012.9	3432.1	3400.8	2663.0
62.5°	675.2	681.2	728.0	865.8	1235.2	1863.6	2643.5	3085.2	3694.0	3679.3	2962.1
65°	522.8	524.8	557.0	621.5	872.7	1467.8	2470.5	3152.6	4047.8	4035.0	3204.4
67.5°	386.1	388.9	411.4	451.5	589.3	1054.5	2187.1	3100.8	4314.6	4277.5	3292.4
69°	311.7	314.7	334.2	366.4	465.1	830.6	1928.2	2972.8	4354.6	4319.4	3236.6
70°	266.8	268.7	288.3	315.7	396.8	705.5	1722.9	2862.3	4301.8	4267.6	3109.6
72.5°	171.0	180.8	200.3	217.9	262.9	467.1	1162.9	2373.8	3711.6	3653.0	2435.3
75°	94.8	97.7	132.9	154.4	174.9	303.9	646.9	1480.5	2361.1	2320.0	1302.6
77.5°	78.2	80.1	93.8	117.2	117.2	170.0	244.3	583.4	898.0	810.2	352.8
80°	54.7	56.7	71.3	77.2	84.1	95.7	79.2	128.0	138.8	123.2	52.8
82.5°	38.2	40.1	48.9	63.5	67.4	44.9	29.4	38.2	40.1	40.1	20.6
85°	6.9	9.8	36.1	52.8	40.1	13.7	16.6	13.7	12.7	13.7	4.9
87.5°	0.0	0.0	22.5	25.4	21.5	5.8	6.9	4.9	3.0	3.9	1.9
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°	421.1	421.1	421.1	421.1	421.1	421.1	421.1	421.1	421.1	421.1	421.1
2.5°	424.1	403.6	368.5	343.0	321.5	304.9	298.1	287.3	279.5	283.4	278.5
5°	435.9	399.7	343.0	306.9	281.4	259.9	242.3	228.6	217.9	215.9	214.0
7.5°	454.4	402.6	328.4	283.4	245.3	212.1	184.7	164.2	148.5	148.5	142.7
10°	479.9	410.4	319.6	259.9	203.3	158.4	130.9	111.4	103.6	102.6	100.7
12.5°	515.1	425.1	312.7	229.7	158.4	115.3	98.7	91.9	88.9	88.0	87.0
15°	562.9	446.6	304.9	192.5	120.2	94.8	88.0	82.0	79.2	78.2	77.2
17.5°	608.9	466.2	288.3	154.4	97.7	86.0	78.2	73.2	69.4	68.4	68.4
20°	651.8	482.7	259.9	120.2	88.0	77.2	69.4	63.5	59.6	58.6	58.6
22.5°	696.7	496.4	224.7	97.7	80.1	68.4	60.6	54.7	50.8	49.8	48.9
25°	744.7	506.3	184.7	87.0	72.3	60.6	51.8	47.0	44.0	43.0	42.0
27.5°	796.5	510.1	146.6	79.2	63.5	52.8	44.9	40.1	38.2	37.1	37.1
30°	843.3	506.3	113.3	70.4	55.8	45.9	39.1	35.2	33.2	32.2	32.2
32.5°	892.2	496.4	90.8	62.5	48.9	39.1	33.2	30.3	29.4	28.3	28.3
35°	944.0	483.8	78.2	55.8	42.0	34.2	29.4	27.3	26.4	25.4	25.4
37.5°	1004.6	468.1	71.3	49.8	37.1	30.3	25.4	24.4	23.4	23.4	23.4
40°	1073.0	448.6	66.5	44.9	33.2	26.4	22.5	21.5	20.6	20.6	20.6
42.5°	1145.3	426.1	61.6	40.1	29.4	22.5	19.5	19.5	18.6	18.6	17.6
45°	1226.4	403.6	56.7	35.2	25.4	19.5	16.6	15.7	15.7	14.6	14.6
47.5°	1322.3	383.1	51.8	31.3	22.5	16.6	14.6	13.7	12.7	11.8	11.8
50°	1457.1	381.2	45.9	27.3	20.6	13.7	11.8	10.7	9.8	8.8	8.8
52.5°	1591.0	363.6	39.1	22.5	16.6	11.8	8.8	7.8	6.9	6.9	5.8
55°	1621.3	334.2	34.2	19.5	12.7	8.8	6.9	4.9	4.9	3.9	3.9
57.5°	1687.7	320.5	29.4	15.7	9.8	6.9	3.9	3.0	3.0	3.0	3.0
60°	1818.7	316.6	25.4	13.7	6.9	4.9	3.0	1.9	1.9	1.0	1.0
62.5°	1999.5	312.7	21.5	11.8	4.9	3.0	1.9	1.0	0.0	0.0	0.0
65°	2099.1	286.3	17.6	8.8	3.9	3.0	1.0	0.0	0.0	0.0	0.0
67.5°	2072.7	236.5	15.7	5.8	3.0	1.9	1.0	0.0	0.0	0.0	0.0
69°	1962.3	199.4	12.7	4.9	3.0	1.9	1.0	0.0	0.0	0.0	0.0
70°	1829.4	172.0	11.8	3.9	1.9	1.0	1.0	0.0	0.0	0.0	0.0
72.5°	1298.7	89.9	7.8	3.0	1.9	1.0	0.0	0.0	0.0	0.0	0.0
75°	606.9	40.1	4.9	1.9	1.0	1.0	0.0	0.0	0.0	0.0	0.0
77.5°	133.9	18.6	3.0	1.9	1.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	25.4	6.9	1.9	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	8.8	3.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	3.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	1.0	0.0	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)