

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: P231231

Luminaire Tested: **ARCH-M-AF48-40-D-U-T3-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P231231  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29624)  
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-T3-HSS  
Description: ARCHEON-M ROADWAY AND AREA LUMINAIRE  
(2) 70 CRI, 4000K, 240mA LIGHT ENGINES WITH 24 LEDS AND TYPE III OPTICS  
WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4173.7 lumens  
Efficiency: N/A  
Efficacy: 109.8 lumens/watt  
Luminous Opening: Rectangular (W 0.75' x L: 1' x H: 0')  
IES Classification: Type III - Medium - Semi-Cutoff  
BUG Rating: B1 - U0 - G1

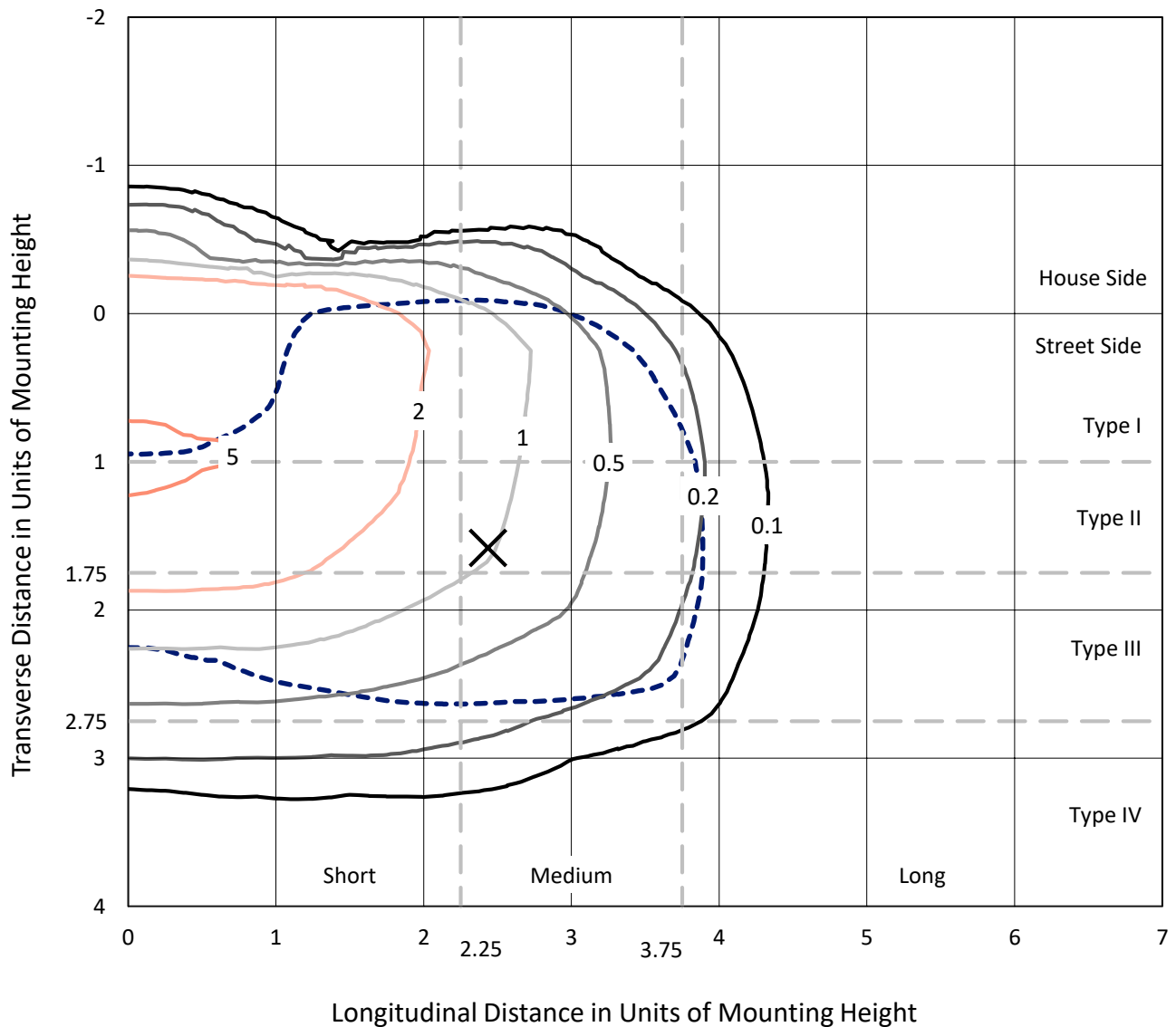
Input Watts (W): 38  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

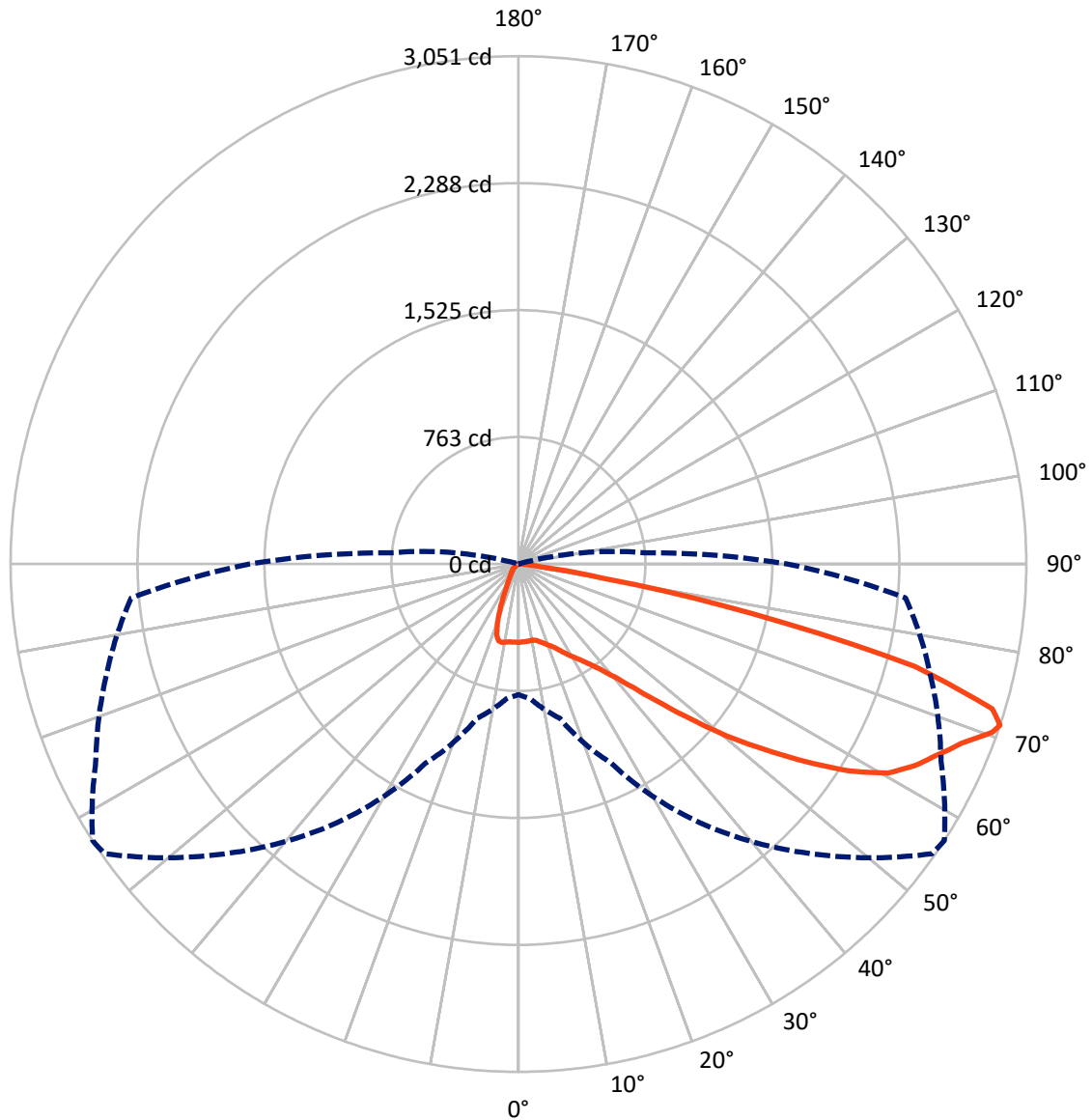
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 5.9 fc  
 Type III - Medium - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 57-Deg Lateral      - - - Horizontal Cone Through 71-Deg Vertical

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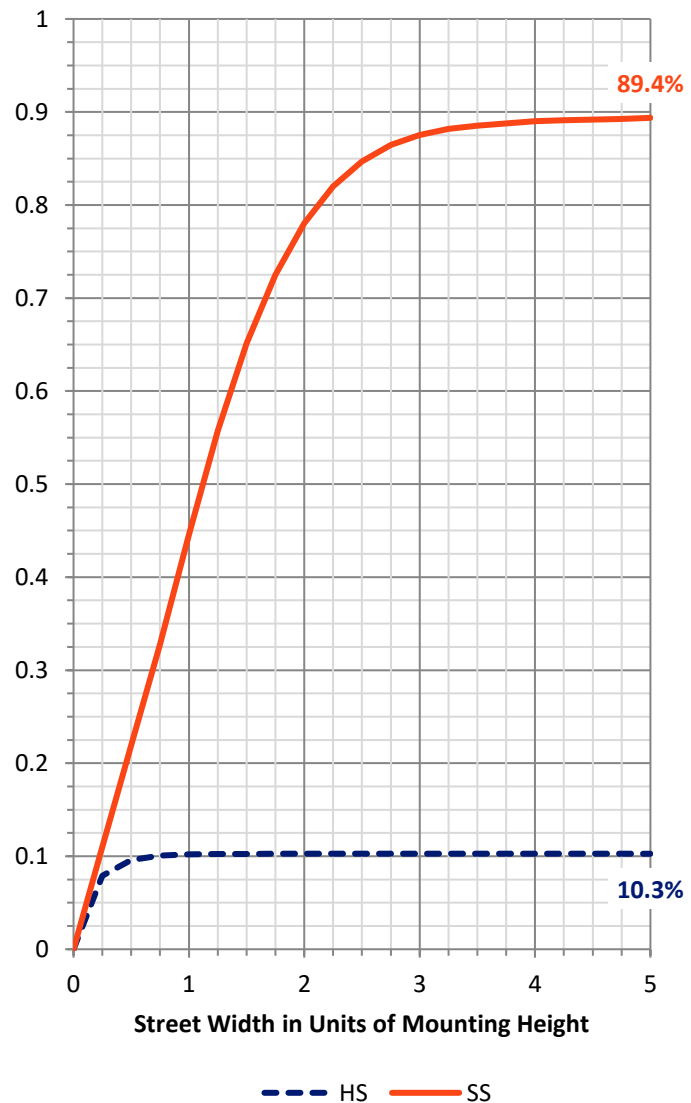
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	432.5	0.0	432.5
	% Fixture	10.4	0.0	10.4
<b>Street Side</b>	Lumens	3741.1	0.0	3741.1
	% Fixture	89.6	0.0	89.6
<b>Total</b>	Lumens	4173.7	0.0	4173.7
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	44.3	1.1
10°-20°	118.4	2.8
20°-30°	184.8	4.4
30°-40°	312.3	7.5
40°-50°	606.5	14.5
50°-60°	1018.6	24.4
60°-70°	1215.6	29.1
70°-80°	640.6	15.3
80°-90°	32.6	0.8
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°	4173.7	100.0
0°-180°	4173.7	100.0

**Coefficient of Utilization**



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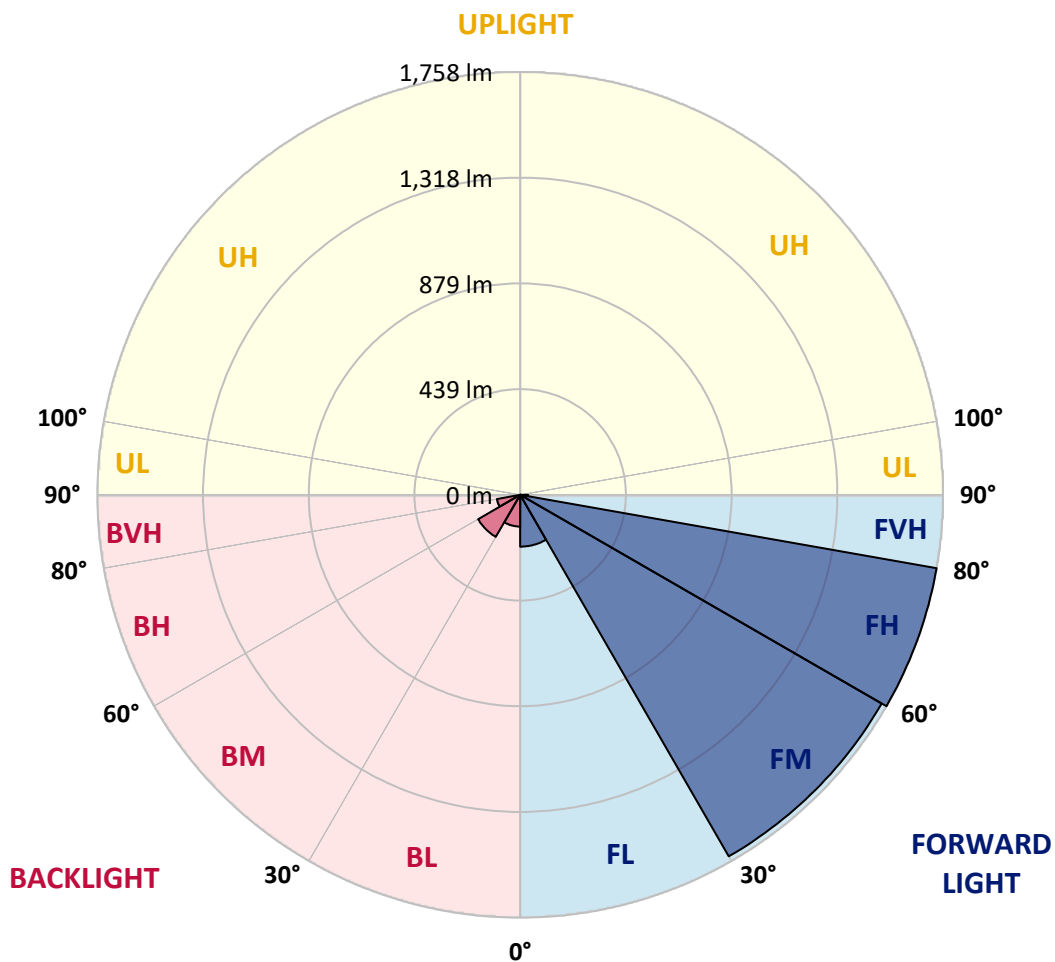
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	215.5	5.2			
FM	(30°-60°)	1735.4	41.6			
FH	(60°-80°)	1758.0	42.1			G1/1800
FVH	(80°-90°)	32.2	0.8			G1/100
BL	(0°-30°)	132.0	3.2	B1/500		
BM	(30°-60°)	202.0	4.8	B0/220		
BH	(60°-80°)	98.2	2.4	B0/110		G0/110
BVH	(80°-90°)	0.3	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-G1**

Type III Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	57°	65°	75°	85°
0°	471.7	471.7	471.7	471.7	471.7	471.7	471.7	471.7	471.7	471.7	471.7
2.5°	464.8	464.8	464.8	465.9	466.8	466.8	468.7	467.8	467.8	467.8	469.7
5°	452.2	453.2	454.2	456.1	460.0	462.9	467.8	467.8	468.7	470.8	471.7
7.5°	434.8	435.7	438.6	442.5	450.3	457.1	464.8	466.8	469.7	474.6	476.6
10°	424.0	426.0	429.8	434.8	443.4	452.2	462.0	464.8	473.6	482.4	487.2
12.5°	421.1	422.1	426.0	433.7	444.5	455.1	467.8	470.8	483.3	496.9	504.7
15°	426.0	427.0	428.9	437.6	450.3	463.9	480.5	484.4	499.9	515.5	525.2
17.5°	434.8	434.8	436.7	444.5	458.1	473.6	495.0	500.8	518.3	535.8	546.6
20°	440.6	440.6	443.4	451.2	466.8	487.2	512.5	520.3	539.8	559.2	569.0
22.5°	446.4	447.3	450.3	459.0	476.6	504.7	533.9	541.8	564.1	584.5	594.2
25°	462.9	462.0	462.9	470.8	491.1	526.1	563.1	572.9	596.2	618.6	623.4
27.5°	508.6	506.7	494.1	489.2	504.7	548.5	600.1	609.8	637.0	659.4	659.4
30°	613.7	609.8	578.7	538.8	526.1	569.0	635.0	648.7	683.7	703.2	697.3
32.5°	747.0	738.2	698.3	630.2	579.6	596.2	672.1	687.6	732.3	748.9	736.2
35°	892.8	891.8	842.2	754.7	682.7	652.5	719.6	738.2	794.5	809.2	788.7
37.5°	1047.4	1051.3	1018.2	897.6	813.0	745.0	782.9	804.2	873.4	890.9	871.5
40°	1219.6	1218.6	1206.0	1062.9	969.7	876.3	874.3	893.8	977.4	1004.6	977.4
42.5°	1437.5	1435.5	1389.8	1261.4	1159.3	1047.4	1007.6	1014.4	1107.8	1152.5	1112.6
45°	1659.1	1645.5	1593.0	1482.2	1391.7	1259.5	1183.6	1183.6	1263.3	1324.6	1262.3
47.5°	1782.7	1769.1	1747.7	1686.4	1659.1	1511.3	1399.5	1385.9	1448.1	1510.4	1422.8
50°	1945.1	1945.1	1891.6	1868.2	1915.0	1810.9	1637.7	1624.1	1654.3	1703.9	1589.2
52.5°	2073.4	2050.1	2012.2	2032.6	2165.9	2118.2	1876.0	1849.8	1873.1	1885.8	1734.0
55°	2126.9	2104.6	2101.7	2176.5	2382.8	2316.6	2120.2	2096.8	2094.9	2032.6	1860.4
57.5°	2137.7	2118.2	2155.2	2286.5	2593.8	2479.0	2363.3	2345.7	2291.3	2135.7	1989.8
60°	2047.2	2056.9	2146.5	2346.8	2718.3	2620.1	2568.5	2550.0	2424.6	2223.3	2133.8
62.5°	1861.5	1884.8	2052.0	2352.6	2672.6	2677.4	2682.3	2669.6	2527.6	2303.0	2278.6
65°	1641.6	1648.5	1849.8	2271.9	2592.8	2659.9	2766.0	2764.9	2606.4	2392.5	2442.1
67.5°	1352.9	1364.5	1538.5	1999.6	2433.3	2652.1	2875.8	2872.9	2695.9	2494.6	2539.3
70°	1006.6	1021.2	1162.2	1555.1	2077.3	2554.9	3019.8	3021.7	2790.2	2572.4	2472.2
71°	784.8	811.1	958.9	1320.7	1895.5	2456.6	3033.4	3050.8	2800.9	2561.7	2334.1
72.5°	385.1	416.2	602.0	929.8	1560.0	2236.9	2943.8	2977.9	2733.8	2428.5	1995.7
75°	100.1	106.0	179.9	380.2	836.4	1482.2	2374.0	2460.5	2234.9	1848.8	1219.6
77.5°	63.2	65.2	84.6	147.8	313.1	563.1	1394.6	1437.5	1276.9	936.5	429.8
80°	44.7	45.7	53.5	95.3	182.8	164.4	501.9	520.3	462.0	248.0	76.8
82.5°	27.2	27.2	38.9	61.3	112.8	89.5	132.3	141.1	124.5	69.0	25.3
85°	15.5	16.6	24.3	41.8	53.5	43.8	49.6	52.5	53.5	45.7	10.7
87.5°	12.7	13.6	21.4	35.0	29.2	21.4	21.4	22.4	23.3	27.2	4.9
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°	471.7	471.7	471.7	471.7	471.7	471.7	471.7	471.7	471.7	471.7	471.7
2.5°	469.7	469.7	470.8	469.7	469.7	469.7	470.8	470.8	470.8	472.7	473.6
5°	471.7	471.7	471.7	470.8	469.7	469.7	471.7	472.7	472.7	475.6	475.6
7.5°	476.6	476.6	474.6	472.7	470.8	467.8	468.7	469.7	468.7	469.7	469.7
10°	487.2	487.2	484.4	480.5	474.6	465.9	454.2	439.6	426.0	421.1	419.2
12.5°	504.7	503.8	498.0	491.1	478.5	448.4	404.6	353.0	310.3	298.6	294.7
15°	524.2	522.2	515.5	503.8	469.7	389.9	298.6	232.4	191.6	181.9	179.9
17.5°	544.6	541.8	531.9	508.6	429.8	289.8	192.5	145.9	123.5	121.5	122.5
20°	566.0	562.1	548.5	498.9	347.2	193.5	124.5	112.8	110.9	110.9	111.8
22.5°	590.3	585.4	567.0	463.9	252.9	128.4	107.0	106.0	105.1	104.0	104.0
25°	618.6	612.7	584.5	400.7	174.1	105.1	102.1	99.2	97.3	95.3	94.3
27.5°	652.5	644.8	598.1	322.8	119.6	98.2	96.3	91.5	87.6	83.7	83.7
30°	686.6	676.9	594.2	243.2	97.3	91.5	87.6	81.7	75.9	72.0	71.0
32.5°	722.6	712.9	569.0	163.4	88.5	83.7	78.8	70.1	63.2	58.3	57.4
35°	776.1	768.3	519.4	107.9	79.8	74.0	67.1	58.3	49.6	44.7	43.8
37.5°	855.8	846.1	458.1	82.7	70.1	61.3	55.4	45.7	36.9	32.1	31.1
40°	962.8	933.6	385.1	72.9	61.3	50.5	42.8	33.0	26.3	23.3	23.3
42.5°	1087.3	1018.2	306.4	66.1	54.4	41.8	31.1	22.4	18.5	17.5	17.5
45°	1219.6	1097.0	227.6	61.3	47.7	33.0	22.4	15.5	13.6	12.7	12.7
47.5°	1355.7	1161.3	158.6	55.4	39.9	25.3	15.5	11.7	9.7	8.8	8.8
50°	1483.2	1203.0	111.8	49.6	34.1	18.5	11.7	8.8	6.9	6.9	6.9
52.5°	1571.7	1199.1	80.7	42.8	26.3	12.7	7.8	5.8	5.8	5.8	5.8
55°	1649.4	1184.6	63.2	36.9	20.5	8.8	5.8	4.9	4.9	3.9	3.9
57.5°	1715.6	1161.3	53.5	30.2	14.6	6.9	3.9	3.9	3.0	3.0	3.0
60°	1772.0	1132.0	44.7	25.3	9.7	4.9	3.0	1.9	1.9	1.0	1.9
62.5°	1848.8	1113.6	38.9	19.4	6.9	3.0	1.9	1.0	1.0	0.0	0.0
65°	1905.2	1078.6	33.0	13.6	3.9	1.9	1.0	1.0	0.0	0.0	0.0
67.5°	1907.2	1015.4	24.3	7.8	3.0	1.9	1.0	0.0	0.0	0.0	0.0
70°	1753.5	865.5	15.5	3.9	1.9	1.0	1.0	0.0	0.0	0.0	0.0
71°	1612.5	766.4	12.7	3.0	1.9	1.0	0.0	0.0	0.0	0.0	0.0
72.5°	1328.5	563.1	9.7	3.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0
75°	732.3	204.3	4.9	1.9	1.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	234.4	62.2	3.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	39.9	9.7	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	13.6	3.9	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	3.9	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	1.9	1.0	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)