

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: P257690

Luminaire Tested: **ARCH-AF16-50-D-U-T2U-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P257690  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1802-616-3)  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: ARCH-AF16-50-D-U-T2U-HSS  
Description: ARCHEON ROADWAY AND AREA LUMINAIRE  
(1) 70 CRI, 4000K, 980mA LIGHT ENGINE WITH 16 LEDS AND TYPE II U OPTICS  
WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4161.3 lumens  
Efficiency: N/A  
Efficacy: 78.5 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.75' x H: 0')  
IES Classification: Type II - Short - Full Cutoff  
BUG Rating: B1 - U0 - G1

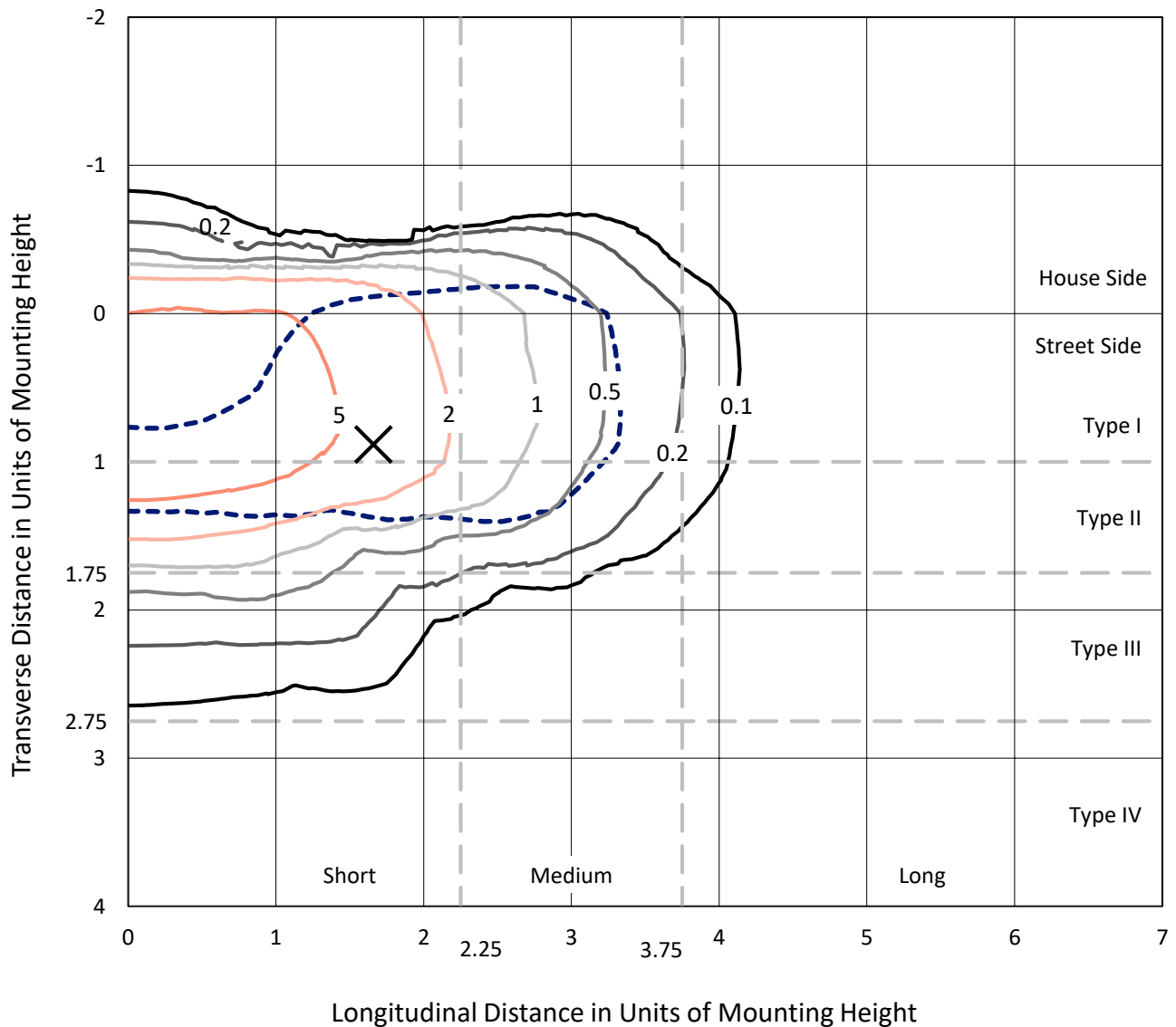
Input Watts (W): 53  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

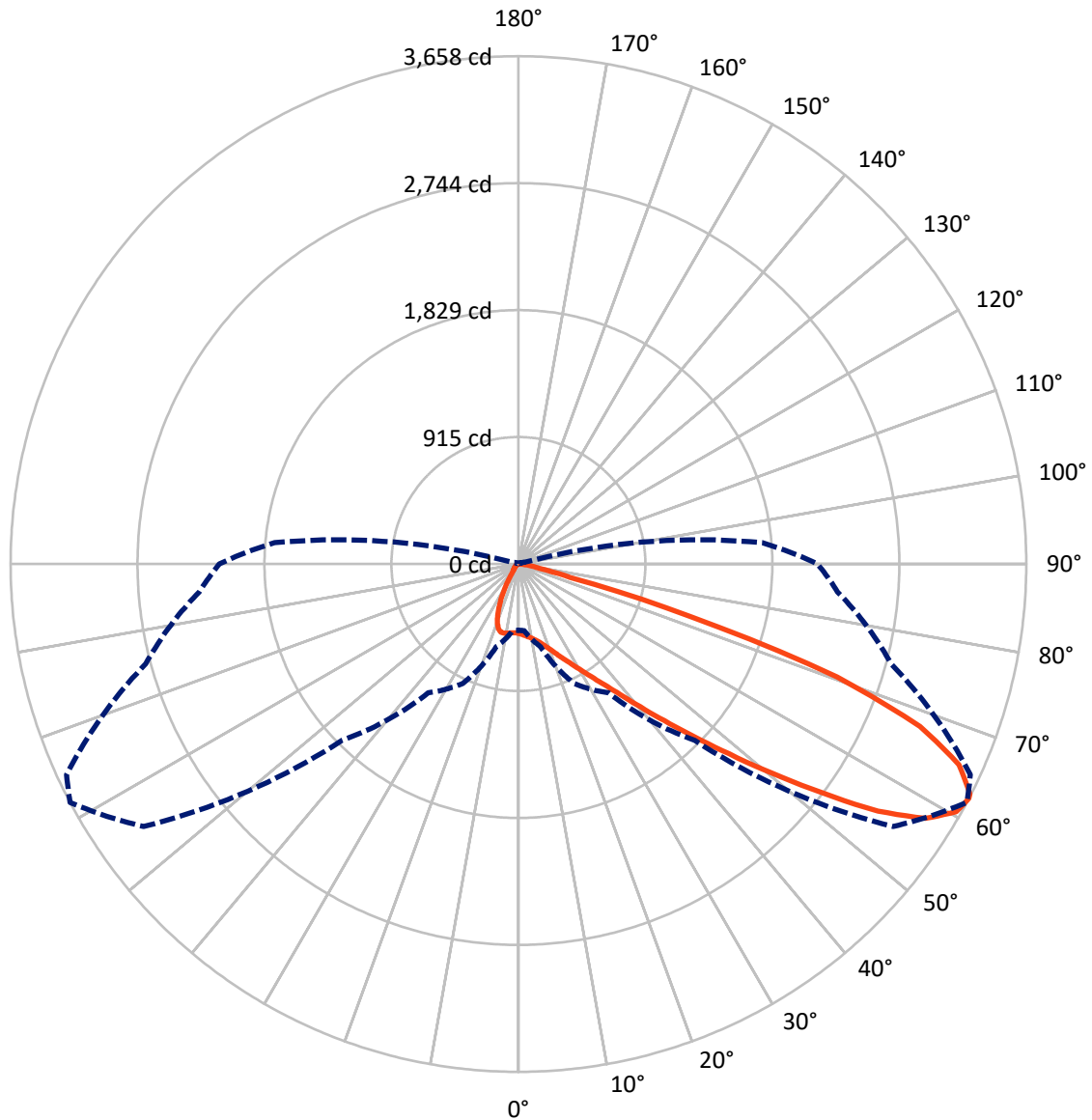
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 9.6 fc  
 Type II - Short - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 62-Deg Lateral    - - - Horizontal Cone Through 62-Deg Vertical



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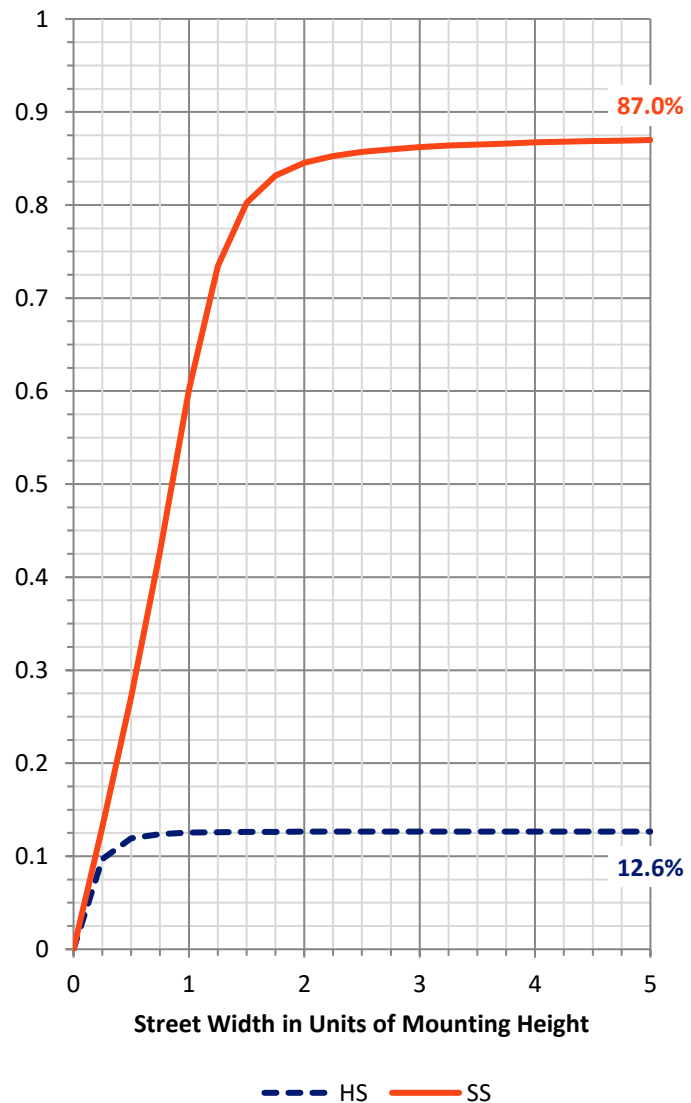
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	532.1	0.0	532.1
	% Fixture	12.8	0.0	12.8
<b>Street Side</b>	Lumens	3629.3	0.0	3629.3
	% Fixture	87.2	0.0	87.2
<b>Total</b>	Lumens	4161.3	0.0	4161.3
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	48.2	1.2
10°-20°	134.7	3.2
20°-30°	226.3	5.4
30°-40°	433.7	10.4
40°-50°	885.8	21.3
50°-60°	1172.3	28.2
60°-70°	910.7	21.9
70°-80°	328.7	7.9
80°-90°	20.9	0.5
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°	4161.3	100.0
0°-180°	4161.3	100.0

**Coefficient of Utilization**



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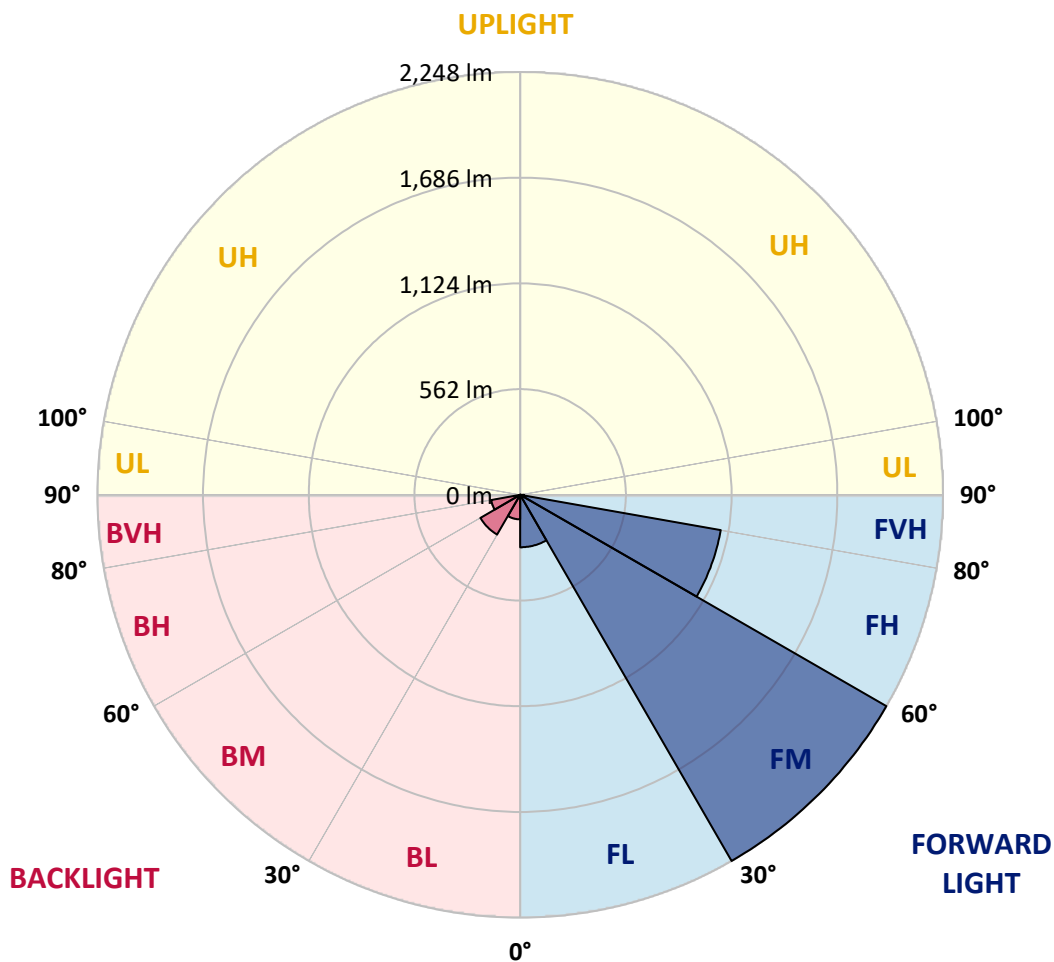
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	279.0	6.7			
FM	(30°-60°)	2247.6	54.0			
FH	(60°-80°)	1082.7	26.0			G1/1800
FVH	(80°-90°)	20.0	0.5			G1/100
BL	(0°-30°)	130.2	3.1	B1/500		
BM	(30°-60°)	244.3	5.9	B1/1000		
BH	(60°-80°)	156.7	3.8	B1/500		G1/500
BVH	(80°-90°)	0.9	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 II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	62°	65°	75°	85°
0°	501.2	501.2	501.2	501.2	501.2	501.2	501.2	501.2	501.2	501.2	501.2
2.5°	514.5	513.5	512.5	511.5	511.5	510.5	509.4	507.4	505.3	503.3	502.3
5°	523.8	522.7	521.7	522.7	521.7	521.7	520.7	518.6	516.6	513.5	510.5
7.5°	530.9	529.9	528.9	529.9	530.9	531.9	533.0	530.9	529.9	525.8	522.7
10°	540.1	539.1	538.1	540.1	540.1	545.2	546.3	545.2	544.2	541.1	536.0
12.5°	553.4	554.4	554.4	556.5	558.5	564.7	566.7	563.6	563.6	559.6	553.4
15°	578.1	578.1	578.1	580.1	581.1	589.3	591.4	588.3	590.3	583.2	577.0
17.5°	601.6	602.6	604.7	608.8	608.8	615.9	620.0	620.0	624.1	614.9	606.7
20°	625.1	626.1	629.2	638.4	638.4	647.6	654.8	657.9	662.0	652.7	638.4
22.5°	650.7	650.7	655.8	670.1	667.1	685.5	698.8	703.9	708.0	695.7	673.2
25°	689.6	685.5	689.6	702.9	700.8	726.4	750.9	756.1	761.2	746.9	713.1
27.5°	763.2	757.1	742.8	743.8	743.8	773.5	808.2	815.4	818.5	806.2	764.2
30°	910.5	910.5	857.3	821.5	798.0	824.6	873.7	886.0	890.1	871.7	816.4
32.5°	1167.3	1167.3	1069.1	978.0	889.0	889.0	945.3	967.8	971.9	950.4	886.0
35°	1494.6	1492.6	1345.3	1220.5	1046.6	981.1	1029.2	1067.0	1079.3	1050.7	976.0
37.5°	1842.5	1829.2	1670.6	1527.4	1289.0	1128.4	1142.7	1192.9	1204.1	1180.6	1092.6
40°	2124.9	2109.5	1981.7	1862.0	1602.0	1363.7	1306.4	1352.4	1365.7	1333.0	1231.7
42.5°	2380.6	2342.8	2254.8	2168.9	1962.2	1770.9	1524.3	1542.7	1557.0	1522.3	1388.2
45°	2565.8	2507.5	2462.4	2435.9	2326.4	2218.0	1806.7	1769.9	1775.0	1732.1	1559.1
47.5°	2570.9	2530.0	2534.1	2603.6	2648.6	2644.5	2174.0	2043.0	2023.6	1952.0	1741.3
50°	2325.4	2348.9	2423.6	2622.0	2865.5	3012.9	2610.8	2366.3	2308.0	2179.1	1922.3
52.5°	1916.2	1953.0	2093.2	2427.7	2897.3	3255.3	3064.0	2735.6	2631.2	2404.1	2061.5
55°	1500.8	1502.8	1650.1	1990.9	2685.5	3299.3	3426.2	3141.8	2982.2	2575.0	2153.5
57.5°	1032.3	1088.5	1275.7	1504.9	2207.7	3080.4	3562.2	3456.9	3251.2	2680.3	2218.0
60°	676.3	679.3	897.2	1162.2	1502.8	2506.4	3479.4	3623.6	3469.1	2742.7	2261.9
62°	476.7	481.8	616.9	949.4	1132.5	1796.5	3296.3	3658.4	3591.9	2779.6	2308.0
62.5°	441.9	446.0	559.6	896.2	1064.0	1611.2	3230.8	3650.2	3610.3	2791.8	2324.3
65°	324.3	324.3	366.2	615.9	779.6	870.6	2737.6	3487.5	3585.7	2890.1	2385.7
67.5°	250.6	252.7	267.0	379.5	588.3	527.8	1747.4	3121.3	3330.0	3035.4	2420.5
70°	215.8	214.8	225.0	251.6	424.5	350.9	769.4	2435.9	2788.8	2998.6	2388.8
72.5°	159.6	160.6	184.1	221.0	295.6	228.1	347.8	1293.1	1808.8	2346.9	2047.1
75°	102.3	103.3	129.9	173.9	212.8	149.4	200.5	385.7	740.7	1301.3	1252.2
77.5°	68.5	70.6	84.9	121.7	186.2	93.1	125.8	161.6	223.0	487.9	449.1
80°	46.0	46.0	54.2	81.8	117.6	77.7	67.5	107.4	115.6	151.4	75.7
82.5°	30.7	30.7	35.8	54.2	76.7	69.6	40.9	58.3	67.5	75.7	26.6
85°	18.4	18.4	24.6	33.8	50.1	38.9	26.6	32.7	34.8	48.1	14.3
87.5°	11.3	10.2	16.4	23.5	26.6	23.5	17.4	17.4	18.4	26.6	7.2
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°	501.2	501.2	501.2	501.2	501.2	501.2	501.2	501.2	501.2	501.2	501.2
2.5°	500.2	499.2	498.2	496.1	493.1	491.0	489.0	486.9	484.9	484.9	487.9
5°	509.4	506.4	502.3	498.2	492.0	487.9	484.9	480.8	478.7	478.7	479.8
7.5°	520.7	517.6	510.5	503.3	494.1	486.9	479.8	470.6	463.4	460.3	463.4
10°	533.0	528.9	518.6	507.4	497.2	478.7	455.2	426.6	402.0	390.8	395.9
12.5°	548.3	543.2	530.9	515.6	492.0	447.0	388.7	322.2	280.3	260.9	264.9
15°	570.8	563.6	546.3	522.7	470.6	373.4	278.2	201.5	162.6	146.3	148.3
17.5°	597.5	588.3	564.7	520.7	415.3	269.0	165.7	117.6	101.3	97.2	97.2
20°	626.1	613.9	583.2	505.3	331.4	168.8	103.3	90.0	83.9	80.8	80.8
22.5°	655.8	639.4	598.5	469.5	236.3	105.4	84.9	75.7	68.5	65.5	65.5
25°	691.6	670.1	613.9	407.1	150.4	84.9	72.6	63.4	56.3	52.2	53.2
27.5°	733.6	705.9	627.2	329.4	97.2	73.7	60.4	51.1	45.0	43.0	43.0
30°	777.5	744.8	630.2	246.5	78.8	63.4	50.1	41.9	37.8	35.8	35.8
32.5°	837.9	794.9	621.0	163.7	66.5	53.2	41.9	34.8	31.7	30.7	30.7
35°	917.7	860.4	599.6	101.3	56.3	44.0	34.8	30.7	27.6	26.6	26.6
37.5°	1019.0	951.4	561.6	69.6	48.1	35.8	29.7	26.6	24.6	23.5	23.5
40°	1154.0	1061.9	512.5	60.4	40.9	30.7	25.6	23.5	21.5	21.5	21.5
42.5°	1297.2	1195.9	449.1	53.2	34.8	26.6	22.5	20.5	19.4	18.4	18.4
45°	1453.7	1333.0	370.3	47.1	29.7	23.5	20.5	17.4	16.4	16.4	16.4
47.5°	1609.2	1474.2	284.4	40.9	25.6	20.5	17.4	15.3	14.3	13.3	13.3
50°	1768.9	1602.0	208.7	35.8	22.5	18.4	15.3	13.3	11.3	10.2	10.2
52.5°	1884.5	1678.8	152.4	30.7	19.4	15.3	12.3	10.2	8.2	7.2	7.2
55°	1969.4	1725.9	111.5	25.6	17.4	13.3	10.2	8.2	6.1	6.1	5.1
57.5°	2035.9	1748.4	83.9	22.5	15.3	11.3	8.2	6.1	5.1	4.1	4.1
60°	2087.0	1749.5	62.4	18.4	13.3	9.2	6.1	4.1	3.1	3.1	3.1
62°	2154.5	1762.7	51.1	15.3	12.3	8.2	5.1	3.1	2.0	1.0	1.0
62.5°	2174.0	1767.9	49.1	15.3	11.3	7.2	4.1	3.1	2.0	1.0	1.0
65°	2264.0	1777.1	37.8	12.3	9.2	6.1	3.1	2.0	0.0	0.0	0.0
67.5°	2345.8	1762.7	27.6	9.2	7.2	4.1	3.1	1.0	0.0	0.0	0.0
70°	2337.6	1664.4	19.4	6.1	5.1	3.1	2.0	0.0	0.0	0.0	0.0
72.5°	1926.4	1246.1	13.3	5.1	3.1	2.0	1.0	0.0	0.0	0.0	0.0
75°	1163.2	545.2	9.2	3.1	3.1	2.0	1.0	0.0	0.0	0.0	0.0
77.5°	381.6	197.4	6.1	2.0	2.0	1.0	1.0	0.0	0.0	0.0	0.0
80°	62.4	32.7	3.1	2.0	2.0	1.0	1.0	0.0	0.0	0.0	0.0
82.5°	19.4	8.2	2.0	2.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0
85°	7.2	3.1	2.0	2.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0
87.5°	3.1	2.0	2.0	2.0	1.0	1.0	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)