

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: P234726

Luminaire Tested: **ARCH-AF16-40-D-U-T3-8027-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P234726  
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-AF16-40-D-U-T3-8027-HSS  
Description: ARCHEON ROADWAY AND AREA LUMINAIRE  
(1) 80 CRI, 2700K, 740mA LIGHT ENGINE WITH 16 LEDS AND TYPE III OPTICS  
WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2654 lumens  
Efficiency: N/A  
Efficacy: 63.2 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.75' x H: 0')  
IES Classification: Type III - Medium - Semi-Cutoff  
BUG Rating: B0 - U0 - G1

Input Watts (W): 42  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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

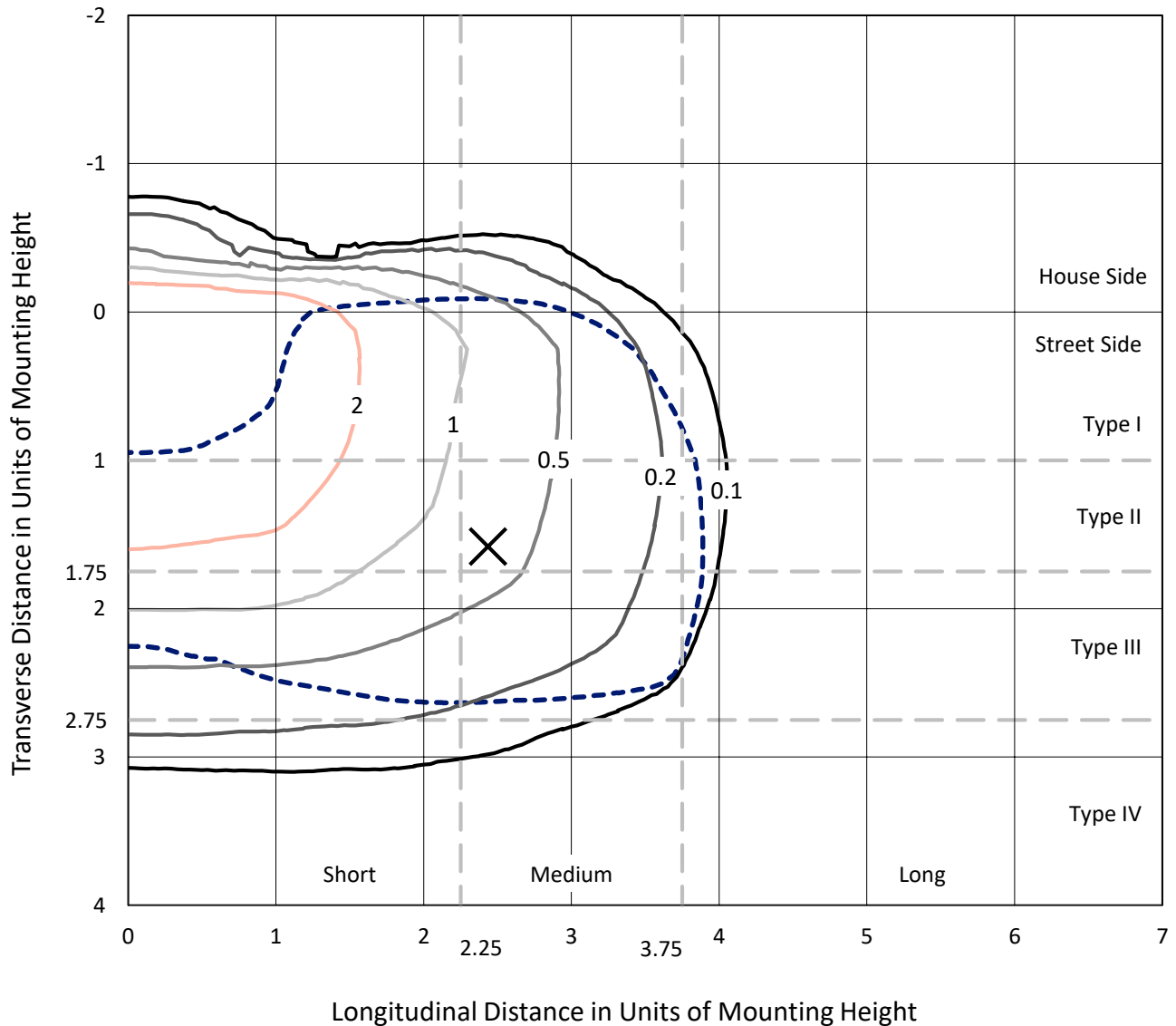


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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

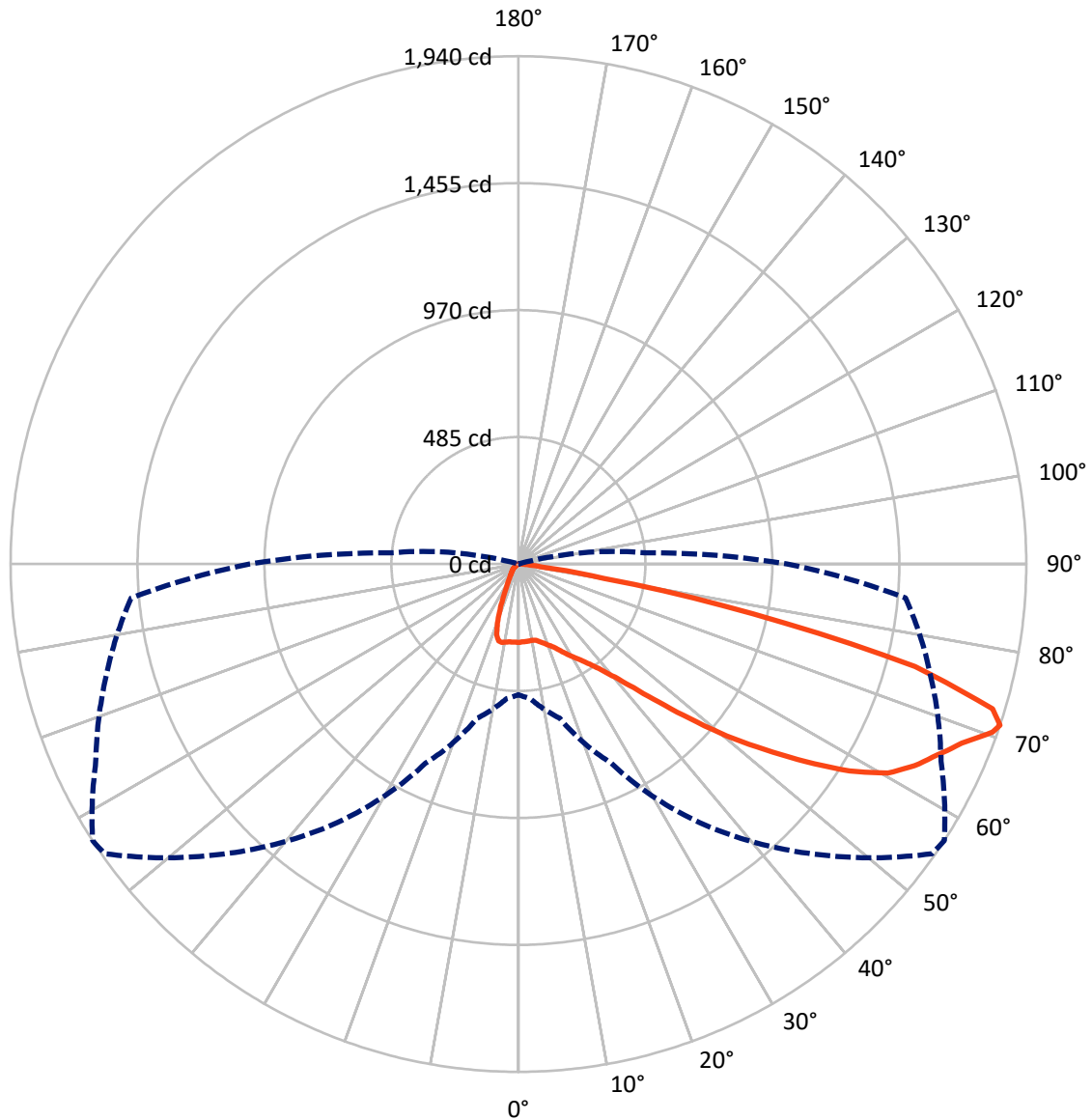


Based on 10 foot mounting height. Maximum calculated value = 3.7 fc  
 Type III - Medium - Semi-Cutoff

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### Luminous Intensity Polar Plot



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

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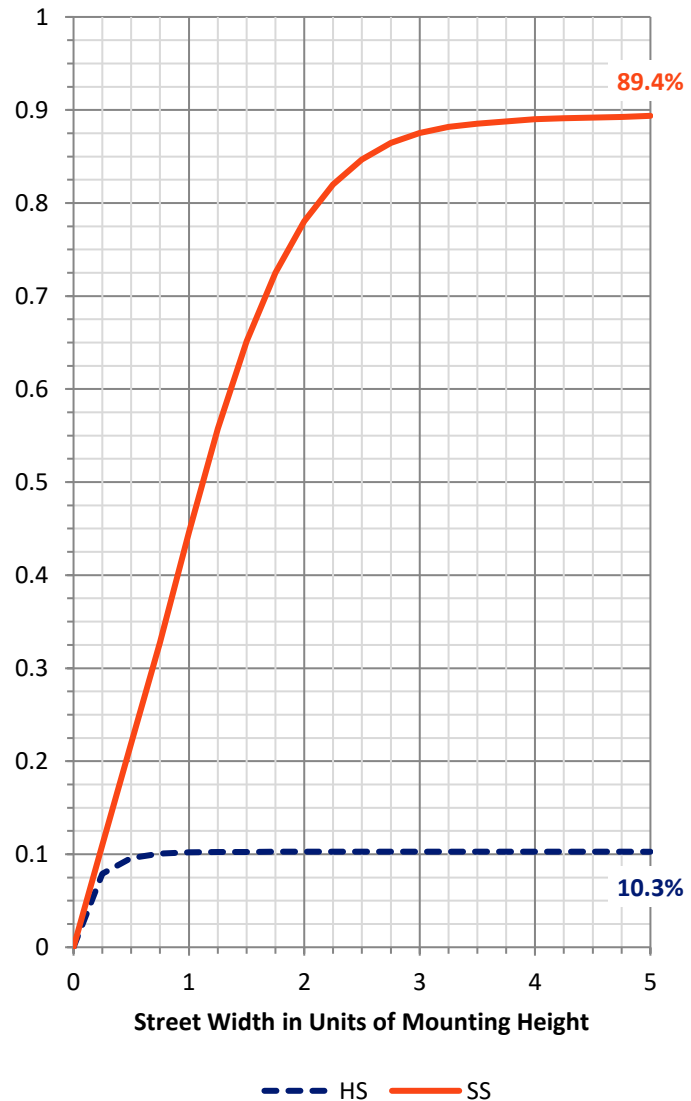
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	275.0	0.0	275.0
	% Fixture	10.4	0.0	10.4
<b>Street Side</b>	Lumens	2379.0	0.0	2379.0
	% Fixture	89.6	0.0	89.6
<b>Total</b>	Lumens	2654.0	0.0	2654.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	28.2	1.1
10°-20°	75.3	2.8
20°-30°	117.5	4.4
30°-40°	198.6	7.5
40°-50°	385.7	14.5
50°-60°	647.7	24.4
60°-70°	773.0	29.1
70°-80°	407.4	15.3
80°-90°	20.7	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°	2654.0	100.0
0°-180°	2654.0	100.0



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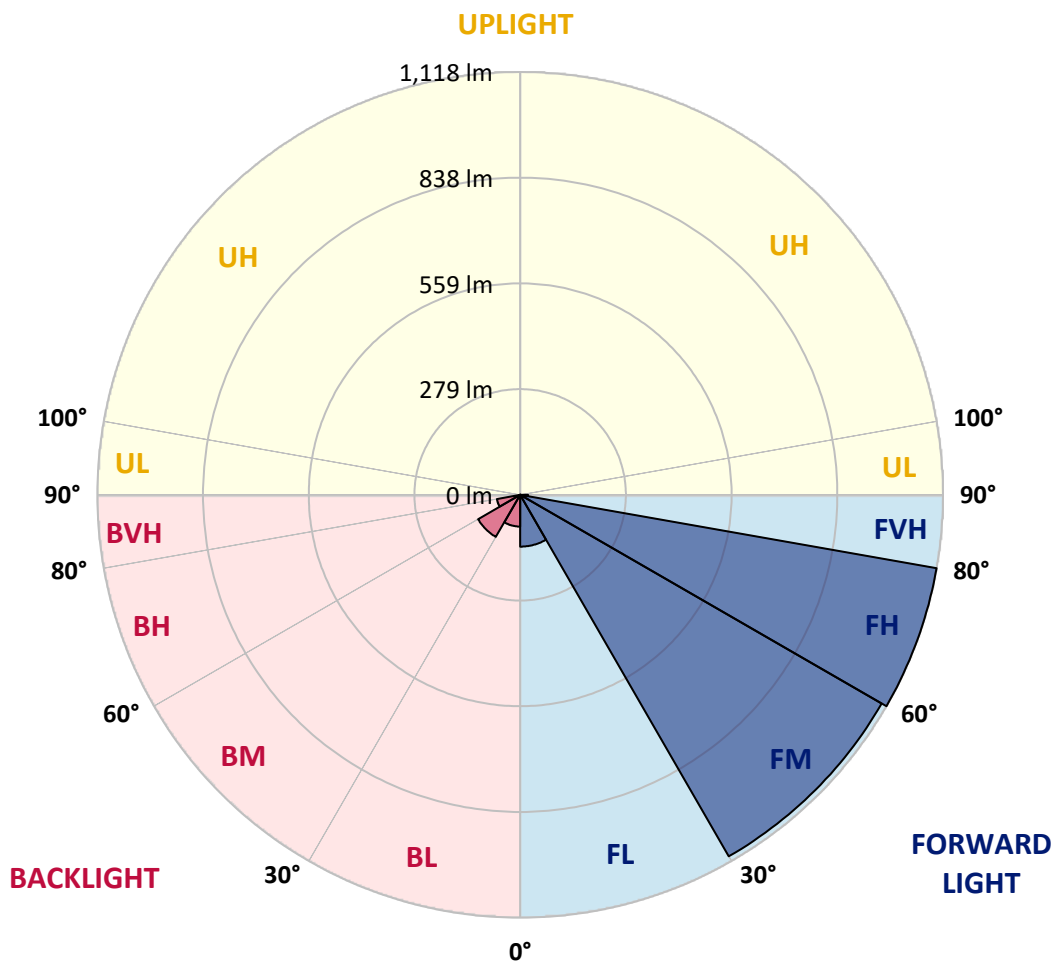
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	137.0	5.2			
FM	(30°-60°)	1103.6	41.6			
FH	(60°-80°)	1117.9	42.1			G1/1800
FVH	(80°-90°)	20.5	0.8			G1/100
BL	(0°-30°)	84.0	3.2	B0/110		
BM	(30°-60°)	128.4	4.8	B0/220		
BH	(60°-80°)	62.5	2.4	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 III Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	57°	65°	75°	85°
0°	299.9	299.9	299.9	299.9	299.9	299.9	299.9	299.9	299.9	299.9	299.9
2.5°	295.6	295.6	295.6	296.2	296.9	296.9	298.1	297.5	297.5	297.5	298.7
5°	287.6	288.2	288.8	290.0	292.5	294.4	297.5	297.5	298.1	299.3	299.9
7.5°	276.4	277.1	278.9	281.4	286.3	290.7	295.6	296.9	298.7	301.8	303.0
10°	269.6	270.9	273.3	276.4	282.0	287.6	293.8	295.6	301.2	306.7	309.8
12.5°	267.8	268.4	270.9	275.8	282.6	289.4	297.5	299.3	307.4	316.0	321.0
15°	270.9	271.5	272.7	278.3	286.3	295.0	305.5	308.0	317.9	327.8	334.0
17.5°	276.4	276.4	277.7	282.6	291.3	301.2	314.8	318.5	329.6	340.8	347.6
20°	280.2	280.2	282.0	287.0	296.9	309.8	325.9	330.9	343.2	355.6	361.8
22.5°	283.9	284.5	286.3	291.9	303.0	321.0	339.5	344.5	358.7	371.7	377.9
25°	294.4	293.8	294.4	299.3	312.3	334.6	358.1	364.3	379.1	393.3	396.4
27.5°	323.4	322.2	314.2	311.1	321.0	348.8	381.6	387.8	405.1	419.3	419.3
30°	390.2	387.8	368.0	342.6	334.6	361.8	403.8	412.5	434.8	447.1	443.4
32.5°	475.0	469.4	444.0	400.7	368.6	379.1	427.3	437.2	465.7	476.2	468.2
35°	567.7	567.1	535.6	479.9	434.1	415.0	457.6	469.4	505.3	514.5	501.6
37.5°	666.1	668.5	647.5	570.8	517.0	473.7	497.8	511.4	555.4	566.5	554.1
40°	775.5	774.9	766.9	676.0	616.6	557.2	556.0	568.3	621.5	638.8	621.5
42.5°	914.1	912.8	883.7	802.1	737.2	666.1	640.7	645.0	704.4	732.8	707.5
45°	1055.1	1046.4	1013.0	942.5	885.0	800.9	752.6	752.6	803.4	842.3	802.7
47.5°	1133.6	1124.9	1111.3	1072.4	1055.1	961.1	889.9	881.3	920.9	960.4	904.8
50°	1236.9	1236.9	1202.9	1188.0	1217.7	1151.5	1041.4	1032.8	1052.0	1083.5	1010.5
52.5°	1318.5	1303.7	1279.5	1292.5	1377.3	1347.0	1193.0	1176.3	1191.1	1199.2	1102.7
55°	1352.5	1338.3	1336.4	1384.1	1515.2	1473.1	1348.2	1333.4	1332.1	1292.5	1183.1
57.5°	1359.3	1347.0	1370.5	1453.9	1649.4	1576.4	1502.8	1491.7	1457.0	1358.1	1265.3
60°	1301.8	1308.0	1364.9	1492.3	1728.5	1666.1	1633.3	1621.5	1541.8	1413.7	1356.9
62.5°	1183.7	1198.5	1304.9	1496.0	1699.5	1702.6	1705.7	1697.6	1607.3	1464.5	1449.0
65°	1043.9	1048.3	1176.3	1444.7	1648.8	1691.4	1758.8	1758.2	1657.4	1521.4	1552.9
67.5°	860.2	867.7	978.4	1271.5	1547.3	1686.5	1828.7	1826.9	1714.3	1586.3	1614.7
70°	640.1	649.4	739.0	988.9	1321.0	1624.6	1920.2	1921.5	1774.3	1635.8	1572.1
71°	499.1	515.8	609.8	839.8	1205.3	1562.2	1928.9	1940.0	1781.1	1629.0	1484.3
72.5°	244.9	264.7	382.8	591.2	992.0	1422.4	1872.0	1893.7	1738.4	1544.2	1269.0
75°	63.7	67.4	114.4	241.8	531.9	942.5	1509.6	1564.6	1421.2	1175.6	775.5
77.5°	40.2	41.4	53.8	94.0	199.1	358.1	886.8	914.1	812.0	595.6	273.3
80°	28.4	29.1	34.0	60.6	116.3	104.5	319.1	330.9	293.8	157.7	48.9
82.5°	17.3	17.3	24.7	39.0	71.7	56.9	84.1	89.7	79.2	43.9	16.1
85°	9.9	10.5	15.5	26.6	34.0	27.8	31.5	33.4	34.0	29.1	6.8
87.5°	8.0	8.7	13.6	22.3	18.6	13.6	13.6	14.2	14.8	17.3	3.1
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°	299.9	299.9	299.9	299.9	299.9	299.9	299.9	299.9	299.9	299.9	299.9
2.5°	298.7	298.7	299.3	298.7	298.7	298.7	299.3	299.3	299.3	300.6	301.2
5°	299.9	299.9	299.9	299.3	298.7	298.7	299.9	300.6	300.6	302.4	302.4
7.5°	303.0	303.0	301.8	300.6	299.3	297.5	298.1	298.7	298.1	298.7	298.7
10°	309.8	309.8	308.0	305.5	301.8	296.2	288.8	279.5	270.9	267.8	266.5
12.5°	321.0	320.4	316.6	312.3	304.3	285.1	257.3	224.5	197.3	189.9	187.4
15°	333.3	332.1	327.8	320.4	298.7	248.0	189.9	147.8	121.8	115.6	114.4
17.5°	346.3	344.5	338.3	323.4	273.3	184.3	122.5	92.8	78.5	77.3	77.9
20°	359.9	357.5	348.8	317.3	220.8	123.1	79.2	71.7	70.5	70.5	71.1
22.5°	375.4	372.3	360.5	295.0	160.8	81.6	68.0	67.4	66.8	66.2	66.2
25°	393.3	389.6	371.7	254.8	110.7	66.8	64.9	63.1	61.8	60.6	60.0
27.5°	415.0	410.0	380.3	205.3	76.1	62.5	61.2	58.1	55.7	53.2	53.2
30°	436.6	430.4	377.9	154.6	61.8	58.1	55.7	51.9	48.2	45.8	45.1
32.5°	459.5	453.3	361.8	103.9	56.3	53.2	50.1	44.5	40.2	37.1	36.5
35°	493.5	488.6	330.2	68.6	50.7	47.0	42.7	37.1	31.5	28.4	27.8
37.5°	544.2	538.0	291.3	52.6	44.5	39.0	35.3	29.1	23.5	20.4	19.8
40°	612.3	593.7	244.9	46.4	39.0	32.2	27.2	21.0	16.7	14.8	14.8
42.5°	691.4	647.5	194.8	42.1	34.6	26.6	19.8	14.2	11.8	11.1	11.1
45°	775.5	697.6	144.7	39.0	30.3	21.0	14.2	9.9	8.7	8.0	8.0
47.5°	862.1	738.4	100.8	35.3	25.4	16.1	9.9	7.4	6.2	5.6	5.6
50°	943.1	765.0	71.1	31.5	21.6	11.8	7.4	5.6	4.3	4.3	4.3
52.5°	999.4	762.5	51.3	27.2	16.7	8.0	4.9	3.7	3.7	3.7	3.7
55°	1048.9	753.3	40.2	23.5	13.0	5.6	3.7	3.1	3.1	2.5	2.5
57.5°	1090.9	738.4	34.0	19.2	9.3	4.3	2.5	2.5	1.9	1.9	1.9
60°	1126.8	719.9	28.4	16.1	6.2	3.1	1.9	1.2	1.2	0.6	1.2
62.5°	1175.6	708.1	24.7	12.4	4.3	1.9	1.2	0.6	0.6	0.0	0.0
65°	1211.5	685.8	21.0	8.7	2.5	1.2	0.6	0.6	0.0	0.0	0.0
67.5°	1212.8	645.6	15.5	4.9	1.9	1.2	0.6	0.0	0.0	0.0	0.0
70°	1115.0	550.4	9.9	2.5	1.2	0.6	0.6	0.0	0.0	0.0	0.0
71°	1025.4	487.3	8.0	1.9	1.2	0.6	0.0	0.0	0.0	0.0	0.0
72.5°	844.8	358.1	6.2	1.9	0.6	0.6	0.0	0.0	0.0	0.0	0.0
75°	465.7	129.9	3.1	1.2	0.6	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	149.0	39.6	1.9	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	25.4	6.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	8.7	2.5	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	2.5	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	1.2	0.6	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)