

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: P234754

Luminaire Tested: **ARCH-AF16-40-D-U-T4W-8027-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P234754  
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-AF16-40-D-U-T4W-8027-HSS  
Description: ARCHEON ROADWAY AND AREA LUMINAIRE  
(1) 80 CRI, 2700K, 740mA LIGHT ENGINE WITH 16 LEDS AND TYPE IV WIDE OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2614 lumens  
Efficiency: N/A  
Efficacy: 62.2 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.75' x H: 0')  
IES Classification: Type IV - Medium - Non-Cutoff  
BUG Rating: B0 - U0 - G1

Input Watts (W): 42  
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

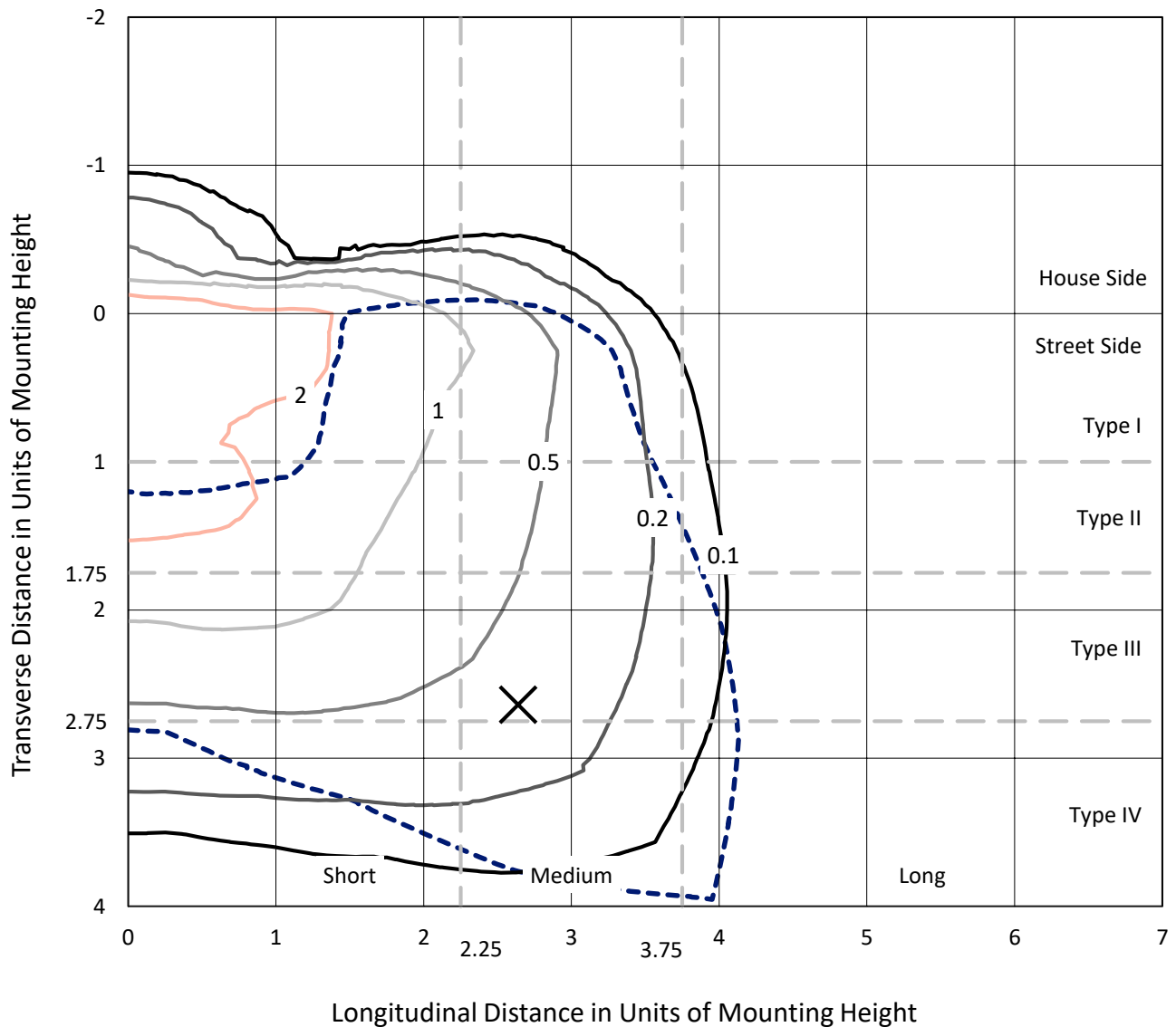


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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

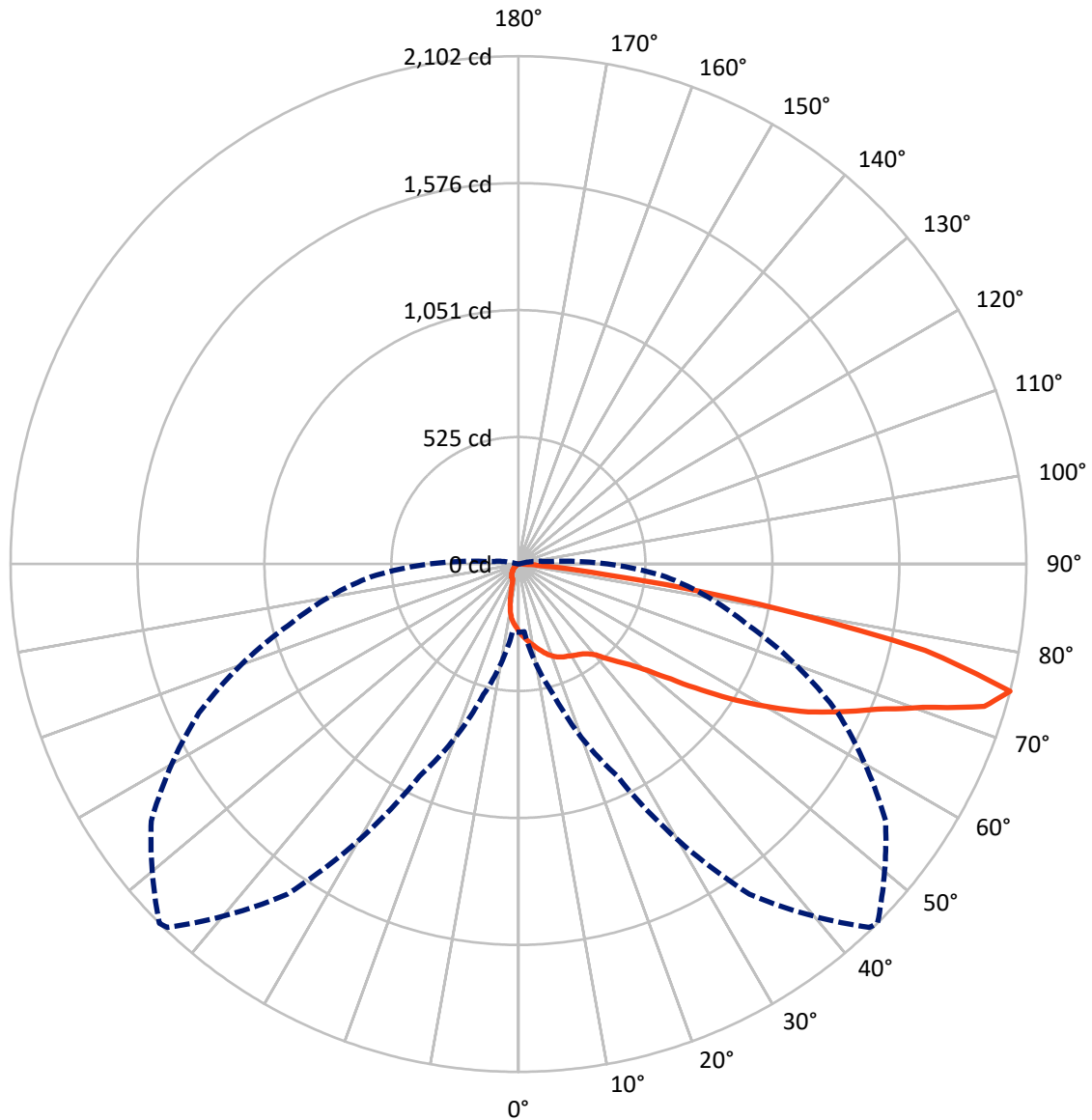


Based on 10 foot mounting height. Maximum calculated value = 3.7 fc  
 Type IV - Medium - Non-Cutoff

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### Luminous Intensity Polar Plot



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

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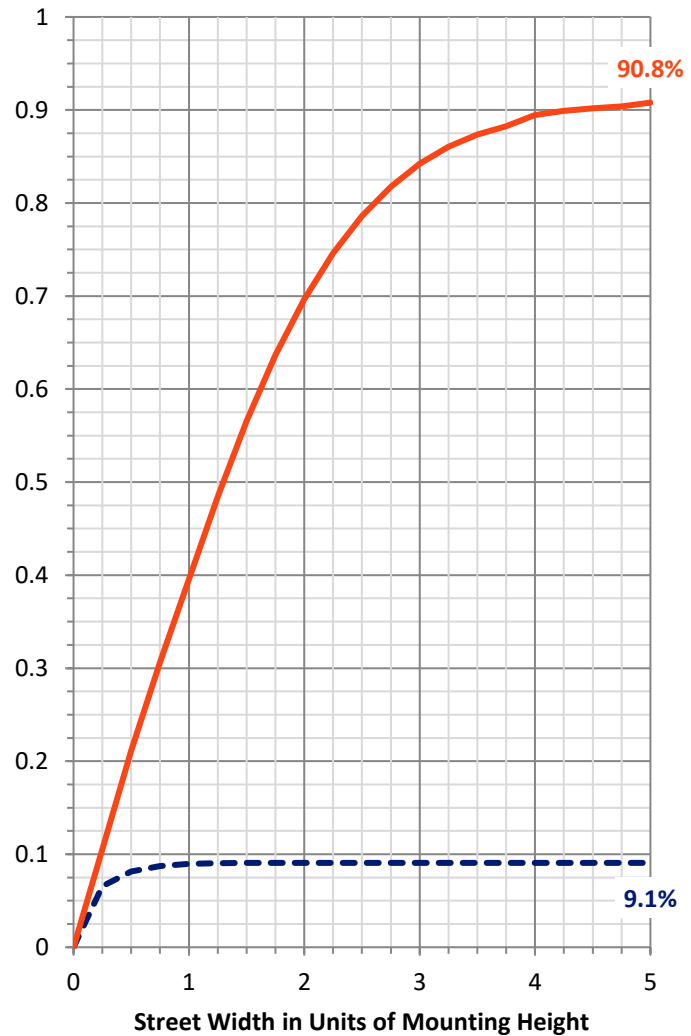
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	239.1	0.0	239.1
	% Fixture	9.1	0.0	9.1
<b>Street Side</b>	Lumens	2374.9	0.0	2374.9
	% Fixture	90.9	0.0	90.9
<b>Total</b>	Lumens	2614.0	0.0	2614.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	26.4	1.0
10°-20°	74.8	2.9
20°-30°	123.8	4.7
30°-40°	179.2	6.9
40°-50°	293.4	11.2
50°-60°	522.8	20.0
60°-70°	768.5	29.4
70°-80°	579.8	22.2
80°-90°	45.5	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°	2614.0	100.0
0°-180°	2614.0	100.0



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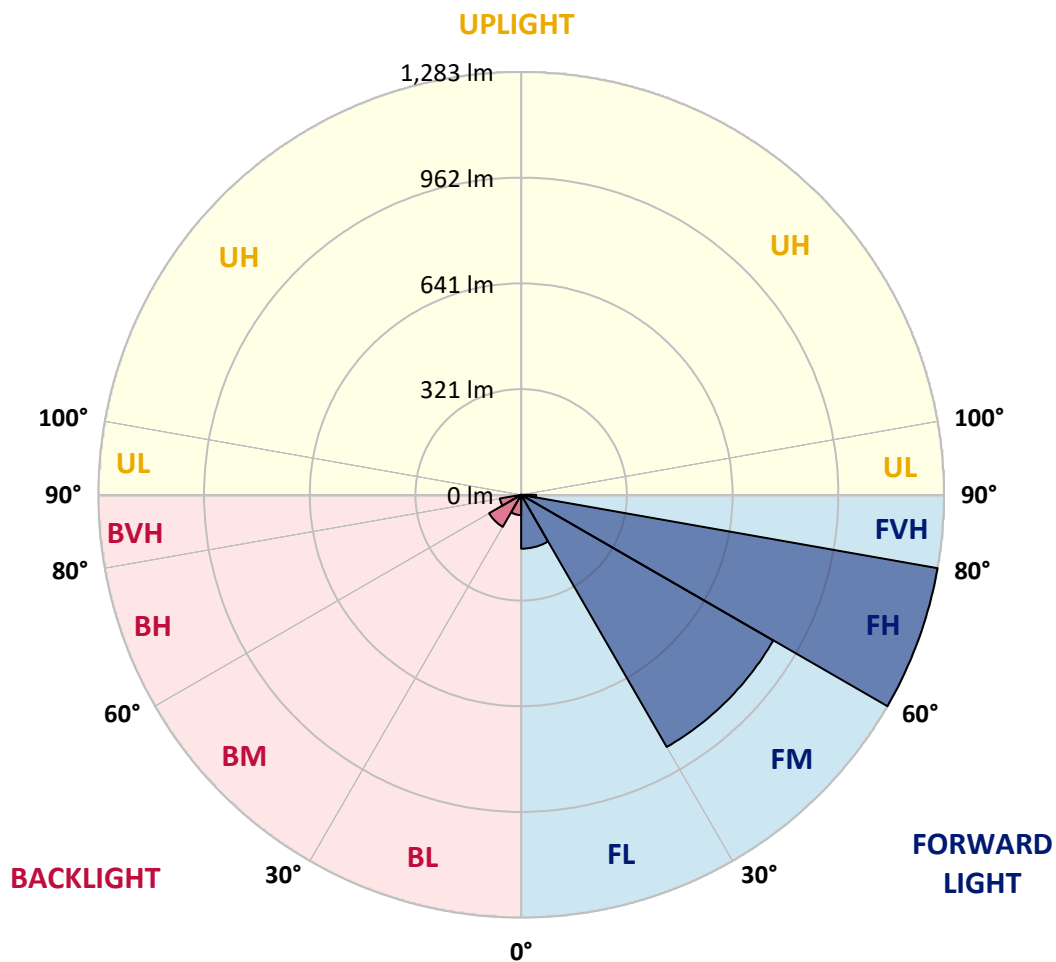
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	163.5	6.3			
FM	(30°-60°)	883.3	33.8			
FH	(60°-80°)	1282.8	49.1			G1/1800
FVH	(80°-90°)	45.4	1.7			G1/100
BL	(0°-30°)	61.4	2.4	B0/110		
BM	(30°-60°)	112.0	4.3	B0/220		
BH	(60°-80°)	65.5	2.5	B0/110		G0/110
BVH	(80°-90°)	0.1	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 IV Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	279.6	279.6	279.6	279.6	279.6	279.6	279.6	279.6	279.6	279.6	279.6
2.5°	303.7	303.7	303.1	302.5	299.4	296.3	295.7	293.8	288.2	284.5	280.8
5°	329.1	329.7	328.4	325.4	318.5	311.7	311.1	306.2	295.7	288.2	280.2
7.5°	353.2	354.4	351.3	345.8	337.7	327.8	327.2	317.9	304.3	293.8	282.1
10°	373.6	373.6	369.3	362.5	353.8	343.3	342.1	331.5	316.1	303.1	287.6
12.5°	395.9	395.2	389.1	379.8	369.9	360.0	359.4	346.4	331.5	314.8	295.7
15°	416.3	415.0	407.0	398.3	387.8	377.3	376.7	363.7	348.2	328.4	307.4
17.5°	427.4	426.8	419.4	410.7	402.1	394.0	393.4	379.8	363.1	342.7	319.2
20°	429.3	429.9	423.7	416.3	411.3	407.0	407.0	394.6	376.7	355.0	331.5
22.5°	429.9	431.7	427.4	417.5	416.3	416.9	418.1	408.2	389.7	369.3	344.5
25°	434.2	436.7	433.6	421.8	420.6	424.9	426.2	421.8	405.1	384.7	359.4
27.5°	442.9	445.4	442.9	428.0	426.2	430.5	431.7	434.2	421.8	399.6	374.8
30°	460.2	460.8	455.2	436.7	433.0	438.5	440.4	447.2	437.3	413.8	389.7
32.5°	490.5	484.3	467.6	442.9	439.8	446.0	447.8	455.2	451.5	427.4	405.1
35°	552.4	520.2	481.8	451.5	448.4	454.6	457.1	467.6	469.5	446.6	424.3
37.5°	551.7	522.7	515.2	468.2	463.9	468.2	471.3	484.3	491.7	471.9	452.2
40°	590.7	578.3	578.3	499.8	485.6	491.7	494.8	507.8	520.8	505.3	484.9
42.5°	713.2	705.1	696.5	560.4	515.9	533.2	535.0	543.1	558.5	553.6	529.5
45°	849.9	842.5	809.1	663.1	567.8	570.9	575.2	588.2	610.5	619.8	591.3
47.5°	956.9	949.5	921.0	786.8	648.9	621.6	621.6	647.0	681.6	705.1	677.9
50°	1042.9	1034.2	1016.9	918.5	781.8	694.6	690.9	720.6	771.9	808.4	789.9
52.5°	1126.4	1101.0	1090.5	1054.6	932.1	800.4	790.5	811.5	882.7	927.8	912.4
55°	1182.0	1178.3	1167.2	1179.6	1089.9	929.1	920.4	924.7	1013.8	1044.1	1024.9
57.5°	1234.0	1233.4	1258.1	1315.6	1261.8	1076.3	1062.7	1055.9	1140.6	1133.2	1149.9
60°	1298.3	1287.2	1344.7	1427.0	1419.6	1219.8	1204.3	1190.7	1237.7	1216.7	1299.6
62.5°	1301.4	1298.3	1415.2	1533.4	1576.0	1365.7	1347.8	1298.9	1322.4	1298.3	1442.4
65°	1183.3	1198.7	1444.9	1589.7	1707.2	1493.8	1472.1	1396.1	1397.9	1381.8	1610.7
67.5°	1156.7	1164.7	1363.3	1650.3	1801.8	1623.1	1602.6	1508.0	1485.7	1487.0	1710.3
70°	1090.5	1102.9	1261.8	1645.9	1876.7	1795.6	1775.2	1672.5	1618.7	1558.7	1633.6
72.5°	833.2	854.2	1063.3	1443.1	1856.2	2021.4	2015.8	1881.0	1671.9	1431.3	1235.8
75°	282.1	281.4	558.5	969.3	1667.6	2090.7	2101.8	1855.0	1458.5	987.2	613.6
77.5°	60.6	61.2	115.0	392.8	1107.8	1678.7	1721.4	1399.1	940.8	439.8	140.4
80°	29.7	30.3	47.6	103.9	442.9	941.4	1008.2	719.4	347.6	87.8	23.5
82.5°	14.8	15.5	24.7	55.1	163.9	334.6	357.5	264.7	99.6	49.5	11.8
85°	5.6	5.6	12.4	32.8	74.8	78.6	96.5	76.7	60.0	40.2	3.1
87.5°	1.2	1.2	6.8	16.1	33.4	24.7	24.7	23.5	36.5	27.2	1.2
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°	279.6	279.6	279.6	279.6	279.6	279.6	279.6	279.6	279.6	279.6	279.6
2.5°	279.0	276.5	272.2	267.8	264.7	261.0	259.2	257.3	256.7	256.1	257.3
5°	275.9	272.2	264.1	257.3	251.1	246.2	242.5	238.8	236.9	235.7	236.3
7.5°	275.9	270.3	258.6	248.0	238.1	227.6	217.1	209.1	202.9	199.2	199.8
10°	279.0	271.5	256.1	241.9	223.3	201.0	178.1	160.8	149.1	142.3	142.3
12.5°	285.8	275.9	256.7	234.4	202.9	163.9	129.3	108.2	99.6	94.6	95.3
15°	295.0	283.3	259.8	224.5	174.4	121.9	90.3	76.7	76.7	77.9	78.6
17.5°	305.6	292.6	262.3	209.7	137.9	87.2	71.1	69.9	71.8	74.8	74.8
20°	316.1	301.8	263.5	186.2	103.3	69.3	67.4	67.4	68.7	71.8	72.4
22.5°	329.1	313.6	262.3	157.1	77.3	65.6	64.9	64.9	64.9	68.7	68.7
25°	342.7	327.2	257.3	126.2	65.6	63.1	62.5	61.9	61.9	64.9	65.6
27.5°	358.1	341.4	245.6	96.5	61.9	60.6	60.0	58.8	58.8	61.2	61.2
30°	373.6	357.5	227.6	73.0	58.8	58.1	56.9	55.7	54.4	56.9	56.9
32.5°	390.3	374.2	204.1	58.1	54.4	54.4	53.8	52.0	50.7	52.0	52.6
35°	412.6	393.4	177.5	50.7	48.9	48.9	48.9	48.2	45.8	47.0	47.0
37.5°	442.3	420.0	146.6	47.0	44.5	43.3	43.3	43.3	41.4	42.1	42.1
40°	480.0	450.9	116.9	43.9	41.4	38.3	37.1	37.7	36.5	36.5	35.9
42.5°	531.3	484.3	87.8	41.4	39.0	34.6	32.2	31.5	30.3	29.7	29.7
45°	604.9	525.1	63.1	39.0	37.1	30.3	27.8	26.0	22.9	21.0	21.0
47.5°	700.2	571.5	47.0	36.5	35.3	26.6	23.5	19.8	15.5	14.2	14.2
50°	816.5	623.5	39.6	32.8	32.2	23.5	18.6	13.0	8.7	7.4	8.0
52.5°	929.7	672.4	35.3	29.1	28.5	20.4	13.6	6.8	3.7	3.7	3.7
55°	1024.9	707.0	32.2	26.0	24.7	16.1	7.4	3.1	1.9	1.9	1.9
57.5°	1110.9	726.8	29.1	22.9	19.8	11.1	3.1	1.2	1.2	0.6	0.6
60°	1189.5	738.5	25.4	19.8	15.5	6.2	1.2	0.6	0.6	0.0	0.0
62.5°	1266.8	747.2	21.6	16.1	11.8	2.5	0.6	0.6	0.0	0.0	0.0
65°	1325.5	744.1	17.3	13.0	7.4	1.2	0.6	0.0	0.0	0.0	0.0
67.5°	1323.7	702.0	13.0	9.9	3.7	0.6	0.0	0.0	0.0	0.0	0.0
70°	1183.9	591.3	8.7	6.2	1.2	0.6	0.0	0.0	0.0	0.0	0.0
72.5°	840.0	379.2	5.6	3.7	0.6	0.0	0.0	0.0	0.0	0.0	0.0
75°	369.9	115.0	3.1	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	72.4	26.6	1.9	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	17.3	3.1	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	7.4	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	1.9	0.6	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)