

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: P234763

Luminaire Tested: **ARCH-AF24-80-D-U-T4W-8027-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P234763  
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-AF24-80-D-U-T4W-8027-HSS  
Description: ARCHEON ROADWAY AND AREA LUMINAIRE  
(1) 80 CRI, 2700K, 1050mA LIGHT ENGINE WITH 24 LEDS AND TYPE IV WIDE OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5012 lumens  
Efficiency: N/A  
Efficacy: 60.4 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.75' x H: 0')  
IES Classification: Type IV - Medium - Non-Cutoff  
BUG Rating: B1 - U0 - G2

Input Watts (W): 83  
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

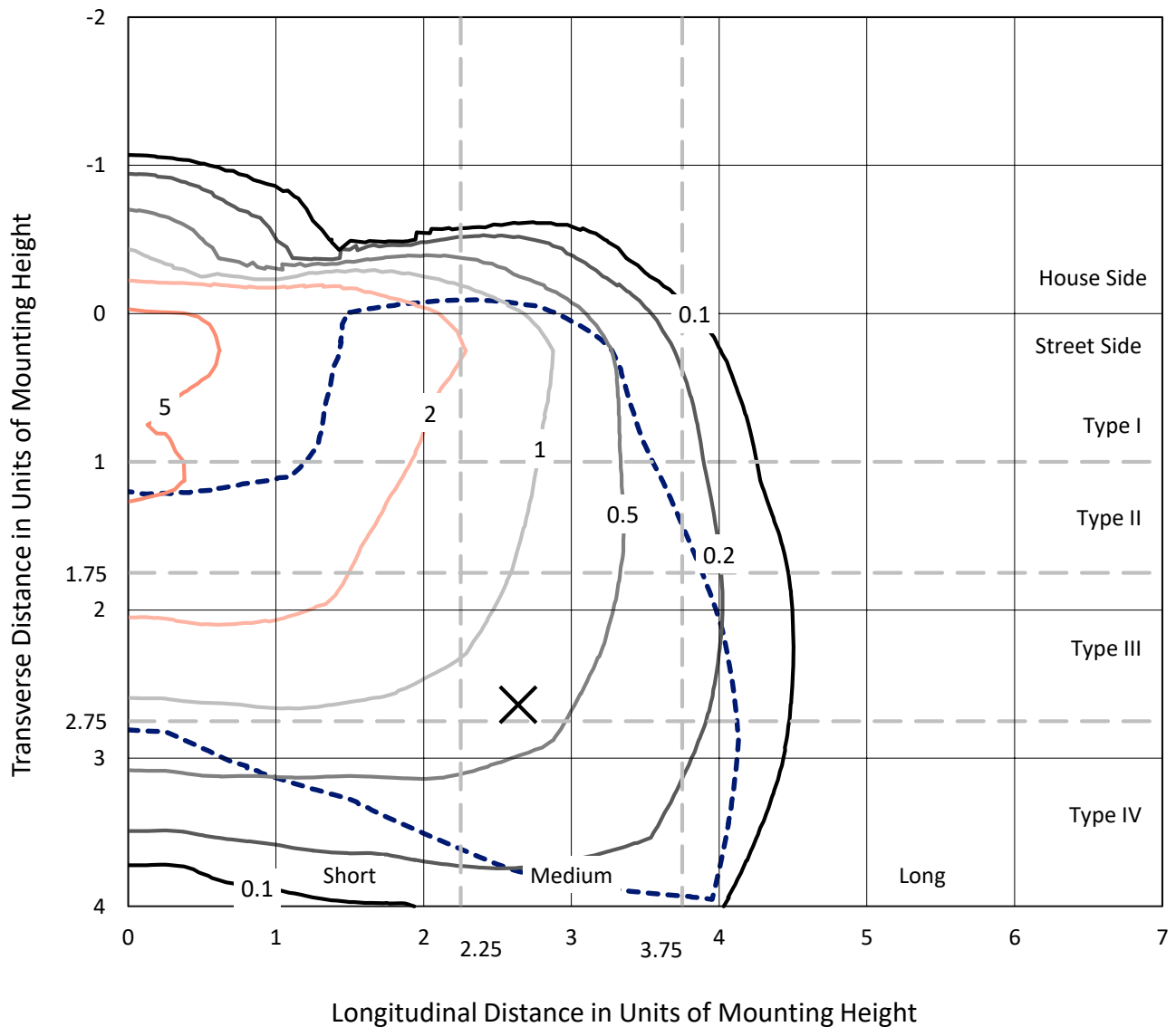


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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

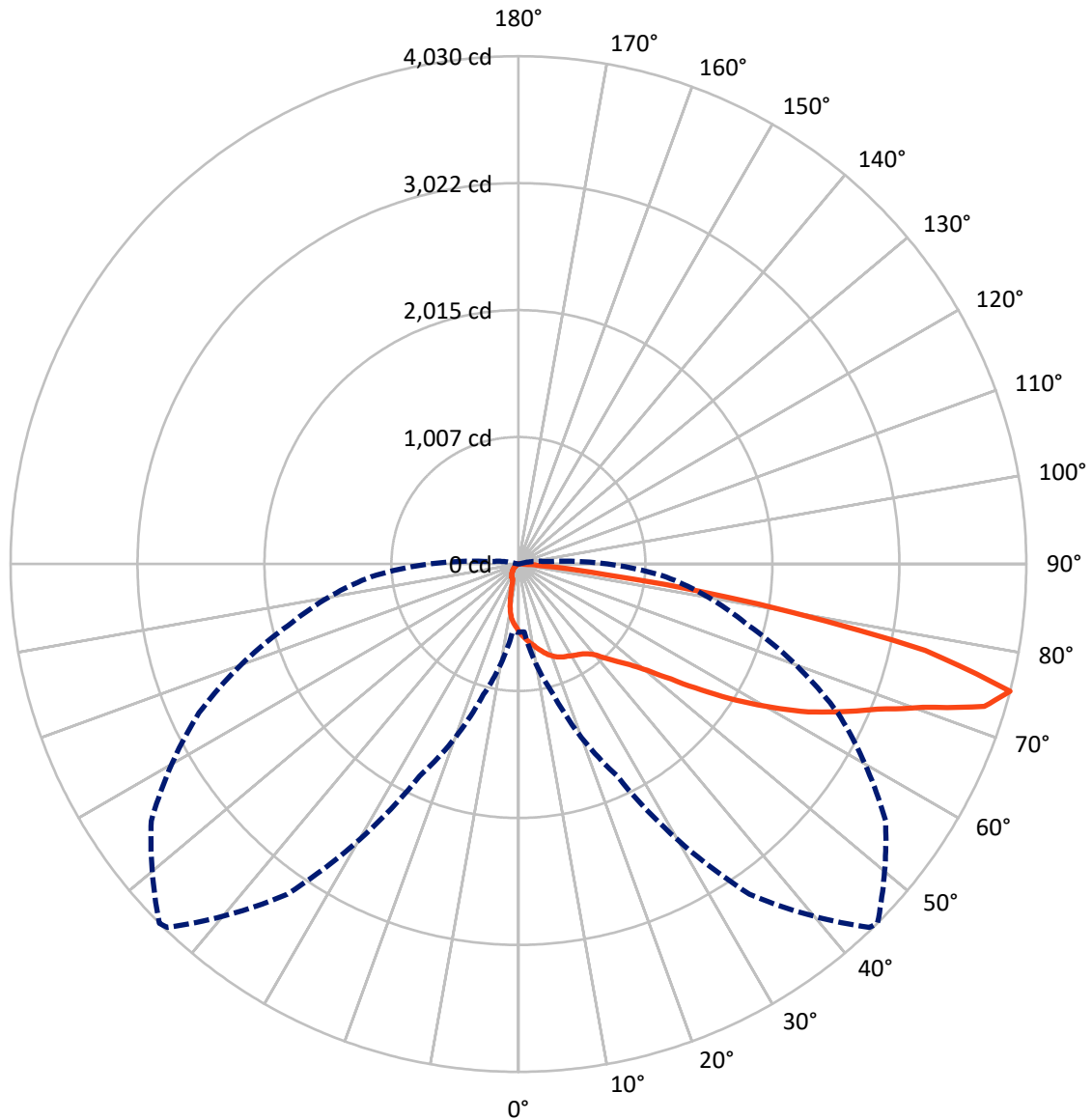


Based on 10 foot mounting height. Maximum calculated value = 7.2 fc  
 Type IV - Medium - Non-Cutoff

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### Luminous Intensity Polar Plot



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

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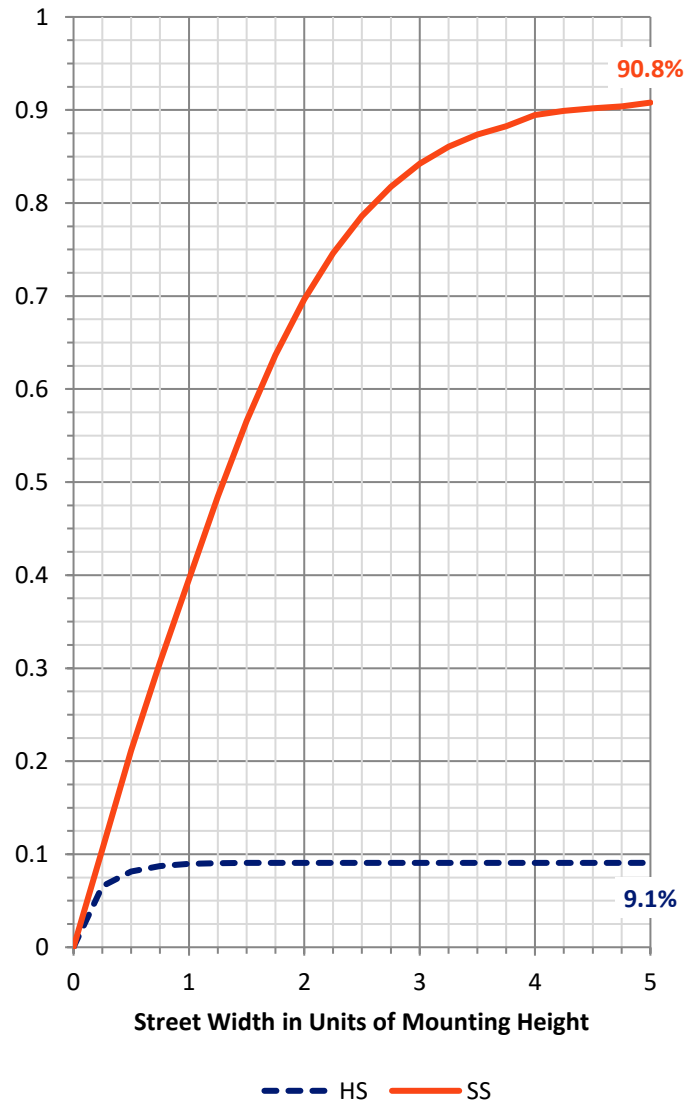
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	458.5	0.0	458.5
	% Fixture	9.1	0.0	9.1
<b>Street Side</b>	Lumens	4553.6	0.0	4553.6
	% Fixture	90.9	0.0	90.9
<b>Total</b>	Lumens	5012.0	0.0	5012.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	50.6	1.0
10°-20°	143.3	2.9
20°-30°	237.4	4.7
30°-40°	343.5	6.9
40°-50°	562.5	11.2
50°-60°	1002.3	20.0
60°-70°	1473.5	29.4
70°-80°	1111.6	22.2
80°-90°	87.2	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°	5012.0	100.0
0°-180°	5012.0	100.0



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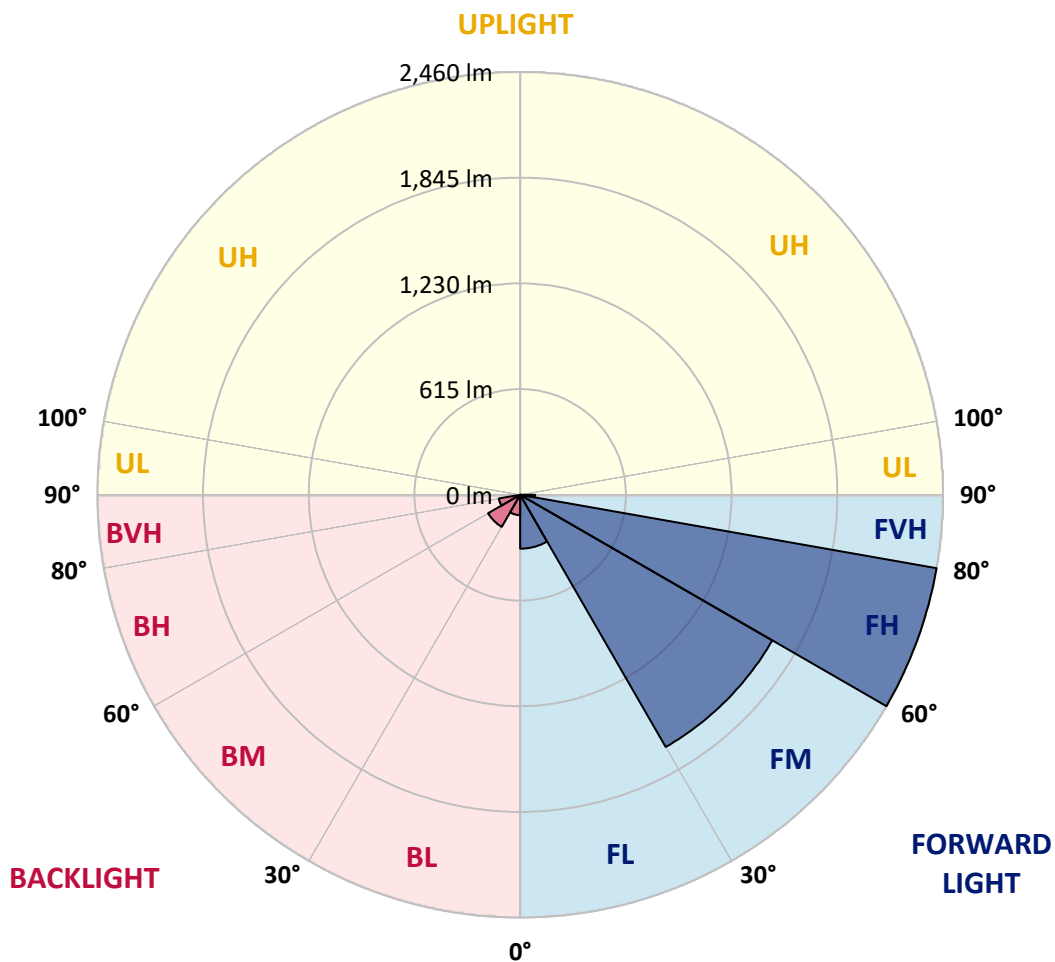
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	313.5	6.3			
FM	(30°-60°)	1693.5	33.8			
FH	(60°-80°)	2459.6	49.1			G2/5000
FVH	(80°-90°)	87.0	1.7			G1/100
BL	(0°-30°)	117.8	2.4	B1/500		
BM	(30°-60°)	214.8	4.3	B0/220		
BH	(60°-80°)	125.6	2.5	B1/500		G1/500
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: B1-U0-G2**

Type IV Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	536.1	536.1	536.1	536.1	536.1	536.1	536.1	536.1	536.1	536.1	536.1
2.5°	582.3	582.3	581.1	579.9	574.0	568.1	566.9	563.3	552.7	545.5	538.4
5°	630.9	632.1	629.8	623.8	610.8	597.7	596.5	587.1	566.9	552.7	537.2
7.5°	677.2	679.6	673.6	663.0	647.5	628.6	627.4	609.6	583.5	563.3	540.8
10°	716.3	716.3	708.0	695.0	678.4	658.2	655.8	635.7	606.0	581.1	551.5
12.5°	759.0	757.8	746.0	728.2	709.2	690.2	689.1	664.1	635.7	603.7	566.9
15°	798.2	795.8	780.4	763.8	743.6	723.4	722.3	697.4	667.7	629.8	589.4
17.5°	819.5	818.3	804.1	787.5	770.9	755.5	754.3	728.2	696.2	657.0	612.0
20°	823.1	824.3	812.4	798.2	788.7	780.4	780.4	756.7	722.3	680.7	635.7
22.5°	824.3	827.8	819.5	800.5	798.2	799.3	801.7	782.7	747.2	708.0	660.6
25°	832.6	837.3	831.4	808.8	806.5	814.8	817.1	808.8	776.8	737.7	689.1
27.5°	849.2	853.9	849.2	820.7	817.1	825.4	827.8	832.6	808.8	766.1	718.7
30°	882.4	883.6	872.9	837.3	830.2	840.9	844.4	857.5	838.5	793.4	747.2
32.5°	940.5	928.6	896.6	849.2	843.2	855.1	858.6	872.9	865.8	819.5	776.8
35°	1059.1	997.4	923.9	865.8	859.8	871.7	876.4	896.6	900.2	856.3	813.6
37.5°	1057.9	1002.1	987.9	897.8	889.5	897.8	903.7	928.6	942.8	904.9	866.9
40°	1132.6	1108.9	1108.9	958.3	931.0	942.8	948.8	973.7	998.6	968.9	929.8
42.5°	1367.4	1352.0	1335.4	1074.5	989.1	1022.3	1025.9	1041.3	1070.9	1061.4	1015.2
45°	1629.5	1615.3	1551.3	1271.4	1088.7	1094.7	1103.0	1127.9	1170.6	1188.3	1133.8
47.5°	1834.7	1820.5	1765.9	1508.6	1244.1	1191.9	1191.9	1240.5	1306.9	1352.0	1299.8
50°	1999.6	1982.9	1949.7	1761.2	1499.1	1331.8	1324.7	1381.7	1480.1	1550.1	1514.5
52.5°	2159.7	2111.0	2090.9	2022.1	1787.3	1534.7	1515.7	1556.0	1692.4	1779.0	1749.3
55°	2266.4	2259.3	2237.9	2261.7	2089.7	1781.3	1764.7	1773.0	1943.8	2001.9	1965.2
57.5°	2366.0	2364.8	2412.3	2522.6	2419.4	2063.6	2037.5	2024.5	2186.9	2172.7	2204.7
60°	2489.4	2468.0	2578.3	2736.0	2721.8	2338.7	2309.1	2283.0	2373.1	2332.8	2491.7
62.5°	2495.3	2489.4	2713.5	2940.0	3021.9	2618.6	2584.2	2490.5	2535.6	2489.4	2765.7
65°	2268.8	2298.4	2770.4	3048.0	3273.3	2864.1	2822.6	2676.7	2680.3	2649.5	3088.3
67.5°	2217.8	2233.2	2613.9	3164.2	3454.7	3112.0	3072.9	2891.4	2848.7	2851.1	3279.2
70°	2090.9	2114.6	2419.4	3155.9	3598.2	3442.9	3403.7	3206.9	3103.7	2988.7	3132.2
72.5°	1597.5	1637.8	2038.7	2766.9	3559.1	3875.8	3865.1	3606.5	3205.7	2744.3	2369.6
75°	540.8	539.6	1070.9	1858.4	3197.4	4008.6	4029.9	3556.7	2796.5	1892.8	1176.5
77.5°	116.2	117.4	220.6	753.1	2124.1	3218.7	3300.6	2682.7	1803.9	843.2	269.2
80°	56.9	58.1	91.3	199.2	849.2	1805.1	1933.1	1379.3	666.5	168.4	45.1
82.5°	28.5	29.6	47.4	105.6	314.3	641.6	685.5	507.6	190.9	94.9	22.5
85°	10.7	10.7	23.7	62.9	143.5	150.6	185.0	147.1	115.0	77.1	5.9
87.5°	2.4	2.4	13.0	30.8	64.0	47.4	47.4	45.1	70.0	52.2	2.4
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°	536.1	536.1	536.1	536.1	536.1	536.1	536.1	536.1	536.1	536.1	536.1
2.5°	534.9	530.1	521.8	513.5	507.6	500.5	496.9	493.4	492.2	491.0	493.4
5°	528.9	521.8	506.4	493.4	481.5	472.0	464.9	457.8	454.2	451.9	453.0
7.5°	528.9	518.3	495.7	475.6	456.6	436.4	416.3	400.9	389.0	381.9	383.1
10°	534.9	520.6	491.0	463.7	428.1	385.4	341.6	308.4	285.8	272.8	272.8
12.5°	547.9	528.9	492.2	449.5	389.0	314.3	247.9	207.5	190.9	181.5	182.6
15°	565.7	543.2	498.1	430.5	334.4	233.6	173.2	147.1	147.1	149.4	150.6
17.5°	585.9	561.0	502.9	402.0	264.5	167.2	136.4	134.0	137.6	143.5	143.5
20°	606.0	578.8	505.2	357.0	198.1	132.8	129.3	129.3	131.6	137.6	138.8
22.5°	630.9	601.3	502.9	301.2	148.2	125.7	124.5	124.5	124.5	131.6	131.6
25°	657.0	627.4	493.4	241.9	125.7	121.0	119.8	118.6	118.6	124.5	125.7
27.5°	686.7	654.7	470.8	185.0	118.6	116.2	115.0	112.7	112.7	117.4	117.4
30°	716.3	685.5	436.4	139.9	112.7	111.5	109.1	106.7	104.4	109.1	109.1
32.5°	748.4	717.5	391.4	111.5	104.4	104.4	103.2	99.6	97.2	99.6	100.8
35°	791.0	754.3	340.4	97.2	93.7	93.7	93.7	92.5	87.8	90.1	90.1
37.5°	848.0	805.3	281.1	90.1	85.4	83.0	83.0	83.0	79.5	80.6	80.6
40°	920.3	864.6	224.1	84.2	79.5	73.5	71.2	72.3	70.0	70.0	68.8
42.5°	1018.8	928.6	168.4	79.5	74.7	66.4	61.7	60.5	58.1	56.9	56.9
45°	1159.9	1006.9	121.0	74.7	71.2	58.1	53.4	49.8	43.9	40.3	40.3
47.5°	1342.5	1095.8	90.1	70.0	67.6	51.0	45.1	38.0	29.6	27.3	27.3
50°	1565.5	1195.5	75.9	62.9	61.7	45.1	35.6	24.9	16.6	14.2	15.4
52.5°	1782.5	1289.2	67.6	55.7	54.6	39.1	26.1	13.0	7.1	7.1	7.1
55°	1965.2	1355.6	61.7	49.8	47.4	30.8	14.2	5.9	3.6	3.6	3.6
57.5°	2130.0	1393.5	55.7	43.9	38.0	21.3	5.9	2.4	2.4	1.2	1.2
60°	2280.6	1416.1	48.6	38.0	29.6	11.9	2.4	1.2	1.2	0.0	0.0
62.5°	2428.9	1432.7	41.5	30.8	22.5	4.7	1.2	1.2	0.0	0.0	0.0
65°	2541.5	1426.7	33.2	24.9	14.2	2.4	1.2	0.0	0.0	0.0	0.0
67.5°	2538.0	1346.1	24.9	19.0	7.1	1.2	0.0	0.0	0.0	0.0	0.0
70°	2270.0	1133.8	16.6	11.9	2.4	1.2	0.0	0.0	0.0	0.0	0.0
72.5°	1610.6	727.0	10.7	7.1	1.2	0.0	0.0	0.0	0.0	0.0	0.0
75°	709.2	220.6	5.9	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	138.8	51.0	3.6	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	33.2	5.9	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	14.2	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	3.6	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	2.4	1.2	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)