

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: P214655

Luminaire Tested: **ARCH-AF16-50-D-U-T2R-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P214655  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29623)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: ARCH-AF16-50-D-U-T2R-HSS  
Description: ARCHEON ROADWAY AND AREA LUMINAIRE  
(1) 70 CRI, 4000K, 980mA LIGHT ENGINE WITH 16 LEDS AND TYPE II ROADWAY OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4738.2 lumens  
Efficiency: N/A  
Efficacy: 89.4 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.75' x H: 0')  
IES Classification: Type II - Medium - Full Cutoff  
BUG Rating: B0 - U0 - G1

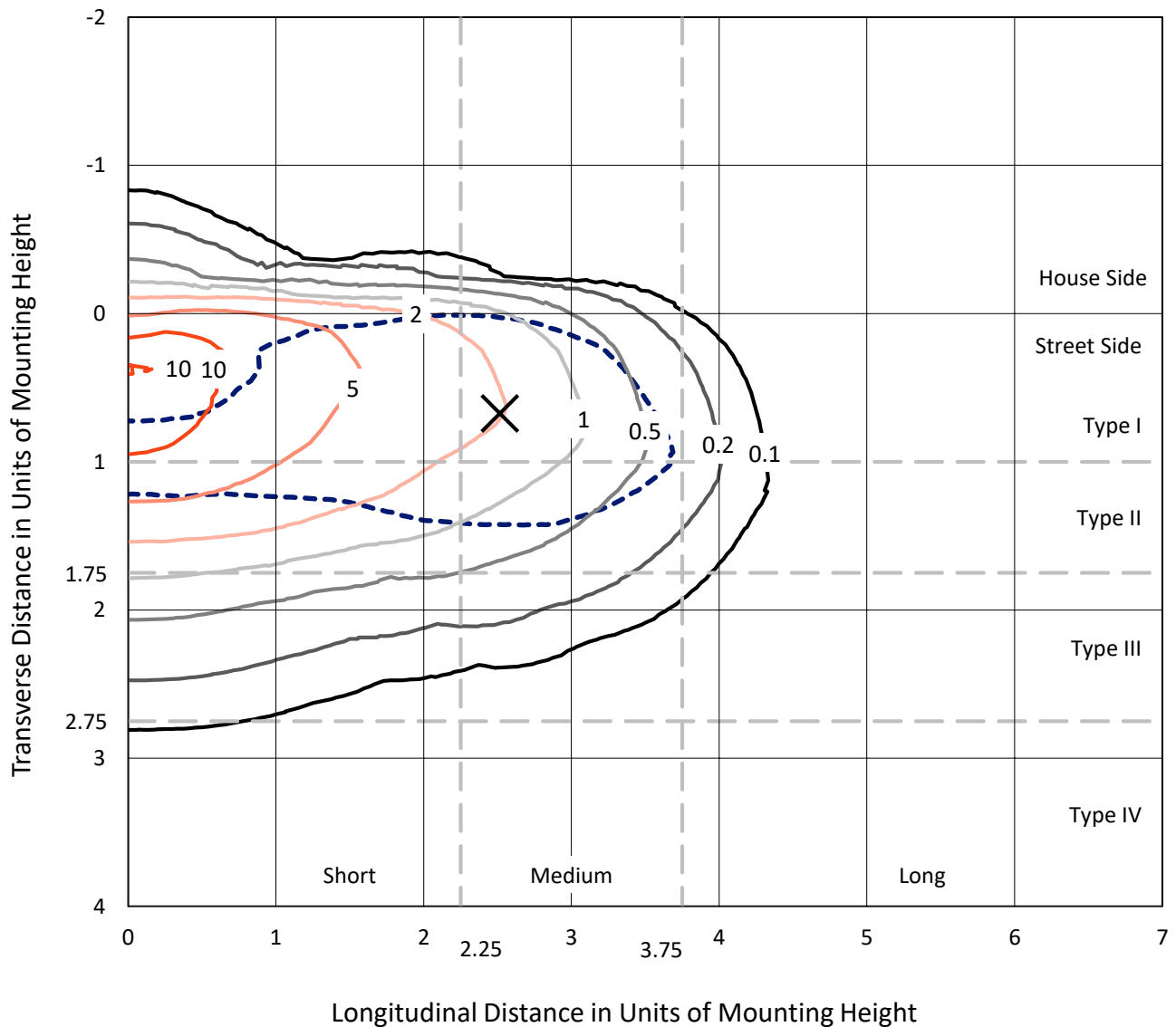
Input Watts (W): 53  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

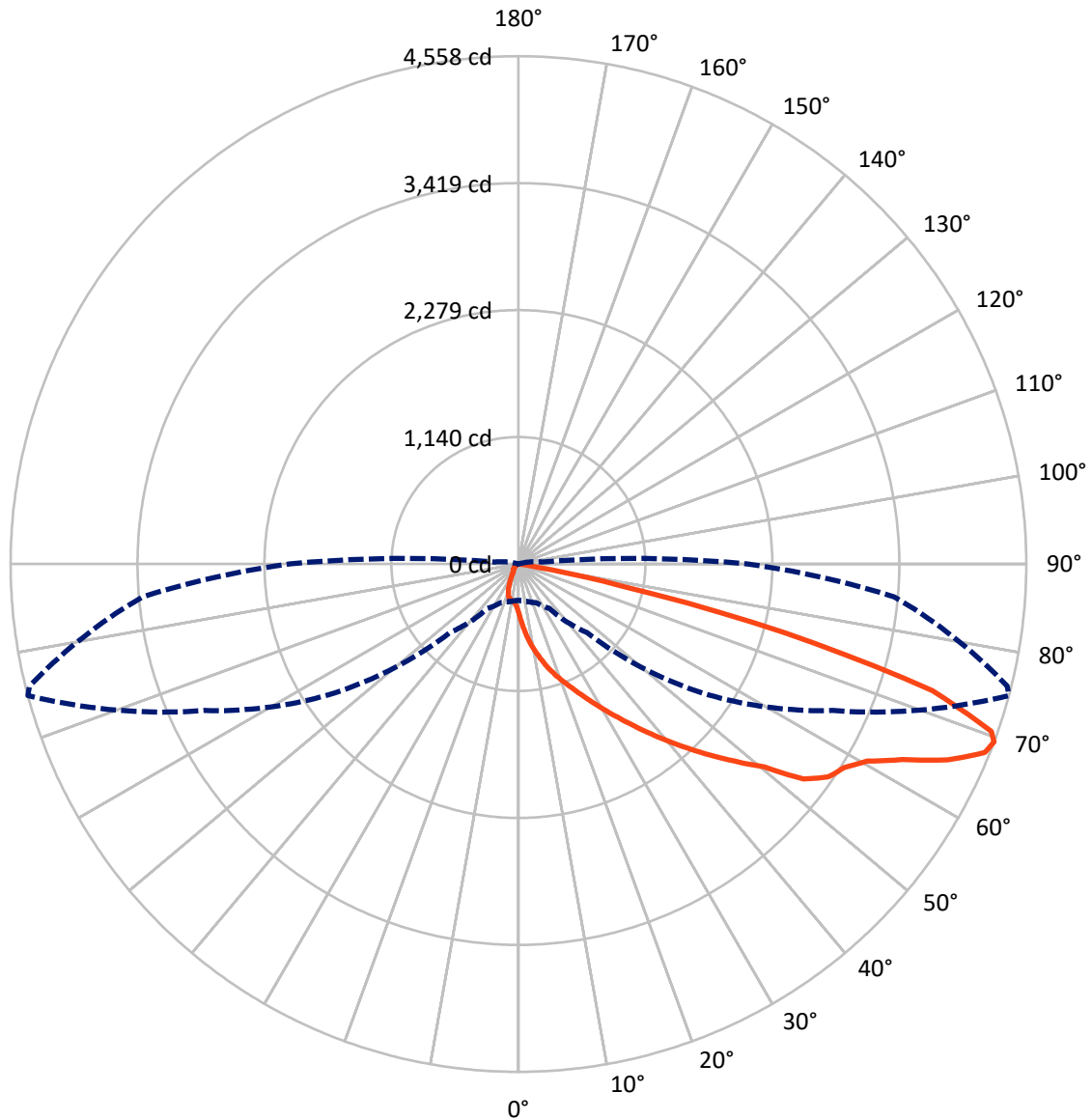
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 12.1 fc  
 Type II - Medium - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 75-Deg Lateral      - - - Horizontal Cone Through 69-Deg Vertical

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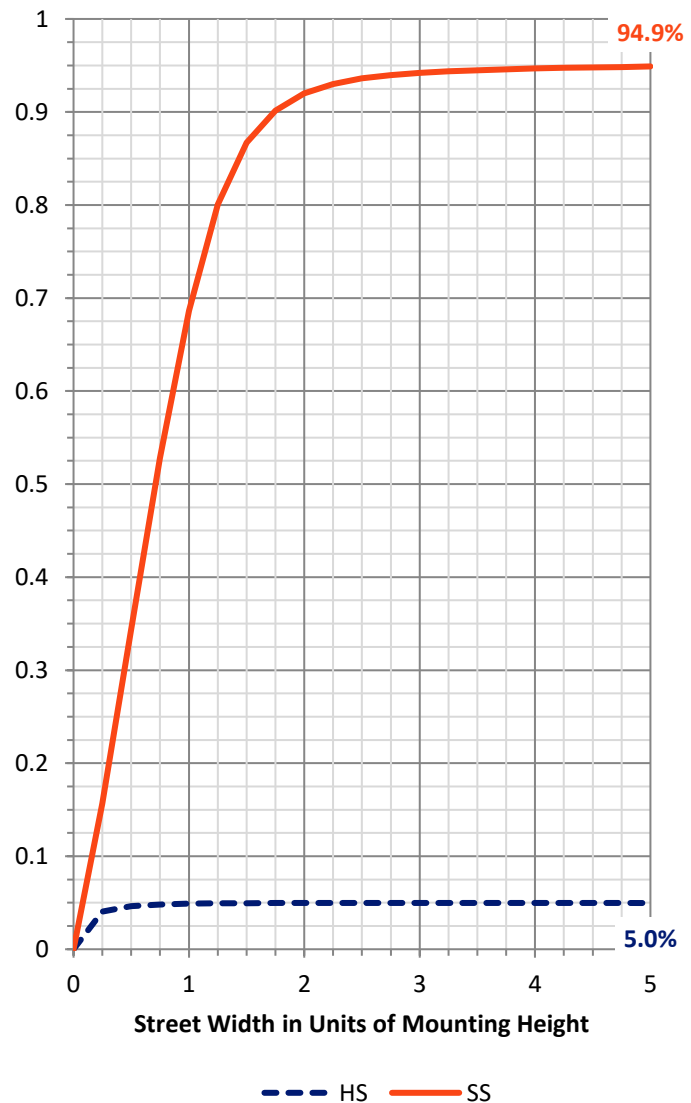
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	236.4	0.0	236.4
	% Fixture	5.0	0.0	5.0
<b>Street Side</b>	Lumens	4501.8	0.0	4501.8
	% Fixture	95.0	0.0	95.0
<b>Total</b>	Lumens	4738.2	0.0	4738.2
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	51.4	1.1
10°-20°	183.8	3.9
20°-30°	350.9	7.4
30°-40°	629.4	13.3
40°-50°	964.3	20.4
50°-60°	1120.8	23.7
60°-70°	992.5	20.9
70°-80°	428.1	9.0
80°-90°	17.1	0.4
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°	4738.2	100.0
0°-180°	4738.2	100.0

**Coefficient of Utilization**



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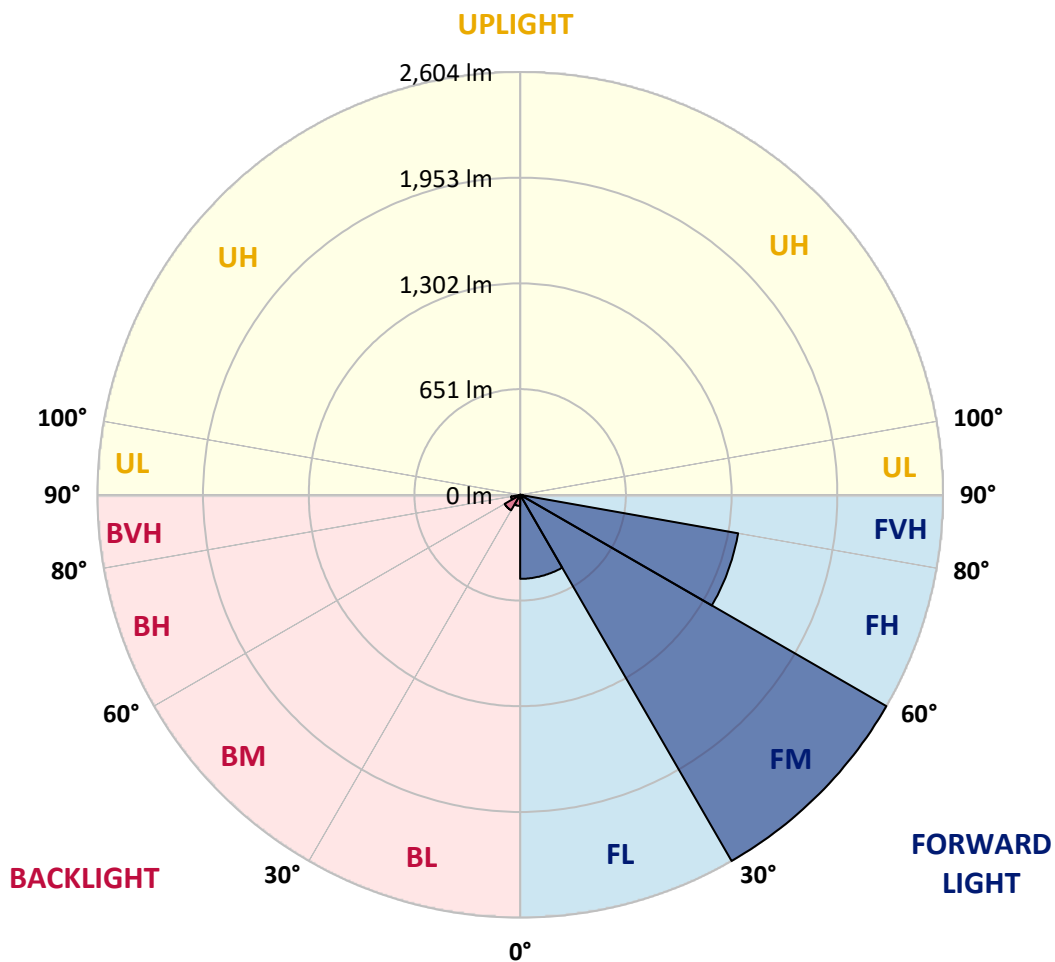
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	517.4	10.9			
FM (30°-60°)	2604.3	55.0			
FH (60°-80°)	1363.3	28.8			G1/1800
FVH (80°-90°)	16.9	0.4			G1/100
BL (0°-30°)	68.7	1.4	B0/110		
BM (30°-60°)	110.2	2.3	B0/220		
BH (60°-80°)	57.3	1.2	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 II Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	76°	85°
0°	440.9	440.9	440.9	440.9	440.9	440.9	440.9	440.9	440.9	440.9	440.9
2.5°	726.3	719.1	712.0	703.8	685.4	653.7	613.8	570.8	517.6	508.4	465.4
5°	881.8	878.7	871.6	860.3	839.8	805.1	760.1	696.6	607.6	592.3	501.2
7.5°	991.2	989.2	983.1	969.8	951.3	916.6	869.5	801.0	697.7	680.3	546.3
10°	1089.4	1088.4	1083.3	1071.0	1052.6	1014.8	964.6	893.0	783.6	764.1	598.4
12.5°	1178.4	1179.5	1177.4	1171.3	1158.0	1122.2	1064.9	987.1	866.4	845.0	660.8
15°	1230.6	1233.7	1241.9	1254.1	1258.2	1229.6	1170.3	1084.3	951.3	932.9	732.4
17.5°	1213.2	1216.3	1241.9	1283.8	1323.7	1327.8	1274.6	1176.4	1035.2	1016.8	803.0
20°	1171.3	1175.4	1202.0	1259.3	1337.0	1391.2	1369.7	1276.6	1115.0	1092.5	870.5
22.5°	1218.3	1218.3	1226.5	1261.3	1331.9	1416.8	1445.4	1376.9	1196.9	1169.2	938.0
25°	1380.0	1376.9	1359.5	1345.2	1367.7	1443.4	1502.7	1479.2	1293.0	1261.3	1009.7
27.5°	1584.6	1598.9	1566.1	1514.0	1462.8	1495.6	1553.9	1580.5	1399.4	1366.7	1083.3
30°	1813.7	1819.8	1781.0	1711.4	1621.4	1589.7	1614.2	1667.4	1515.0	1479.2	1160.0
32.5°	2020.3	2015.2	1982.5	1909.8	1798.3	1729.8	1692.0	1737.0	1640.8	1599.9	1238.8
35°	2203.4	2207.5	2167.6	2083.8	1974.3	1901.7	1811.6	1815.7	1782.0	1734.9	1329.8
37.5°	2368.1	2361.0	2323.1	2239.2	2140.0	2061.2	1966.1	1897.6	1936.4	1887.3	1432.1
40°	2502.1	2495.0	2455.1	2373.2	2280.2	2215.7	2141.0	2007.0	2099.1	2042.8	1541.6
42.5°	2608.5	2600.3	2566.6	2487.8	2397.8	2340.5	2304.7	2142.1	2273.0	2216.7	1664.3
45°	2660.7	2653.5	2633.1	2573.7	2495.0	2444.9	2462.2	2297.5	2459.2	2412.1	1799.4
47.5°	2599.3	2596.2	2619.8	2609.5	2564.5	2537.9	2598.3	2467.4	2654.6	2608.5	1954.9
50°	2413.1	2418.3	2486.8	2571.7	2593.2	2624.9	2709.8	2646.4	2864.3	2815.2	2133.9
52.5°	1953.8	1988.6	2195.3	2399.8	2558.4	2678.1	2840.7	2902.1	3205.9	3157.8	2413.1
55°	1458.7	1473.0	1698.1	2047.9	2418.3	2674.0	2937.9	3052.5	3374.7	3325.6	2486.8
57.5°	1157.0	1162.1	1273.6	1630.6	2129.8	2581.9	2989.1	3106.7	3448.4	3407.4	2596.2
60°	908.4	914.5	995.3	1240.8	1723.7	2333.4	2915.4	3153.8	3592.6	3559.9	2787.5
62.5°	706.9	713.0	762.1	906.3	1293.0	1950.8	2767.1	3229.5	3866.9	3851.5	3100.6
65°	547.3	549.3	583.1	650.6	913.5	1536.5	2586.0	3300.0	4237.2	4223.9	3354.3
67.5°	404.1	407.1	430.7	472.6	616.8	1103.8	2289.4	3245.8	4516.4	4477.6	3446.3
69°	326.3	329.4	349.8	383.6	486.9	869.5	2018.3	3111.8	4558.4	4521.5	3388.0
70°	279.3	281.3	301.8	330.4	415.3	738.6	1803.5	2996.2	4503.1	4467.3	3255.0
72.5°	179.0	189.2	209.7	228.1	275.2	489.0	1217.3	2484.7	3885.3	3823.9	2549.2
75°	99.2	102.3	139.1	161.6	183.1	318.1	677.2	1549.8	2471.4	2428.5	1363.6
77.5°	81.8	83.9	98.2	122.8	122.8	178.0	255.7	610.7	940.1	848.0	369.3
80°	57.3	59.3	74.7	80.8	88.0	100.2	82.9	134.0	145.3	128.9	55.2
82.5°	39.9	41.9	51.1	66.5	70.6	47.1	30.7	39.9	41.9	41.9	21.5
85°	7.2	10.2	37.8	55.2	41.9	14.3	17.4	14.3	13.3	14.3	5.1
87.5°	0.0	0.0	23.5	26.6	22.5	6.1	7.2	5.1	3.1	4.1	2.0
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°	440.9	440.9	440.9	440.9	440.9	440.9	440.9	440.9	440.9	440.9	440.9
2.5°	444.0	422.5	385.7	359.1	336.6	319.2	312.0	300.7	292.6	296.7	291.5
5°	456.2	418.4	359.1	321.2	294.6	272.1	253.7	239.4	228.1	226.1	224.0
7.5°	475.7	421.5	343.7	296.7	256.8	222.0	193.3	171.9	155.5	155.5	149.4
10°	502.3	429.6	334.5	272.1	212.8	165.7	137.1	116.6	108.4	107.4	105.4
12.5°	539.1	445.0	327.3	240.4	165.7	120.7	103.3	96.2	93.1	92.1	91.0
15°	589.2	467.5	319.2	201.5	125.8	99.2	92.1	85.9	82.9	81.8	80.8
17.5°	637.3	487.9	301.8	161.6	102.3	90.0	81.8	76.7	72.6	71.6	71.6
20°	682.3	505.3	272.1	125.8	92.1	80.8	72.6	66.5	62.4	61.4	61.4
22.5°	729.4	519.7	235.3	102.3	83.9	71.6	63.4	57.3	53.2	52.2	51.1
25°	779.5	529.9	193.3	91.0	75.7	63.4	54.2	49.1	46.0	45.0	44.0
27.5°	833.7	534.0	153.4	82.9	66.5	55.2	47.1	41.9	39.9	38.9	38.9
30°	882.8	529.9	118.7	73.7	58.3	48.1	40.9	36.8	34.8	33.8	33.8
32.5°	934.0	519.7	95.1	65.5	51.1	40.9	34.8	31.7	30.7	29.7	29.7
35°	988.2	506.4	81.8	58.3	44.0	35.8	30.7	28.6	27.6	26.6	26.6
37.5°	1051.6	490.0	74.7	52.2	38.9	31.7	26.6	25.6	24.6	24.6	24.6
40°	1123.2	469.5	69.6	47.1	34.8	27.6	23.5	22.5	21.5	21.5	21.5
42.5°	1198.9	446.0	64.4	41.9	30.7	23.5	20.5	20.5	19.4	19.4	18.4
45°	1283.8	422.5	59.3	36.8	26.6	20.5	17.4	16.4	16.4	15.3	15.3
47.5°	1384.1	401.0	54.2	32.7	23.5	17.4	15.3	14.3	13.3	12.3	12.3
50°	1525.2	399.0	48.1	28.6	21.5	14.3	12.3	11.3	10.2	9.2	9.2
52.5°	1665.4	380.5	40.9	23.5	17.4	12.3	9.2	8.2	7.2	7.2	6.1
55°	1697.1	349.8	35.8	20.5	13.3	9.2	7.2	5.1	5.1	4.1	4.1
57.5°	1766.6	335.5	30.7	16.4	10.2	7.2	4.1	3.1	3.1	3.1	3.1
60°	1903.7	331.4	26.6	14.3	7.2	5.1	3.1	2.0	2.0	1.0	1.0
62.5°	2093.0	327.3	22.5	12.3	5.1	3.1	2.0	1.0	0.0	0.0	0.0
65°	2197.3	299.7	18.4	9.2	4.1	3.1	1.0	0.0	0.0	0.0	0.0
67.5°	2169.7	247.6	16.4	6.1	3.1	2.0	1.0	0.0	0.0	0.0	0.0
69°	2054.1	208.7	13.3	5.1	3.1	2.0	1.0	0.0	0.0	0.0	0.0
70°	1915.0	180.0	12.3	4.1	2.0	1.0	1.0	0.0	0.0	0.0	0.0
72.5°	1359.5	94.1	8.2	3.1	2.0	1.0	0.0	0.0	0.0	0.0	0.0
75°	635.3	41.9	5.1	2.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0
77.5°	140.1	19.4	3.1	2.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	26.6	7.2	2.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	9.2	3.1	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	3.1	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	1.0	0.0	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)