

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: P231091

Luminaire Tested: **ARCH-M-AF48-70-D-U-T2R-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P231091
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-M-AF48-70-D-U-T2R-HSS
Description: ARCHEON-M ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 4000K, 470mA LIGHT ENGINES WITH 24 LEDS AND TYPE II ROADWAY OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8294.1 lumens
Efficiency: N/A
Efficacy: 113.6 lumens/watt
Luminous Opening: Rectangular (W 0.75' x L: 1' x H: 0')
IES Classification: Type II - Medium - Full Cutoff
BUG Rating: B1 - U0 - G2

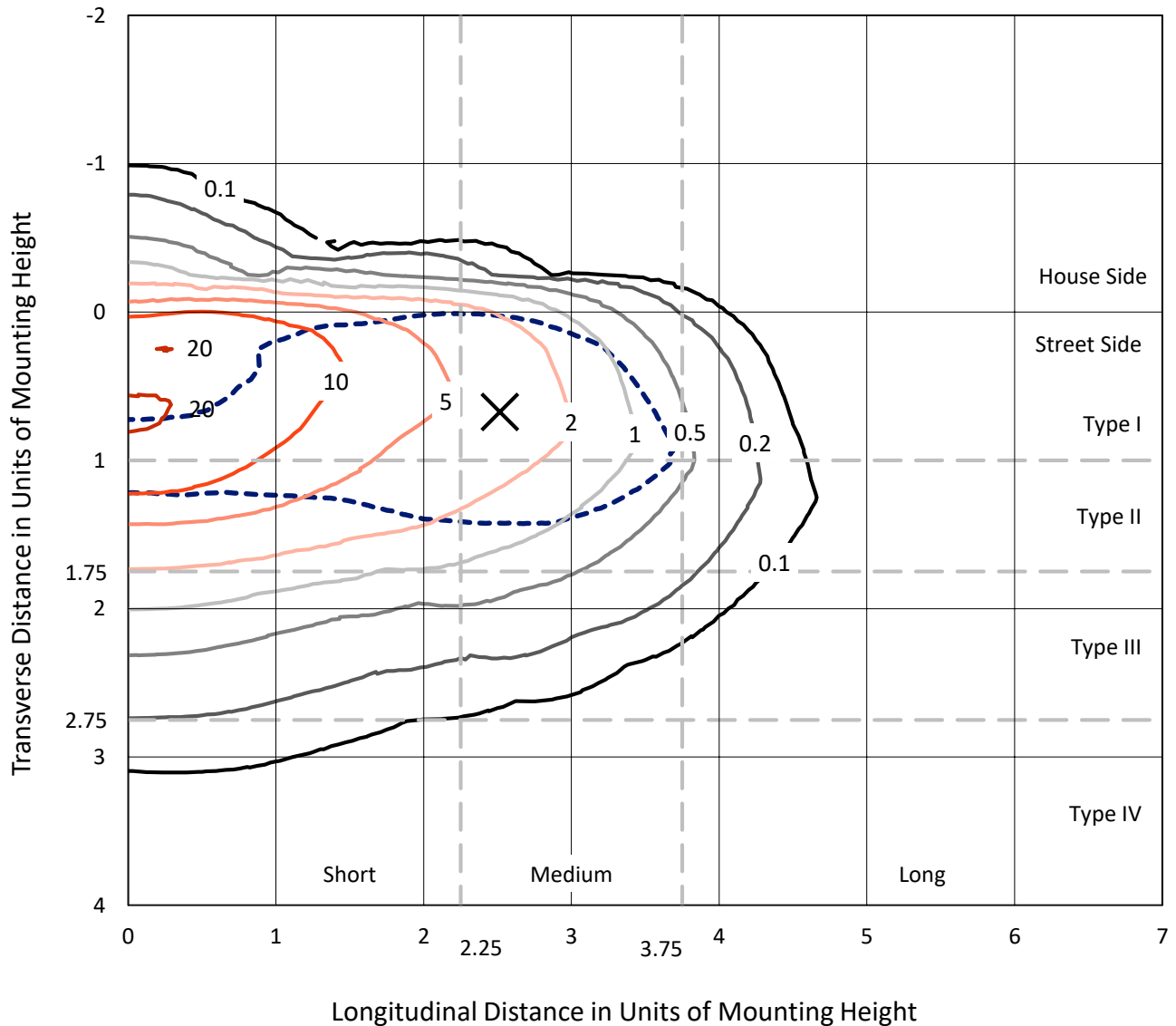
Input Watts (W): 73
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

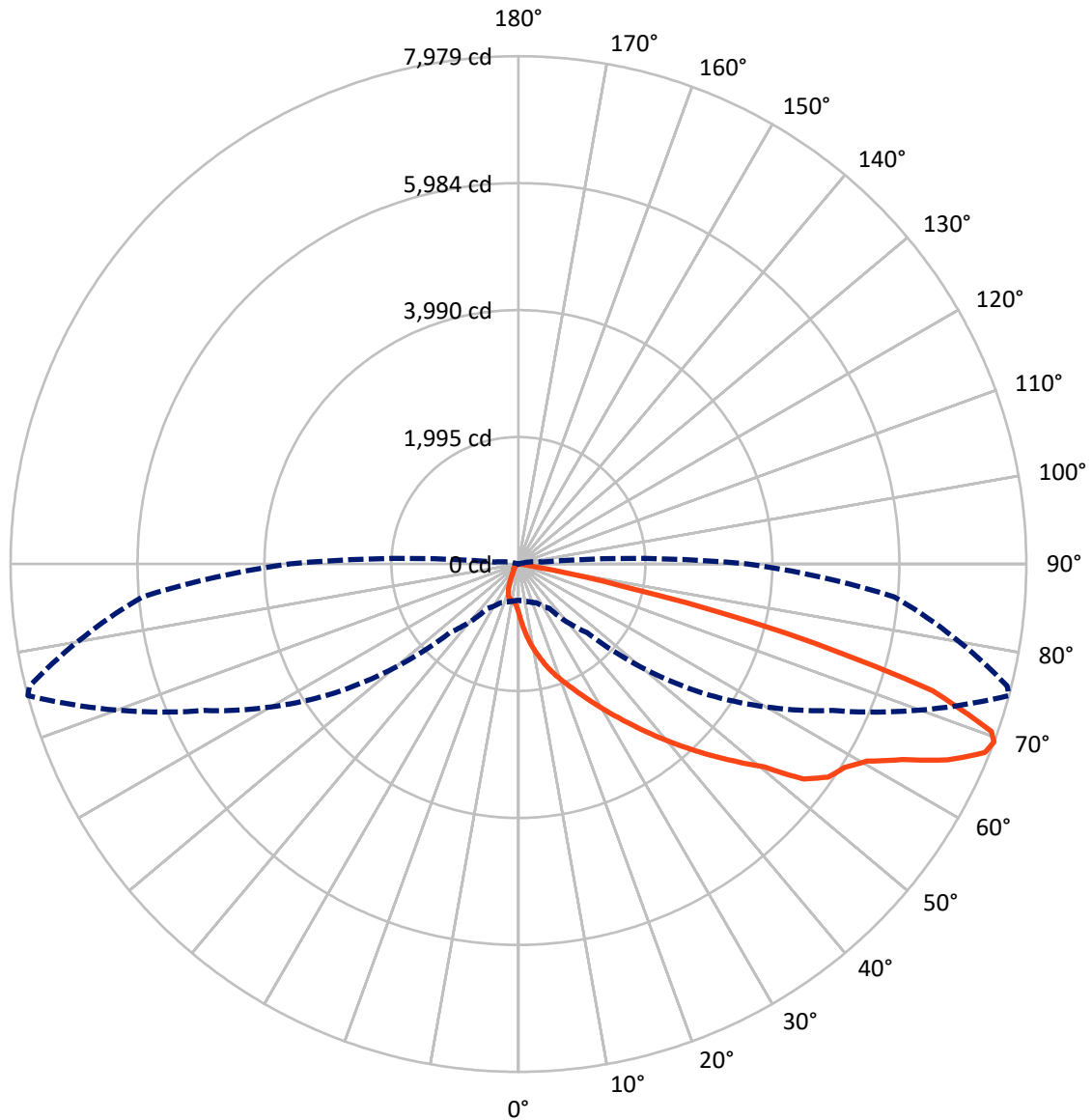
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 21.1 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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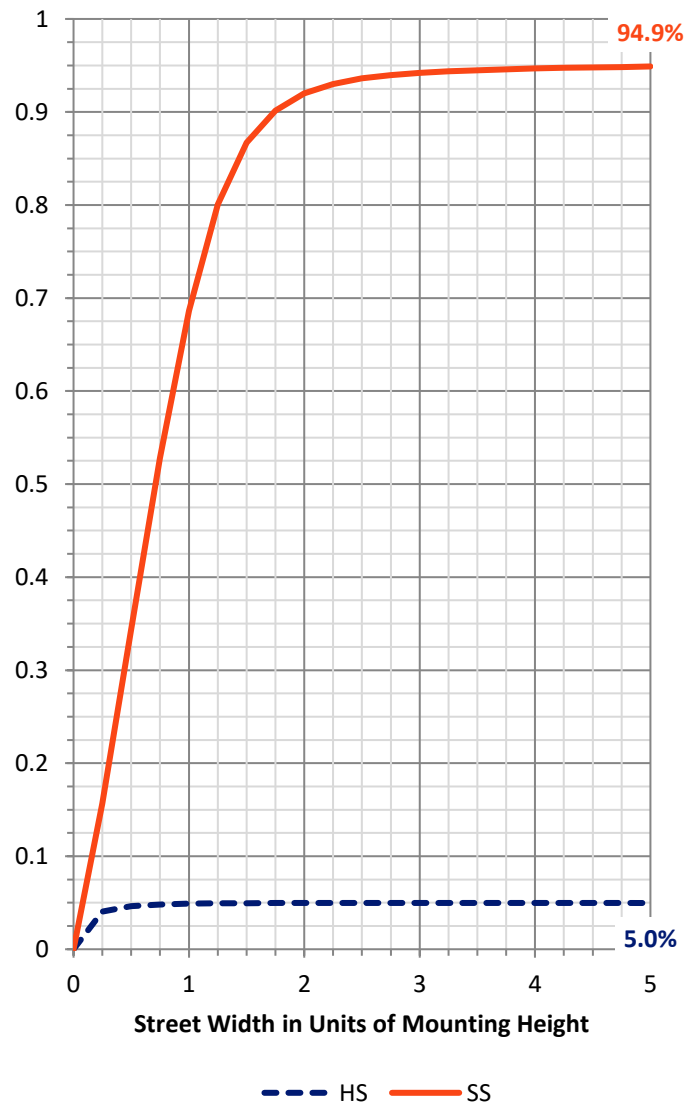
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	413.8	0.0	413.8
	% Fixture	5.0	0.0	5.0
Street Side	Lumens	7880.3	0.0	7880.3
	% Fixture	95.0	0.0	95.0
Total	Lumens	8294.1	0.0	8294.1
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	90.0	1.1
10°-20°	321.7	3.9
20°-30°	614.2	7.4
30°-40°	1101.8	13.3
40°-50°	1688.0	20.4
50°-60°	1961.9	23.7
60°-70°	1737.2	20.9
70°-80°	749.3	9.0
80°-90°	30.0	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°	8294.1	100.0
0°-180°	8294.1	100.0

Coefficient of Utilization



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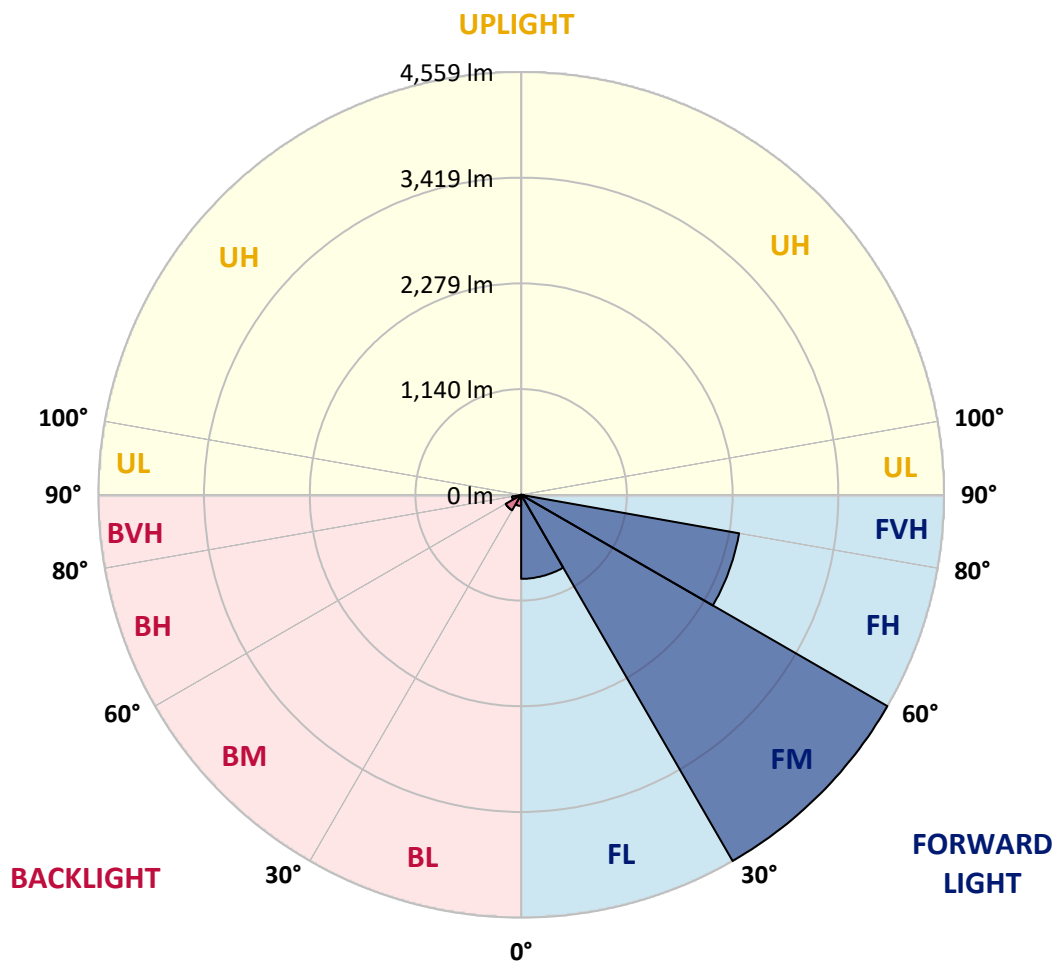
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	905.7	10.9			
FM	(30°-60°)	4558.6	55.0			
FH	(60°-80°)	2386.3	28.8			G2/5000
FVH	(80°-90°)	29.6	0.4			G1/100
BL	(0°-30°)	120.2	1.4	B1/500		
BM	(30°-60°)	192.9	2.3	B0/220		
BH	(60°-80°)	100.3	1.2	B0/110		G0/110
BVH	(80°-90°)	0.4	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 II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	76°	85°
0°	771.7	771.7	771.7	771.7	771.7	771.7	771.7	771.7	771.7	771.7	771.7
2.5°	1271.3	1258.8	1246.3	1231.9	1199.7	1144.2	1074.4	999.2	906.0	890.0	814.8
5°	1543.5	1538.1	1525.6	1505.9	1470.1	1409.2	1330.4	1219.5	1063.7	1036.8	877.4
7.5°	1735.1	1731.5	1720.8	1697.5	1665.3	1604.4	1522.0	1402.1	1221.2	1190.8	956.2
10°	1907.0	1905.2	1896.2	1874.8	1842.5	1776.4	1688.6	1563.2	1371.6	1337.6	1047.5
12.5°	2062.8	2064.6	2061.0	2050.3	2027.0	1964.3	1864.0	1728.0	1516.6	1479.1	1156.8
15°	2154.1	2159.4	2173.9	2195.4	2202.5	2152.3	2048.5	1898.1	1665.3	1633.0	1282.1
17.5°	2123.6	2129.1	2173.9	2247.2	2317.1	2324.2	2231.2	2059.2	1812.2	1779.9	1405.6
20°	2050.3	2057.5	2104.0	2204.3	2340.3	2435.2	2397.7	2234.7	1951.8	1912.4	1523.8
22.5°	2132.6	2132.6	2147.0	2207.8	2331.4	2480.0	2530.2	2410.2	2095.0	2046.7	1642.0
25°	2415.6	2410.2	2379.8	2354.6	2394.1	2526.6	2630.4	2589.3	2263.4	2207.8	1767.4
27.5°	2773.7	2798.8	2741.4	2650.2	2560.7	2617.9	2719.9	2766.6	2449.6	2392.3	1896.2
30°	3174.8	3185.6	3117.4	2995.7	2838.2	2782.6	2825.6	2918.7	2651.9	2589.3	2030.6
32.5°	3536.4	3527.5	3470.3	3343.1	3147.9	3027.9	2961.7	3040.5	2872.1	2800.5	2168.5
35°	3857.0	3864.2	3794.3	3647.5	3455.9	3328.8	3171.2	3178.4	3119.3	3036.9	2327.8
37.5°	4145.3	4132.8	4066.5	3919.6	3746.0	3608.2	3441.6	3321.6	3389.6	3303.7	2506.8
40°	4379.9	4367.4	4297.5	4154.3	3991.3	3878.5	3747.8	3513.2	3674.3	3575.9	2698.4
42.5°	4566.1	4551.8	4492.7	4354.8	4197.3	4096.9	4034.3	3749.6	3978.8	3880.3	2913.4
45°	4657.4	4644.9	4609.1	4505.2	4367.4	4279.6	4310.0	4021.7	4304.7	4222.3	3149.8
47.5°	4550.0	4544.7	4585.8	4567.9	4489.1	4442.6	4548.2	4319.0	4646.7	4566.1	3421.9
50°	4224.1	4233.1	4353.1	4501.6	4539.2	4594.8	4743.4	4632.3	5013.8	4927.9	3735.3
52.5°	3420.1	3481.0	3842.7	4200.8	4478.4	4687.9	4972.6	5080.0	5611.8	5527.7	4224.1
55°	2553.4	2578.6	2972.5	3584.8	4233.1	4680.7	5142.7	5343.3	5907.3	5821.3	4353.1
57.5°	2025.2	2034.1	2229.3	2854.2	3728.0	4519.6	5232.2	5438.1	6036.2	5964.6	4544.7
60°	1590.1	1600.8	1742.3	2172.0	3017.2	4084.4	5103.3	5520.6	6288.7	6231.4	4879.5
62.5°	1237.4	1248.1	1334.0	1586.5	2263.4	3414.7	4843.7	5653.0	6768.6	6741.8	5427.4
65°	958.0	961.6	1020.7	1138.9	1599.1	2689.5	4526.8	5776.6	7416.8	7393.5	5871.4
67.5°	707.3	712.7	753.8	827.3	1079.7	1932.0	4007.4	5681.7	7905.7	7837.5	6032.6
69°	571.2	576.5	612.4	671.5	852.3	1522.0	3532.9	5447.1	7979.0	7914.6	5930.6
70°	488.9	492.4	528.3	578.4	727.0	1292.8	3156.9	5244.8	7882.3	7819.6	5697.7
72.5°	313.3	331.2	367.0	399.4	481.7	855.9	2130.8	4349.5	6800.8	6693.4	4462.2
75°	173.7	179.0	243.6	282.9	320.5	556.9	1185.4	2712.8	4326.2	4251.0	2387.0
77.5°	143.2	146.8	171.9	214.9	214.9	311.6	447.6	1069.0	1645.6	1484.4	646.4
80°	100.2	103.8	130.7	141.5	154.0	175.4	145.1	234.6	254.3	225.7	96.7
82.5°	69.9	73.4	89.5	116.4	123.6	82.3	53.7	69.9	73.4	73.4	37.6
85°	12.6	17.9	66.3	96.7	73.4	25.1	30.5	25.1	23.3	25.1	9.0
87.5°	0.0	0.0	41.2	46.5	39.4	10.7	12.6	9.0	5.4	7.2	3.6
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°	771.7	771.7	771.7	771.7	771.7	771.7	771.7	771.7	771.7	771.7	771.7
2.5°	777.1	739.5	675.0	628.5	589.1	558.6	546.2	526.4	512.1	519.2	510.4
5°	798.6	732.3	628.5	562.2	515.7	476.3	444.1	419.0	399.4	395.8	392.1
7.5°	832.7	737.8	601.7	519.2	449.5	388.5	338.4	300.8	272.2	272.2	261.5
10°	879.2	752.1	585.5	476.3	372.5	290.1	240.0	204.2	189.8	188.0	184.4
12.5°	943.7	778.9	573.0	420.8	290.1	211.3	180.9	168.3	163.0	161.1	159.4
15°	1031.4	818.4	558.6	352.7	220.2	173.7	161.1	150.4	145.1	143.2	141.5
17.5°	1115.5	854.2	528.3	282.9	179.0	157.5	143.2	134.3	127.2	125.3	125.3
20°	1194.4	884.5	476.3	220.2	161.1	141.5	127.2	116.4	109.3	107.4	107.4
22.5°	1276.7	909.6	411.8	179.0	146.8	125.3	111.0	100.2	93.1	91.3	89.5
25°	1364.4	927.5	338.4	159.4	132.5	111.0	94.9	85.9	80.6	78.8	77.0
27.5°	1459.3	934.7	268.6	145.1	116.4	96.7	82.3	73.4	69.9	68.0	68.0
30°	1545.3	927.5	207.8	128.9	102.1	84.2	71.6	64.4	60.9	59.1	59.1
32.5°	1634.9	909.6	166.5	114.6	89.5	71.6	60.9	55.5	53.7	52.0	52.0
35°	1729.7	886.4	143.2	102.1	77.0	62.7	53.7	50.1	48.4	46.5	46.5
37.5°	1840.8	857.7	130.7	91.3	68.0	55.5	46.5	44.8	43.0	43.0	43.0
40°	1966.1	821.9	121.7	82.3	60.9	48.4	41.2	39.4	37.6	37.6	37.6
42.5°	2098.6	780.7	112.8	73.4	53.7	41.2	35.8	35.8	34.1	34.1	32.2
45°	2247.2	739.5	103.8	64.4	46.5	35.8	30.5	28.6	28.6	26.9	26.9
47.5°	2422.8	701.9	94.9	57.3	41.2	30.5	26.9	25.1	23.3	21.5	21.5
50°	2669.8	698.4	84.2	50.1	37.6	25.1	21.5	19.7	17.9	16.2	16.2
52.5°	2915.1	666.1	71.6	41.2	30.5	21.5	16.2	14.3	12.6	12.6	10.7
55°	2970.6	612.4	62.7	35.8	23.3	16.2	12.6	9.0	9.0	7.2	7.2
57.5°	3092.4	587.3	53.7	28.6	17.9	12.6	7.2	5.4	5.4	5.4	5.4
60°	3332.4	580.1	46.5	25.1	12.6	9.0	5.4	3.6	3.6	1.8	1.8
62.5°	3663.6	573.0	39.4	21.5	9.0	5.4	3.6	1.8	0.0	0.0	0.0
65°	3846.3	524.7	32.2	16.2	7.2	5.4	1.8	0.0	0.0	0.0	0.0
67.5°	3797.9	433.3	28.6	10.7	5.4	3.6	1.8	0.0	0.0	0.0	0.0
69°	3595.6	365.3	23.3	9.0	5.4	3.6	1.8	0.0	0.0	0.0	0.0
70°	3352.1	315.2	21.5	7.2	3.6	1.8	1.8	0.0	0.0	0.0	0.0
72.5°	2379.8	164.7	14.3	5.4	3.6	1.8	0.0	0.0	0.0	0.0	0.0
75°	1111.9	73.4	9.0	3.6	1.8	1.8	0.0	0.0	0.0	0.0	0.0
77.5°	245.3	34.1	5.4	3.6	1.8	0.0	0.0	0.0	0.0	0.0	0.0
80°	46.5	12.6	3.6	1.8	1.8	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	16.2	5.4	1.8	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	5.4	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	1.8	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)