

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: P231098

Luminaire Tested: **ARCH-M-AF48-140-D-U-T2R-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P231098
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-AF48-140-D-U-T2R-HSS
Description: ARCHEON-M ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 4000K, 905mA 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: 14172 lumens
Efficiency: N/A
Efficacy: 100.5 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

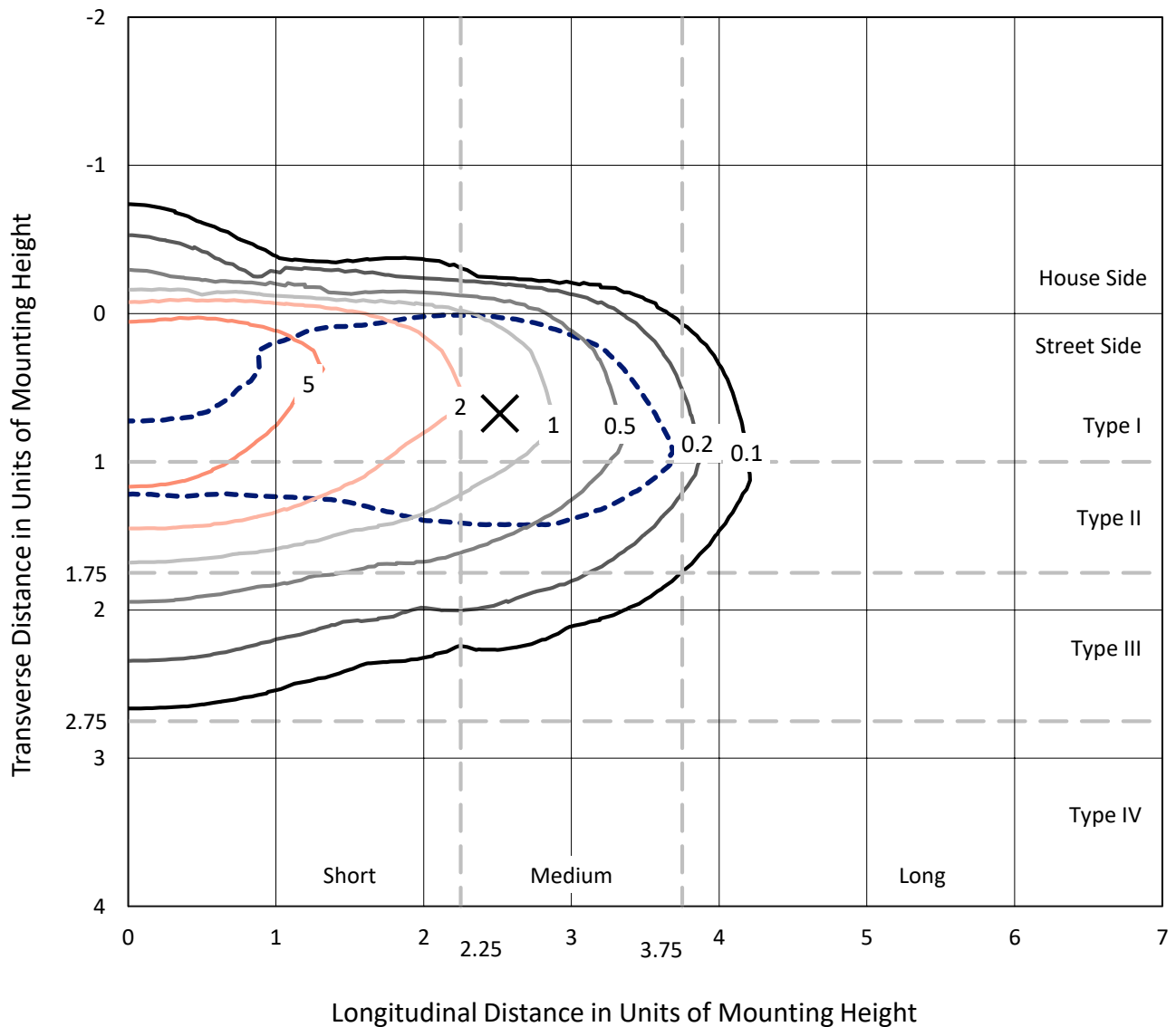
Input Watts (W): 141
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

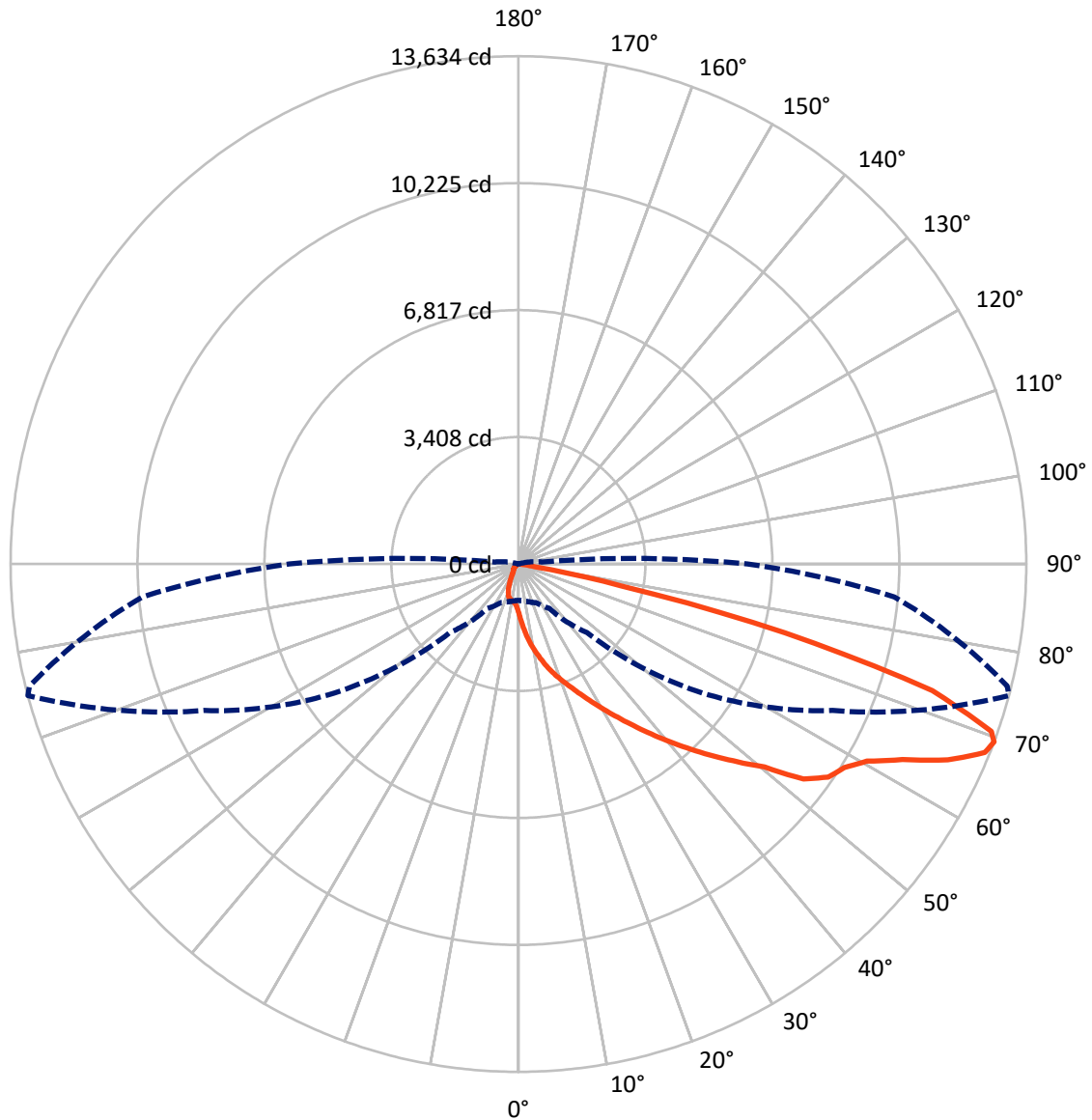
✕ Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 9 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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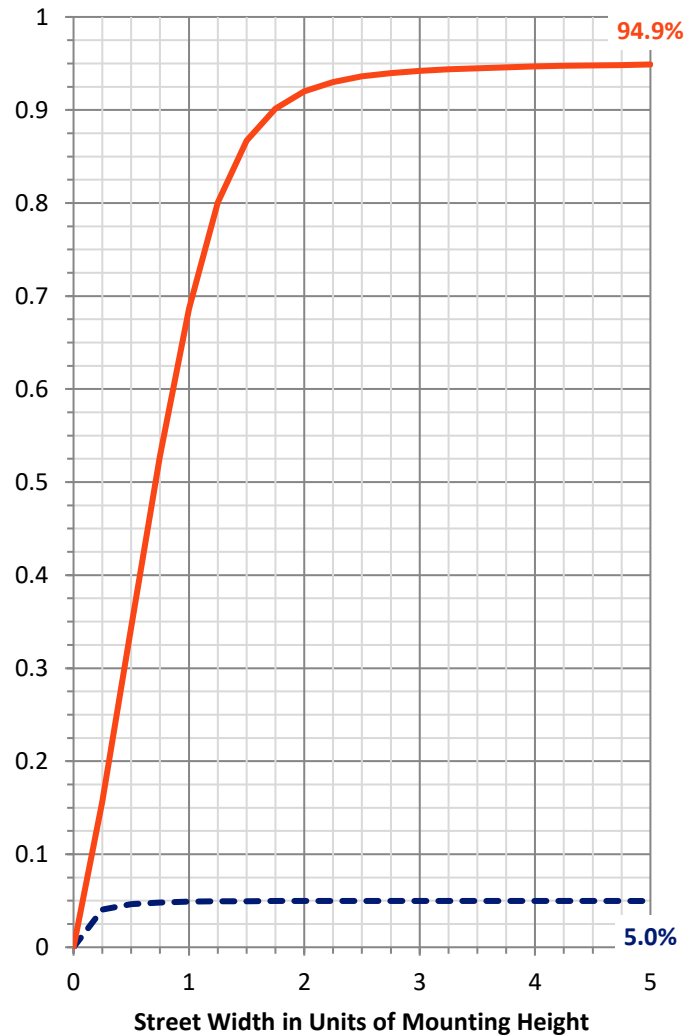
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	707.1	0.0	707.1
	% Fixture	5.0	0.0	5.0
Street Side	Lumens	13464.9	0.0	13464.9
	% Fixture	95.0	0.0	95.0
Total	Lumens	14172.0	0.0	14172.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	153.8	1.1
10°-20°	549.7	3.9
20°-30°	1049.5	7.4
30°-40°	1882.5	13.3
40°-50°	2884.2	20.4
50°-60°	3352.2	23.7
60°-70°	2968.4	20.9
70°-80°	1280.4	9.0
80°-90°	51.3	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°	14172.0	100.0
0°-180°	14172.0	100.0



--- HS — SS

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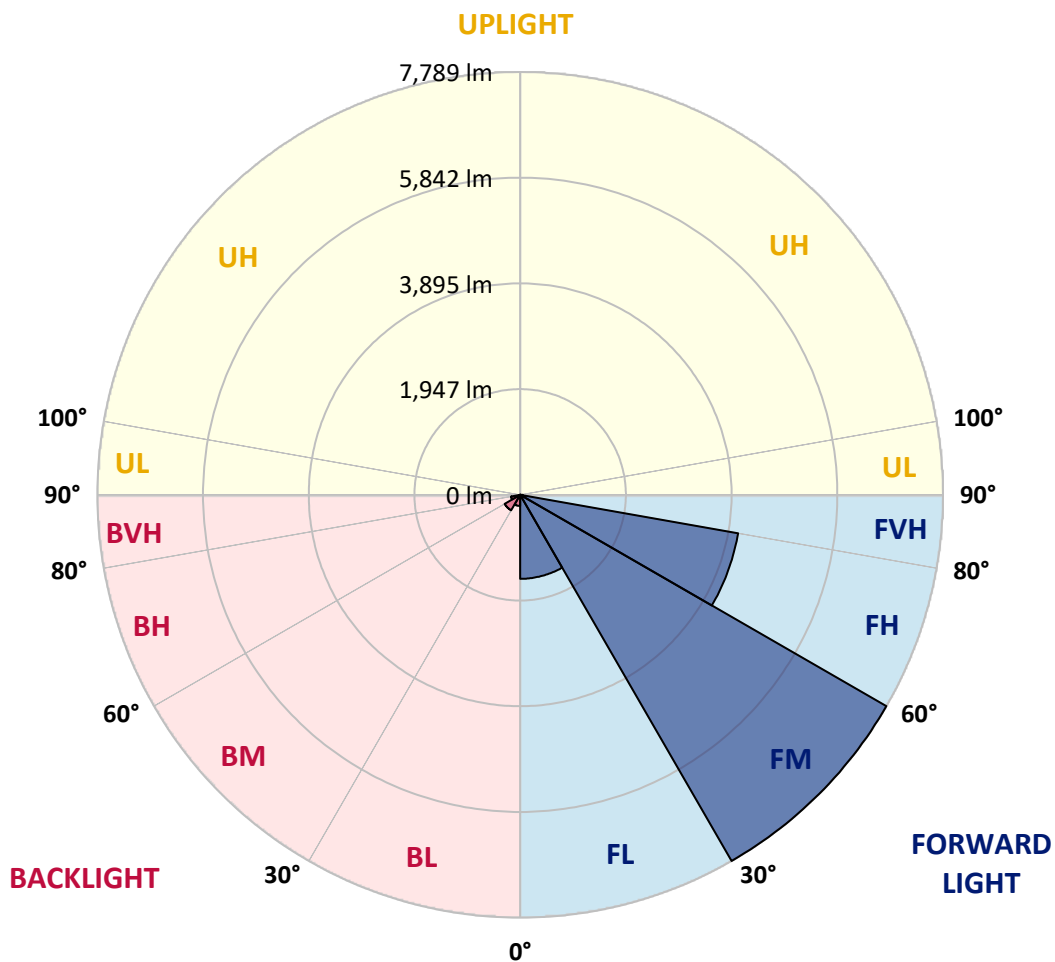
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1547.6	10.9			
FM	(30°-60°)	7789.3	55.0			
FH	(60°-80°)	4077.5	28.8			G2/5000
FVH	(80°-90°)	50.5	0.4			G1/100
BL	(0°-30°)	205.4	1.4	B1/500		
BM	(30°-60°)	329.7	2.3	B1/1000		
BH	(60°-80°)	171.3	1.2	B1/500		G1/500
BVH	(80°-90°)	0.7	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°	1318.7	1318.7	1318.7	1318.7	1318.7	1318.7	1318.7	1318.7	1318.7	1318.7	1318.7
2.5°	2172.3	2151.0	2129.5	2105.0	2050.0	1955.1	1835.8	1707.3	1548.1	1520.6	1392.1
5°	2637.4	2628.2	2606.8	2573.1	2512.0	2407.9	2273.3	2083.6	1817.4	1771.5	1499.2
7.5°	2964.8	2958.7	2940.3	2900.5	2845.4	2741.4	2600.6	2395.6	2086.6	2034.6	1633.9
10°	3258.5	3255.4	3240.1	3203.4	3148.3	3035.1	2885.2	2671.0	2343.7	2285.6	1789.9
12.5°	3524.7	3527.7	3521.6	3503.3	3463.5	3356.4	3185.1	2952.5	2591.5	2527.2	1976.5
15°	3680.7	3689.9	3714.3	3751.1	3763.3	3677.7	3500.2	3243.2	2845.4	2790.4	2190.6
17.5°	3628.7	3637.9	3714.3	3839.9	3959.1	3971.4	3812.3	3518.5	3096.4	3041.2	2401.8
20°	3503.3	3515.5	3595.1	3766.4	3998.9	4161.1	4096.8	3818.4	3335.0	3267.7	2603.7
22.5°	3644.0	3644.0	3668.5	3772.5	3983.6	4237.6	4323.2	4118.3	3579.7	3497.2	2805.6
25°	4127.4	4118.3	4066.2	4023.4	4090.7	4317.2	4494.5	4424.2	3867.4	3772.5	3019.9
27.5°	4739.3	4782.2	4684.3	4528.2	4375.3	4473.2	4647.6	4727.2	4185.6	4087.6	3240.1
30°	5424.7	5443.0	5326.8	5118.7	4849.5	4754.7	4828.1	4987.2	4531.3	4424.2	3469.6
32.5°	6042.8	6027.4	5929.5	5712.3	5378.8	5173.8	5060.6	5195.3	4907.6	4785.3	3705.2
35°	6590.5	6602.6	6483.4	6232.4	5905.1	5687.8	5418.6	5430.8	5329.9	5189.1	3977.5
37.5°	7083.0	7061.6	6948.4	6697.5	6400.7	6165.1	5880.6	5675.6	5791.8	5644.9	4283.5
40°	7483.8	7462.4	7343.0	7098.4	6819.9	6627.1	6403.8	6003.0	6278.4	6110.1	4610.8
42.5°	7802.0	7777.6	7676.6	7440.9	7171.7	7000.4	6893.4	6406.8	6798.4	6630.2	4978.0
45°	7958.0	7936.7	7875.5	7698.0	7462.4	7312.5	7364.5	6871.9	7355.3	7214.6	5381.8
47.5°	7774.5	7765.3	7835.7	7805.1	7670.5	7590.9	7771.5	7379.8	7939.7	7802.0	5847.0
50°	7217.6	7233.0	7438.0	7691.9	7756.1	7850.9	8104.9	7915.2	8566.9	8420.1	6382.4
52.5°	5843.9	5947.9	6565.9	7177.8	7652.1	8010.1	8496.5	8680.1	9588.8	9445.0	7217.6
55°	4363.0	4405.8	5079.0	6125.3	7233.0	7997.8	8787.2	9129.9	10093.7	9946.9	7438.0
57.5°	3460.4	3475.7	3809.3	4877.0	6370.1	7722.5	8940.2	9292.1	10314.0	10191.6	7765.3
60°	2717.0	2735.3	2977.0	3711.4	5155.5	6979.0	8719.9	9432.8	10745.4	10647.5	8337.5
62.5°	2114.2	2132.5	2279.4	2710.8	3867.4	5834.7	8276.3	9659.2	11565.4	11519.4	9273.7
65°	1636.9	1643.1	1744.0	1946.0	2732.2	4595.5	7734.7	9870.4	12672.9	12633.1	10032.5
67.5°	1208.5	1217.7	1288.1	1413.5	1845.0	3301.4	6847.4	9708.2	13508.2	13392.0	10307.9
69°	976.0	985.2	1046.4	1147.3	1456.4	2600.6	6036.6	9307.3	13633.7	13523.5	10133.5
70°	835.2	841.4	902.5	988.3	1242.2	2209.1	5394.1	8961.7	13468.5	13361.4	9735.7
72.5°	535.4	566.0	627.2	682.3	823.1	1462.5	3641.0	7431.8	11620.4	11436.9	7624.6
75°	296.8	306.0	416.1	483.4	547.7	951.5	2025.4	4635.3	7392.0	7263.6	4078.5
77.5°	244.8	250.9	293.7	367.1	367.1	532.3	764.9	1826.6	2811.8	2536.4	1104.5
80°	171.3	177.5	223.3	241.7	263.1	299.8	247.9	400.8	434.4	385.6	165.2
82.5°	119.3	125.4	152.9	198.9	211.1	140.8	91.8	119.3	125.4	125.4	64.2
85°	21.4	30.6	113.2	165.2	125.4	42.9	52.0	42.9	39.8	42.9	15.3
87.5°	0.0	0.0	70.4	79.6	67.3	18.3	21.4	15.3	9.2	12.3	6.1
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°	1318.7	1318.7	1318.7	1318.7	1318.7	1318.7	1318.7	1318.7	1318.7	1318.7	1318.7
2.5°	1327.9	1263.7	1153.5	1073.9	1006.6	954.6	933.1	899.5	875.0	887.3	872.0
5°	1364.6	1251.4	1073.9	960.8	881.2	813.9	758.8	716.0	682.3	676.2	670.0
7.5°	1422.7	1260.6	1028.1	887.3	767.9	663.9	578.3	514.0	465.0	465.0	446.7
10°	1502.3	1285.0	1000.4	813.9	636.4	495.6	410.0	348.8	324.3	321.3	315.2
12.5°	1612.4	1331.0	979.1	719.0	495.6	361.0	309.0	287.7	278.4	275.4	272.3
15°	1762.3	1398.3	954.6	602.7	376.3	296.8	275.4	257.0	247.9	244.8	241.7
17.5°	1906.2	1459.4	902.5	483.4	306.0	269.2	244.8	229.4	217.3	214.2	214.2
20°	2040.8	1511.4	813.9	376.3	275.4	241.7	217.3	198.9	186.6	183.6	183.6
22.5°	2181.5	1554.3	703.7	306.0	250.9	214.2	189.7	171.3	159.1	156.0	152.9
25°	2331.4	1584.9	578.3	272.3	226.4	189.7	162.1	146.9	137.7	134.6	131.6
27.5°	2493.5	1597.1	458.9	247.9	198.9	165.2	140.8	125.4	119.3	116.3	116.3
30°	2640.4	1584.9	355.0	220.3	174.4	143.8	122.3	110.2	104.0	101.0	101.0
32.5°	2793.5	1554.3	284.6	195.8	152.9	122.3	104.0	94.8	91.8	88.7	88.7
35°	2955.6	1514.5	244.8	174.4	131.6	107.1	91.8	85.6	82.7	79.6	79.6
37.5°	3145.3	1465.6	223.3	156.0	116.3	94.8	79.6	76.5	73.4	73.4	73.4
40°	3359.5	1404.4	208.1	140.8	104.0	82.7	70.4	67.3	64.2	64.2	64.2
42.5°	3585.9	1334.0	192.7	125.4	91.8	70.4	61.2	61.2	58.1	58.1	55.0
45°	3839.9	1263.7	177.5	110.2	79.6	61.2	52.0	49.0	49.0	45.9	45.9
47.5°	4139.7	1199.4	162.1	97.9	70.4	52.0	45.9	42.9	39.8	36.7	36.7
50°	4561.8	1193.3	143.8	85.6	64.2	42.9	36.7	33.7	30.6	27.5	27.5
52.5°	4981.1	1138.1	122.3	70.4	52.0	36.7	27.5	24.4	21.4	21.4	18.3
55°	5075.9	1046.4	107.1	61.2	39.8	27.5	21.4	15.3	15.3	12.3	12.3
57.5°	5284.0	1003.5	91.8	49.0	30.6	21.4	12.3	9.2	9.2	9.2	9.2
60°	5693.9	991.3	79.6	42.9	21.4	15.3	9.2	6.1	6.1	3.1	3.1
62.5°	6259.9	979.1	67.3	36.7	15.3	9.2	6.1	3.1	0.0	0.0	0.0
65°	6572.0	896.5	55.0	27.5	12.3	9.2	3.1	0.0	0.0	0.0	0.0
67.5°	6489.5	740.4	49.0	18.3	9.2	6.1	3.1	0.0	0.0	0.0	0.0
69°	6143.7	624.2	39.8	15.3	9.2	6.1	3.1	0.0	0.0	0.0	0.0
70°	5727.6	538.5	36.7	12.3	6.1	3.1	3.1	0.0	0.0	0.0	0.0
72.5°	4066.2	281.5	24.4	9.2	6.1	3.1	0.0	0.0	0.0	0.0	0.0
75°	1900.0	125.4	15.3	6.1	3.1	3.1	0.0	0.0	0.0	0.0	0.0
77.5°	419.2	58.1	9.2	6.1	3.1	0.0	0.0	0.0	0.0	0.0	0.0
80°	79.6	21.4	6.1	3.1	3.1	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	27.5	9.2	3.1	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	9.2	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	3.1	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)