

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: P231096

Luminaire Tested: **ARCH-M-AF48-120-D-U-T2R-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P231096
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-AF48-120-D-U-T2R-HSS
Description: ARCHEON-M ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 4000K, 785mA 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: 12750.1 lumens
Efficiency: N/A
Efficacy: 104.5 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

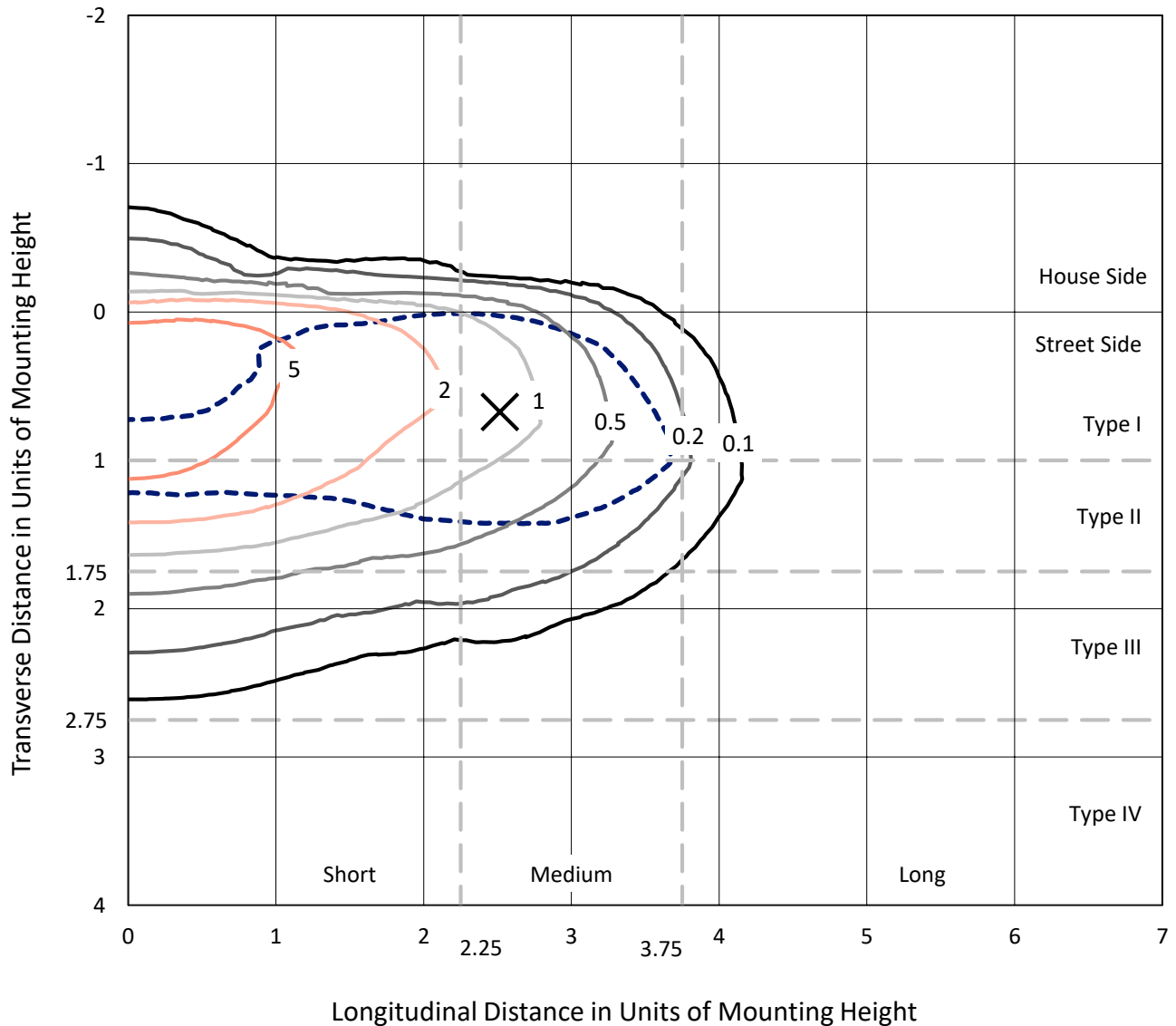
Input Watts (W): 122
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

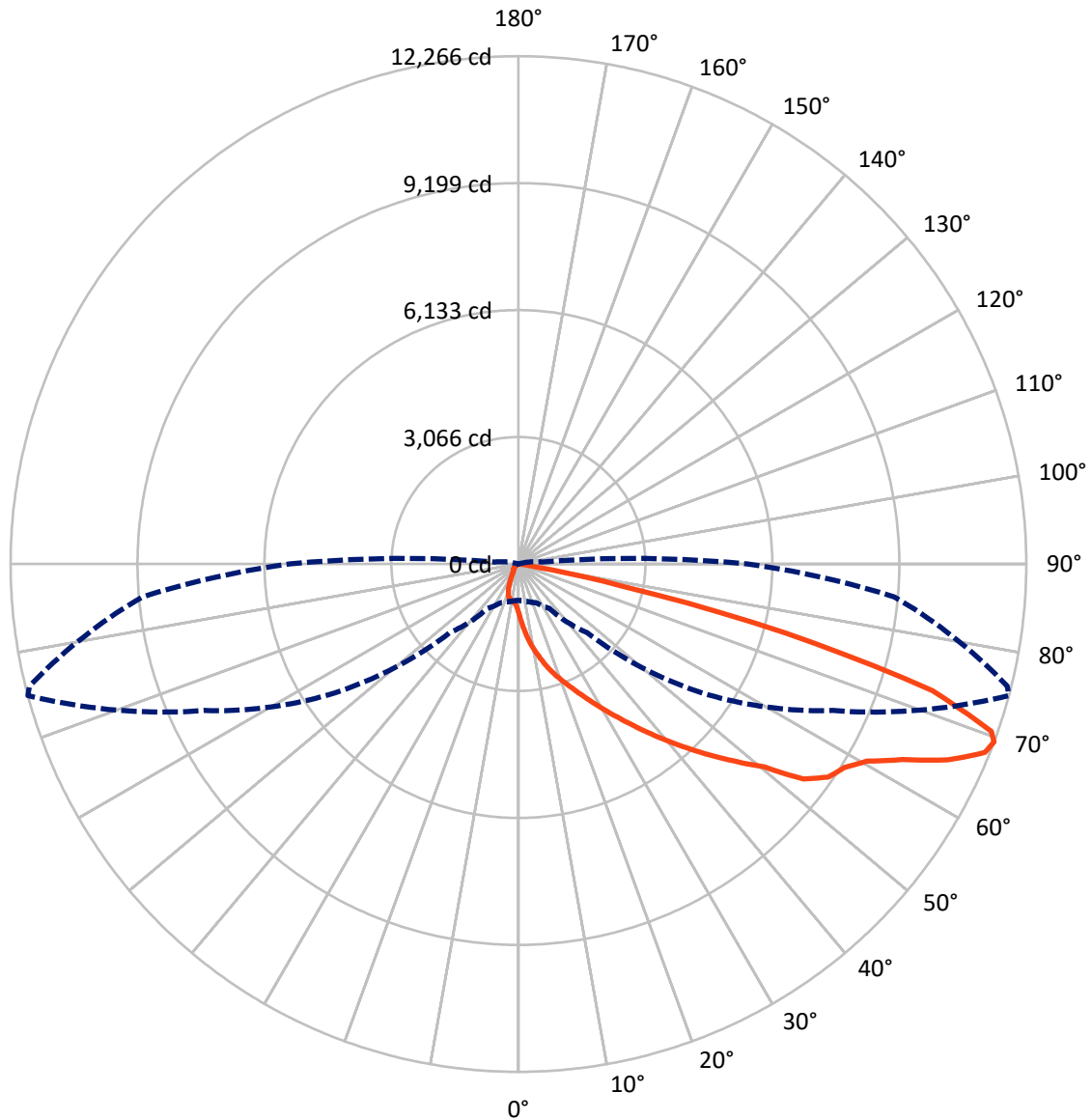
✕ Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 8.1 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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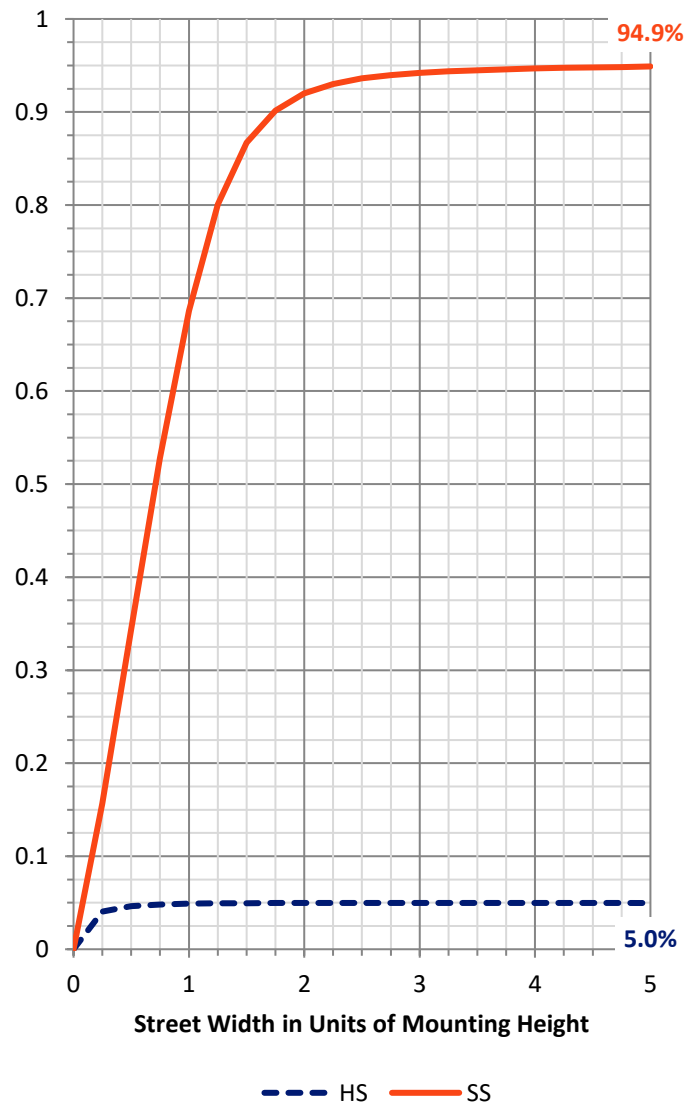
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	636.2	0.0	636.2
	% Fixture	5.0	0.0	5.0
Street Side	Lumens	12113.9	0.0	12113.9
	% Fixture	95.0	0.0	95.0
Total	Lumens	12750.1	0.0	12750.1
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	138.3	1.1
10°-20°	494.6	3.9
20°-30°	944.2	7.4
30°-40°	1693.7	13.3
40°-50°	2594.8	20.4
50°-60°	3015.8	23.7
60°-70°	2670.6	20.9
70°-80°	1151.9	9.0
80°-90°	46.2	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°	12750.1	100.0
0°-180°	12750.1	100.0

Coefficient of Utilization



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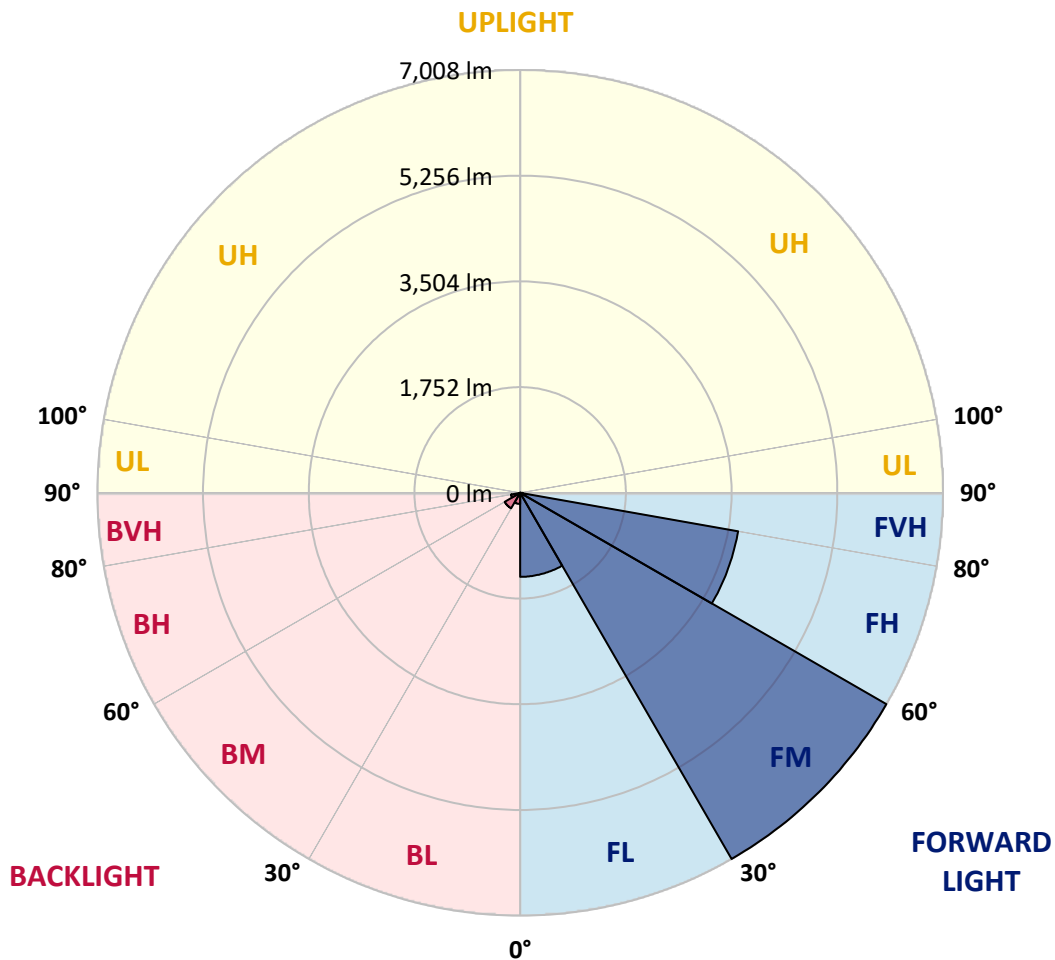
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1392.3	10.9			
FM	(30°-60°)	7007.8	55.0			
FH	(60°-80°)	3668.4	28.8			G2/5000
FVH	(80°-90°)	45.5	0.4			G1/100
BL	(0°-30°)	184.8	1.4	B1/500		
BM	(30°-60°)	296.6	2.3	B1/1000		
BH	(60°-80°)	154.1	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°	1186.4	1186.4	1186.4	1186.4	1186.4	1186.4	1186.4	1186.4	1186.4	1186.4	1186.4
2.5°	1954.3	1935.1	1915.9	1893.8	1844.3	1759.0	1651.6	1536.0	1392.8	1368.1	1252.5
5°	2372.7	2364.6	2345.2	2314.9	2259.9	2166.3	2045.2	1874.6	1635.1	1593.8	1348.8
7.5°	2667.3	2661.8	2645.2	2609.5	2559.9	2466.3	2339.8	2155.4	1877.3	1830.5	1469.9
10°	2931.6	2928.8	2915.0	2882.1	2832.4	2730.7	2595.7	2403.0	2108.5	2056.2	1610.3
12.5°	3171.0	3173.8	3168.3	3151.8	3116.0	3019.6	2865.5	2656.3	2331.5	2273.7	1778.2
15°	3311.4	3319.7	3341.7	3374.7	3385.8	3308.6	3149.1	2917.8	2559.9	2510.4	1970.9
17.5°	3264.6	3272.9	3341.7	3454.6	3561.9	3573.0	3429.7	3165.5	2785.7	2736.1	2160.8
20°	3151.8	3162.8	3234.4	3388.5	3597.7	3743.6	3685.8	3435.3	3000.4	2939.9	2342.5
22.5°	3278.4	3278.4	3300.4	3394.0	3583.9	3812.4	3889.5	3705.0	3220.6	3146.3	2524.1
25°	3713.3	3705.0	3658.3	3619.7	3680.3	3883.9	4043.6	3980.3	3479.4	3394.0	2716.9
27.5°	4263.9	4302.4	4214.3	4073.9	3936.3	4024.4	4181.3	4252.8	3765.6	3677.5	2915.0
30°	4880.4	4897.0	4792.3	4605.1	4362.9	4277.6	4343.7	4486.8	4076.7	3980.3	3121.5
32.5°	5436.5	5422.7	5334.6	5139.2	4839.2	4654.7	4552.8	4674.0	4415.3	4305.1	3333.5
35°	5929.2	5940.2	5832.9	5607.1	5312.6	5117.2	4875.0	4885.9	4795.1	4668.4	3578.4
37.5°	6372.4	6353.1	6251.3	6025.5	5758.5	5546.5	5290.6	5106.2	5210.7	5078.6	3853.7
40°	6733.0	6713.7	6606.3	6386.1	6135.7	5962.3	5761.3	5400.7	5648.4	5497.0	4148.3
42.5°	7019.3	6997.2	6906.4	6694.4	6452.2	6298.0	6201.7	5764.0	6116.3	5964.9	4478.6
45°	7159.6	7140.4	7085.3	6925.7	6713.7	6578.8	6625.7	6182.4	6617.4	6490.7	4841.9
47.5°	6994.4	6986.2	7049.6	7021.9	6900.8	6829.3	6991.7	6639.4	7143.1	7019.3	5260.3
50°	6493.5	6507.2	6691.6	6920.2	6978.0	7063.3	7291.7	7121.1	7707.4	7575.3	5742.0
52.5°	5257.6	5351.2	5907.1	6457.7	6884.4	7206.4	7644.1	7809.2	8626.7	8497.4	6493.5
55°	3925.3	3963.8	4569.4	5510.7	6507.2	7195.4	7905.6	8213.9	9080.9	8948.9	6691.6
57.5°	3113.2	3127.0	3427.0	4387.7	5731.0	6947.7	8043.3	8359.8	9279.2	9169.0	6986.2
60°	2444.3	2460.8	2678.3	3338.9	4638.2	6278.8	7845.0	8486.4	9667.3	9579.2	7501.0
62.5°	1902.1	1918.5	2050.7	2438.8	3479.4	5249.3	7445.9	8690.1	10404.9	10363.7	8343.3
65°	1472.6	1478.2	1569.0	1750.7	2458.2	4134.5	6958.7	8880.0	11401.4	11365.7	9025.9
67.5°	1087.3	1095.6	1158.9	1271.7	1659.8	2970.1	6160.4	8734.2	12152.9	12048.3	9273.7
69°	878.1	886.4	941.4	1032.3	1310.3	2339.8	5430.9	8373.6	12265.8	12166.7	9116.7
70°	751.5	757.0	812.0	889.1	1117.6	1987.4	4852.9	8062.5	12117.2	12020.8	8758.9
72.5°	481.7	509.2	564.3	613.9	740.4	1315.7	3275.7	6686.2	10454.6	10289.4	6859.6
75°	267.0	275.3	374.4	435.0	492.8	856.1	1822.3	4170.3	6650.4	6534.8	3669.2
77.5°	220.2	225.8	264.2	330.3	330.3	478.9	688.1	1643.4	2529.7	2281.9	993.7
80°	154.2	159.7	200.9	217.5	236.7	269.8	223.0	360.6	390.9	346.9	148.6
82.5°	107.3	112.8	137.6	178.9	190.0	126.6	82.6	107.3	112.8	112.8	57.8
85°	19.2	27.5	101.9	148.6	112.8	38.6	46.7	38.6	35.8	38.6	13.8
87.5°	0.0	0.0	63.3	71.6	60.6	16.5	19.2	13.8	8.3	11.0	5.5
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°	1186.4	1186.4	1186.4	1186.4	1186.4	1186.4	1186.4	1186.4	1186.4	1186.4	1186.4
2.5°	1194.6	1136.8	1037.8	966.2	905.6	858.9	839.5	809.3	787.3	798.3	784.5
5°	1227.6	1125.9	966.2	864.3	792.8	732.2	682.6	644.2	613.9	608.3	602.8
7.5°	1280.0	1134.0	924.8	798.3	690.9	597.3	520.3	462.5	418.4	418.4	401.9
10°	1351.5	1156.1	900.1	732.2	572.5	445.9	368.9	313.8	291.7	289.0	283.6
12.5°	1450.6	1197.4	880.9	646.9	445.9	324.8	278.0	258.7	250.5	247.8	245.0
15°	1585.5	1257.9	858.9	542.3	338.6	267.0	247.8	231.2	223.0	220.2	217.5
17.5°	1714.9	1313.1	812.0	435.0	275.3	242.2	220.2	206.4	195.5	192.7	192.7
20°	1836.0	1359.8	732.2	338.6	247.8	217.5	195.5	178.9	167.9	165.2	165.2
22.5°	1962.6	1398.4	633.1	275.3	225.8	192.7	170.6	154.2	143.1	140.3	137.6
25°	2097.6	1425.9	520.3	245.0	203.7	170.6	145.9	132.2	123.9	121.1	118.4
27.5°	2243.4	1436.8	412.9	223.0	178.9	148.6	126.6	112.8	107.3	104.6	104.6
30°	2375.5	1425.9	319.3	198.1	156.9	129.4	110.1	99.1	93.6	90.8	90.8
32.5°	2513.2	1398.4	256.0	176.2	137.6	110.1	93.6	85.3	82.6	79.8	79.8
35°	2659.1	1362.6	220.2	156.9	118.4	96.4	82.6	77.0	74.4	71.6	71.6
37.5°	2829.7	1318.5	200.9	140.3	104.6	85.3	71.6	68.8	66.1	66.1	66.1
40°	3022.4	1263.4	187.2	126.6	93.6	74.4	63.3	60.6	57.8	57.8	57.8
42.5°	3226.1	1200.1	173.4	112.8	82.6	63.3	55.0	55.0	52.3	52.3	49.5
45°	3454.6	1136.8	159.7	99.1	71.6	55.0	46.7	44.1	44.1	41.3	41.3
47.5°	3724.4	1079.0	145.9	88.1	63.3	46.7	41.3	38.6	35.8	33.0	33.0
50°	4104.2	1073.5	129.4	77.0	57.8	38.6	33.0	30.3	27.5	24.8	24.8
52.5°	4481.3	1024.0	110.1	63.3	46.7	33.0	24.8	22.0	19.2	19.2	16.5
55°	4566.7	941.4	96.4	55.0	35.8	24.8	19.2	13.8	13.8	11.0	11.0
57.5°	4753.9	902.9	82.6	44.1	27.5	19.2	11.0	8.3	8.3	8.3	8.3
60°	5122.6	891.8	71.6	38.6	19.2	13.8	8.3	5.5	5.5	2.8	2.8
62.5°	5631.9	880.9	60.6	33.0	13.8	8.3	5.5	2.8	0.0	0.0	0.0
65°	5912.7	806.5	49.5	24.8	11.0	8.3	2.8	0.0	0.0	0.0	0.0
67.5°	5838.4	666.1	44.1	16.5	8.3	5.5	2.8	0.0	0.0	0.0	0.0
69°	5527.3	561.5	35.8	13.8	8.3	5.5	2.8	0.0	0.0	0.0	0.0
70°	5152.9	484.5	33.0	11.0	5.5	2.8	2.8	0.0	0.0	0.0	0.0
72.5°	3658.3	253.3	22.0	8.3	5.5	2.8	0.0	0.0	0.0	0.0	0.0
75°	1709.4	112.8	13.8	5.5	2.8	2.8	0.0	0.0	0.0	0.0	0.0
77.5°	377.2	52.3	8.3	5.5	2.8	0.0	0.0	0.0	0.0	0.0	0.0
80°	71.6	19.2	5.5	2.8	2.8	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	24.8	8.3	2.8	2.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	8.3	2.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	2.8	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)