

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: P231099

Luminaire Tested: **ARCH-M-AF48-150-D-U-T2R-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P231099
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-AF48-150-D-U-T2R-HSS
Description: ARCHEON-M ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 4000K, 970mA 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: 14873.7 lumens
Efficiency: N/A
Efficacy: 98.5 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): 151
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

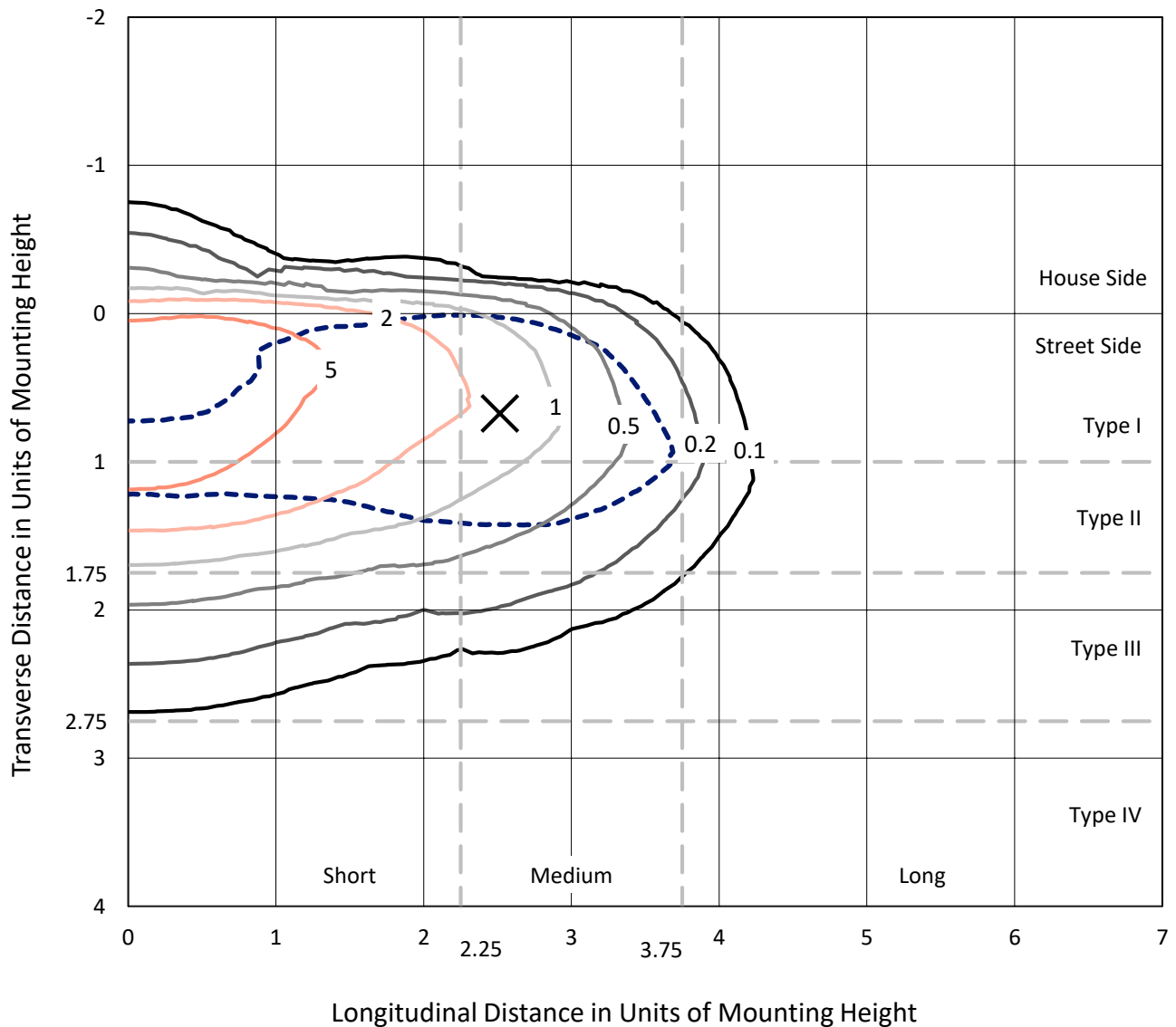


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Iso-Footcandle Lines of Horizontal Illumination

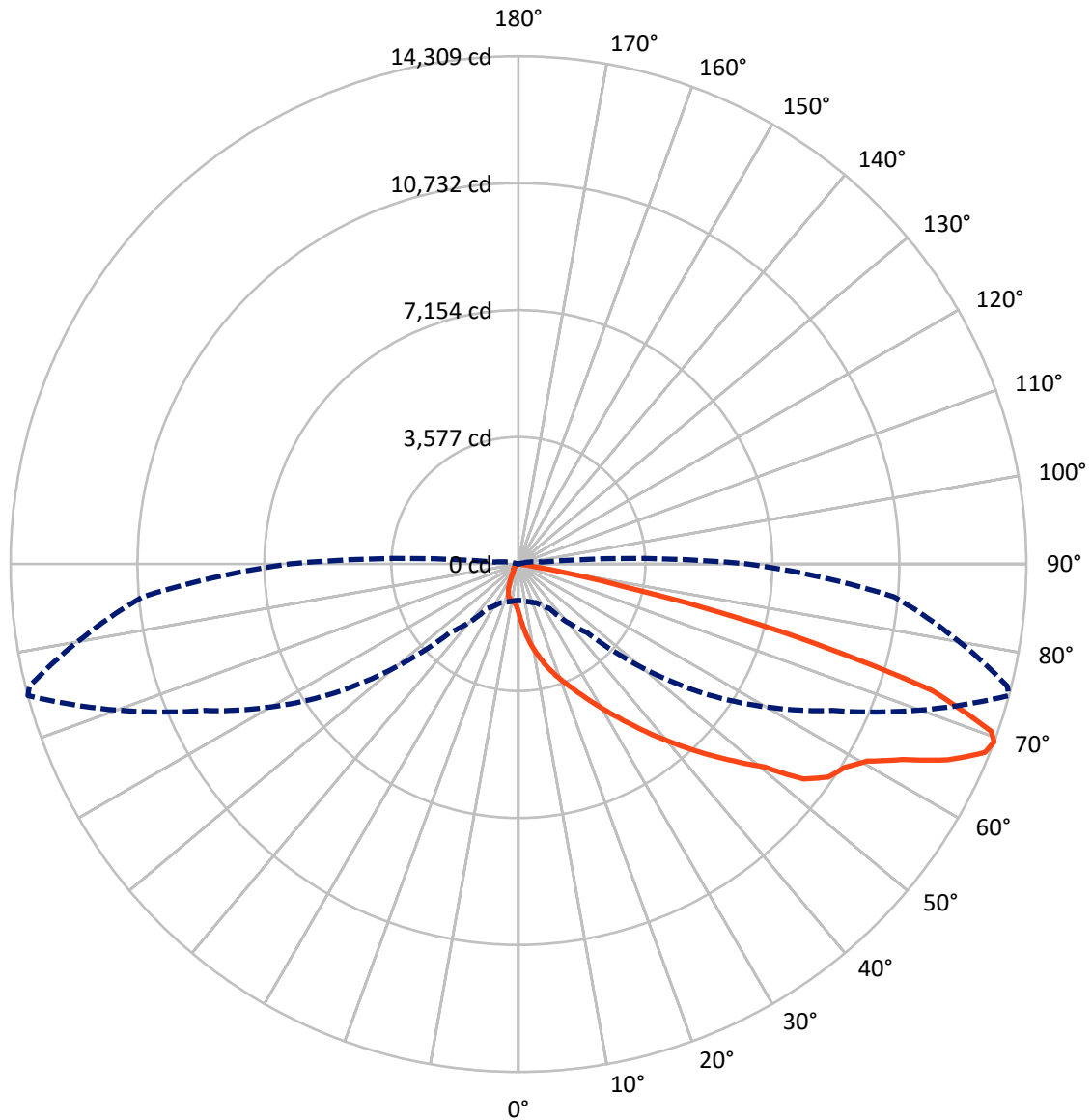
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 9.5 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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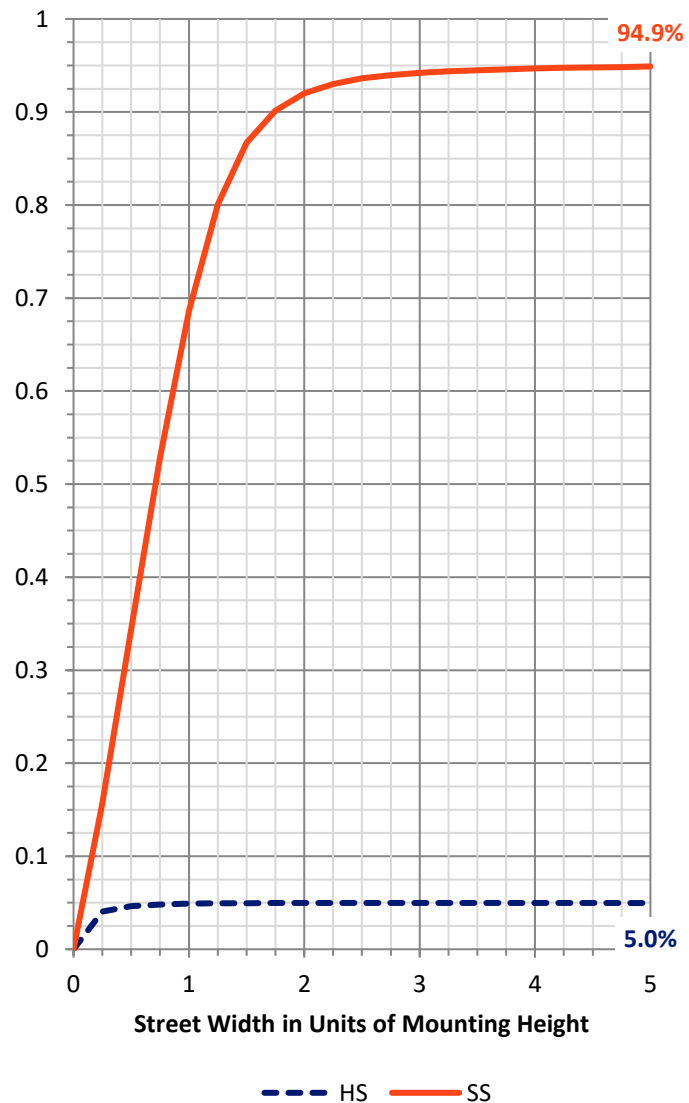
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	742.1	0.0	742.1
	% Fixture	5.0	0.0	5.0
Street Side	Lumens	14131.6	0.0	14131.6
	% Fixture	95.0	0.0	95.0
Total	Lumens	14873.7	0.0	14873.7
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	161.4	1.1
10°-20°	577.0	3.9
20°-30°	1101.4	7.4
30°-40°	1975.8	13.3
40°-50°	3027.0	20.4
50°-60°	3518.2	23.7
60°-70°	3115.4	20.9
70°-80°	1343.8	9.0
80°-90°	53.8	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°	14873.7	100.0
0°-180°	14873.7	100.0

Coefficient of Utilization



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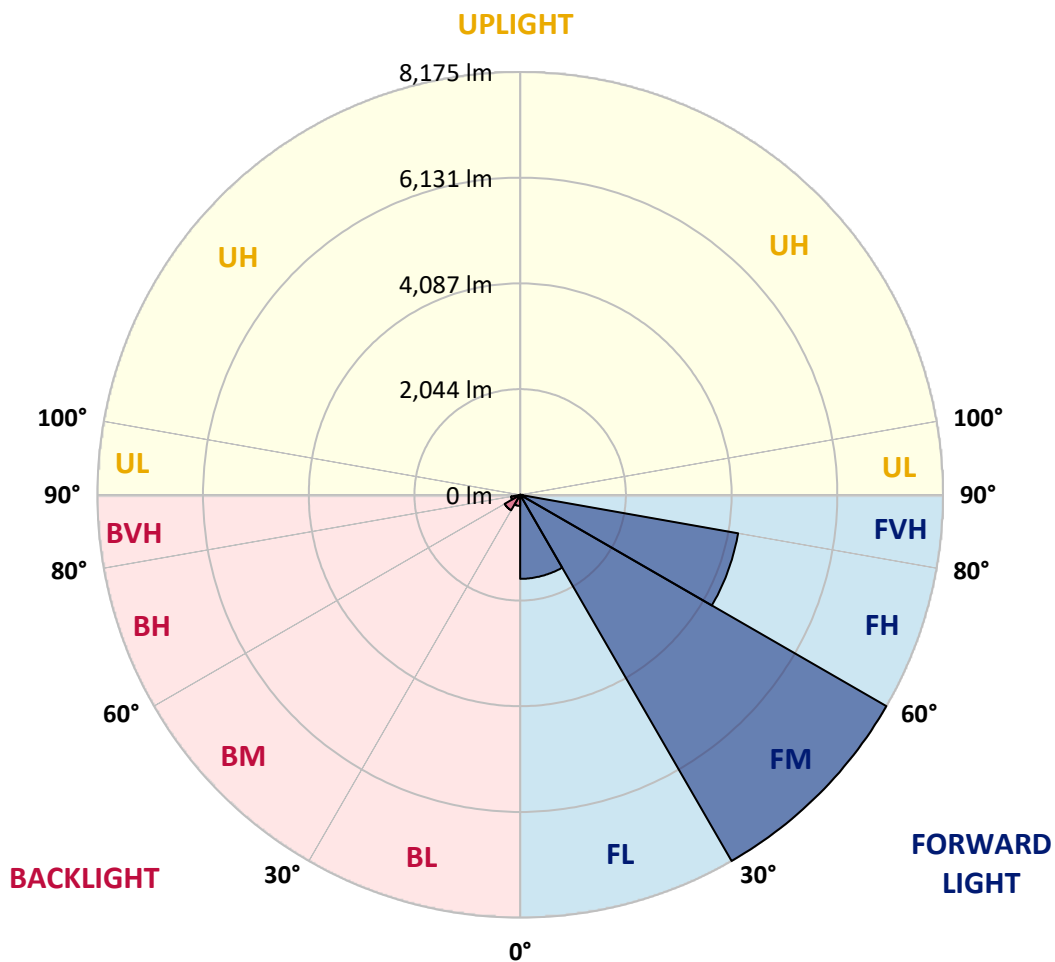
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1624.2	10.9			
FM	(30°-60°)	8175.0	55.0			
FH	(60°-80°)	4279.4	28.8			G2/5000
FVH	(80°-90°)	53.1	0.4			G1/100
BL	(0°-30°)	215.5	1.4	B1/500		
BM	(30°-60°)	346.0	2.3	B1/1000		
BH	(60°-80°)	179.8	1.2	B1/500		G1/500
BVH	(80°-90°)	0.8	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°	1384.0	1384.0	1384.0	1384.0	1384.0	1384.0	1384.0	1384.0	1384.0	1384.0	1384.0
2.5°	2279.9	2257.4	2234.9	2209.3	2151.5	2051.9	1926.6	1791.8	1624.9	1595.9	1461.1
5°	2768.0	2758.4	2735.9	2700.6	2636.3	2527.2	2385.8	2186.8	1907.4	1859.2	1573.4
7.5°	3111.6	3105.2	3085.9	3044.1	2986.3	2877.2	2729.4	2514.3	2189.9	2135.4	1714.8
10°	3419.8	3416.7	3400.6	3362.0	3304.2	3185.5	3028.0	2803.3	2459.7	2398.7	1878.5
12.5°	3699.2	3702.5	3696.0	3676.7	3635.0	3522.6	3342.8	3098.7	2719.8	2652.4	2074.3
15°	3863.0	3872.6	3898.3	3936.8	3949.7	3859.8	3673.5	3403.8	2986.3	2928.5	2299.2
17.5°	3808.3	3818.1	3898.3	4029.9	4155.2	4168.0	4001.1	3692.8	3249.6	3191.8	2520.8
20°	3676.7	3689.6	3773.1	3952.9	4197.0	4367.1	4299.7	4007.5	3500.1	3429.4	2732.7
22.5°	3824.4	3824.4	3850.2	3959.3	4180.9	4447.4	4537.3	4322.2	3757.0	3670.3	2944.6
25°	4331.8	4322.2	4267.5	4222.6	4293.2	4530.9	4717.1	4643.3	4058.9	3959.3	3169.4
27.5°	4974.0	5019.0	4916.2	4752.4	4591.9	4694.6	4877.7	4961.2	4392.9	4290.1	3400.6
30°	5693.3	5712.6	5590.5	5372.2	5089.6	4990.1	5067.2	5234.1	4755.7	4643.3	3641.4
32.5°	6342.0	6325.9	6223.1	5995.2	5645.2	5430.0	5311.2	5452.5	5150.7	5022.2	3888.6
35°	6916.8	6929.6	6804.4	6541.1	6197.4	5969.4	5686.9	5699.8	5593.8	5446.1	4174.5
37.5°	7433.8	7411.3	7292.4	7029.1	6717.6	6470.4	6171.8	5956.6	6078.7	5924.5	4495.6
40°	7854.4	7831.9	7706.7	7449.8	7157.6	6955.2	6720.9	6300.3	6589.2	6412.6	4839.2
42.5°	8188.3	8162.6	8056.7	7809.4	7526.9	7347.0	7234.6	6724.1	7135.1	6958.5	5224.5
45°	8352.1	8329.7	8265.4	8079.2	7831.9	7674.6	7729.2	7212.2	7719.5	7571.8	5648.3
47.5°	8159.5	8149.8	8223.7	8191.6	8050.3	7966.7	8156.3	7745.3	8332.9	8188.3	6136.5
50°	7575.1	7591.1	7806.2	8072.7	8140.2	8239.8	8506.2	8307.2	8991.1	8837.0	6698.4
52.5°	6133.2	6242.5	6891.1	7533.3	8031.0	8406.7	8917.3	9110.0	10063.7	9912.7	7575.1
55°	4579.0	4624.0	5330.5	6428.6	7591.1	8393.8	9222.3	9582.0	10593.5	10439.3	7806.2
57.5°	3631.8	3647.8	3997.8	5118.5	6685.6	8104.8	9382.9	9752.2	10824.7	10696.3	8149.8
60°	2851.5	2870.7	3124.4	3895.1	5410.7	7324.5	9151.7	9899.9	11277.4	11174.7	8750.3
62.5°	2218.9	2238.1	2392.3	2845.0	4058.9	6123.6	8686.1	10137.5	12138.0	12089.8	9732.9
65°	1717.9	1724.4	1830.4	2042.3	2867.5	4823.1	8117.7	10359.1	13300.5	13258.7	10529.2
67.5°	1268.4	1278.1	1351.9	1483.6	1936.3	3464.8	7186.5	10188.9	14177.1	14055.0	10818.2
69°	1024.4	1034.0	1098.2	1204.2	1528.5	2729.4	6335.5	9768.3	14308.7	14193.1	10635.2
70°	876.7	883.0	947.3	1037.2	1303.8	2318.4	5661.2	9405.4	14135.3	14022.9	10217.7
72.5°	561.9	594.0	658.3	716.1	863.8	1534.9	3821.2	7799.8	12195.8	12003.2	8002.1
75°	311.5	321.1	436.7	507.4	574.8	998.7	2125.8	4864.8	7758.1	7623.2	4280.4
77.5°	256.9	263.3	308.3	385.3	385.3	558.7	802.8	1917.0	2951.0	2662.0	1159.2
80°	179.8	186.3	234.5	253.7	276.2	314.7	260.1	420.6	455.9	404.6	173.4
82.5°	125.2	131.7	160.6	208.7	221.6	147.7	96.4	125.2	131.7	131.7	67.4
85°	22.5	32.1	118.8	173.4	131.7	44.9	54.6	44.9	41.7	44.9	16.1
87.5°	0.0	0.0	73.9	83.5	70.7	19.2	22.5	16.1	9.6	12.9	6.4
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°	1384.0	1384.0	1384.0	1384.0	1384.0	1384.0	1384.0	1384.0	1384.0	1384.0	1384.0
2.5°	1393.7	1326.2	1210.6	1127.1	1056.5	1001.9	979.4	944.1	918.4	931.2	915.1
5°	1432.1	1313.4	1127.1	1008.3	924.8	854.2	796.4	751.4	716.1	709.6	703.3
7.5°	1493.2	1323.0	1078.9	931.2	806.0	696.8	606.9	539.5	488.0	488.0	468.8
10°	1576.7	1348.7	1050.1	854.2	667.9	520.2	430.3	366.1	340.3	337.2	330.7
12.5°	1692.3	1396.8	1027.6	754.6	520.2	378.9	324.3	301.9	292.3	289.0	285.8
15°	1849.6	1467.5	1001.9	632.6	395.0	311.5	289.0	269.8	260.1	256.9	253.7
17.5°	2000.5	1531.7	947.3	507.4	321.1	282.5	256.9	240.8	228.0	224.7	224.7
20°	2141.9	1586.3	854.2	395.0	289.0	253.7	228.0	208.7	195.9	192.6	192.6
22.5°	2289.6	1631.3	738.6	321.1	263.3	224.7	199.1	179.8	166.9	163.8	160.6
25°	2446.9	1663.3	606.9	285.8	237.6	199.1	170.2	154.2	144.5	141.3	138.1
27.5°	2617.0	1676.2	481.7	260.1	208.7	173.4	147.7	131.7	125.2	122.0	122.0
30°	2771.2	1663.3	372.5	231.2	183.0	150.9	128.5	115.6	109.1	106.0	106.0
32.5°	2931.8	1631.3	298.6	205.5	160.6	128.5	109.1	99.5	96.4	93.1	93.1
35°	3101.9	1589.5	256.9	183.0	138.1	112.4	96.4	89.9	86.7	83.5	83.5
37.5°	3301.1	1538.1	234.5	163.8	122.0	99.5	83.5	80.3	77.0	77.0	77.0
40°	3525.8	1473.9	218.4	147.7	109.1	86.7	73.9	70.7	67.4	67.4	67.4
42.5°	3763.4	1400.0	202.3	131.7	96.4	73.9	64.2	64.2	61.0	61.0	57.8
45°	4029.9	1326.2	186.3	115.6	83.5	64.2	54.6	51.4	51.4	48.2	48.2
47.5°	4344.7	1258.7	170.2	102.8	73.9	54.6	48.2	44.9	41.7	38.6	38.6
50°	4787.8	1252.3	150.9	89.9	67.4	44.9	38.6	35.3	32.1	28.9	28.9
52.5°	5227.7	1194.5	128.5	73.9	54.6	38.6	28.9	25.7	22.5	22.5	19.2
55°	5327.2	1098.2	112.4	64.2	41.7	28.9	22.5	16.1	16.1	12.9	12.9
57.5°	5545.6	1053.2	96.4	51.4	32.1	22.5	12.9	9.6	9.6	9.6	9.6
60°	5975.9	1040.4	83.5	44.9	22.5	16.1	9.6	6.4	6.4	3.2	3.2
62.5°	6569.9	1027.6	70.7	38.6	16.1	9.6	6.4	3.2	0.0	0.0	0.0
65°	6897.5	940.8	57.8	28.9	12.9	9.6	3.2	0.0	0.0	0.0	0.0
67.5°	6810.8	777.1	51.4	19.2	9.6	6.4	3.2	0.0	0.0	0.0	0.0
69°	6448.0	655.1	41.7	16.1	9.6	6.4	3.2	0.0	0.0	0.0	0.0
70°	6011.2	565.2	38.6	12.9	6.4	3.2	3.2	0.0	0.0	0.0	0.0
72.5°	4267.5	295.4	25.7	9.6	6.4	3.2	0.0	0.0	0.0	0.0	0.0
75°	1994.1	131.7	16.1	6.4	3.2	3.2	0.0	0.0	0.0	0.0	0.0
77.5°	440.0	61.0	9.6	6.4	3.2	0.0	0.0	0.0	0.0	0.0	0.0
80°	83.5	22.5	6.4	3.2	3.2	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	28.9	9.6	3.2	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	9.6	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	3.2	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)