

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: P234804

Luminaire Tested: **ARCH-M-AF48-160-D-U-T2R-8027-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P234804
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-AF48-160-D-U-T2R-8027-HSS
Description: ARCHEON-M ROADWAY AND AREA LUMINAIRE
(2) 80 CRI, 2700K, 1030mA 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: 11756 lumens
Efficiency: N/A
Efficacy: 73.0 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): 161
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

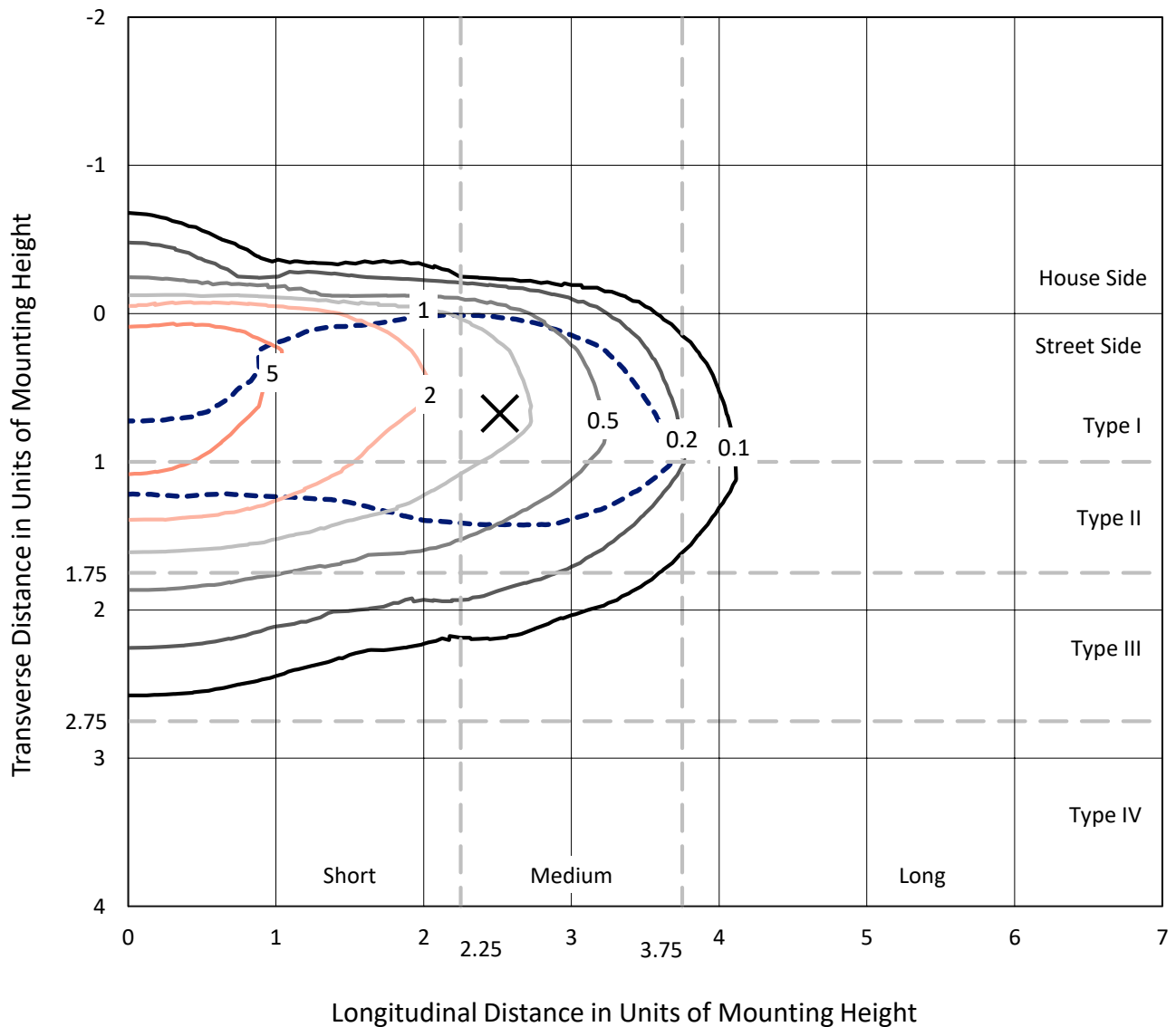


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

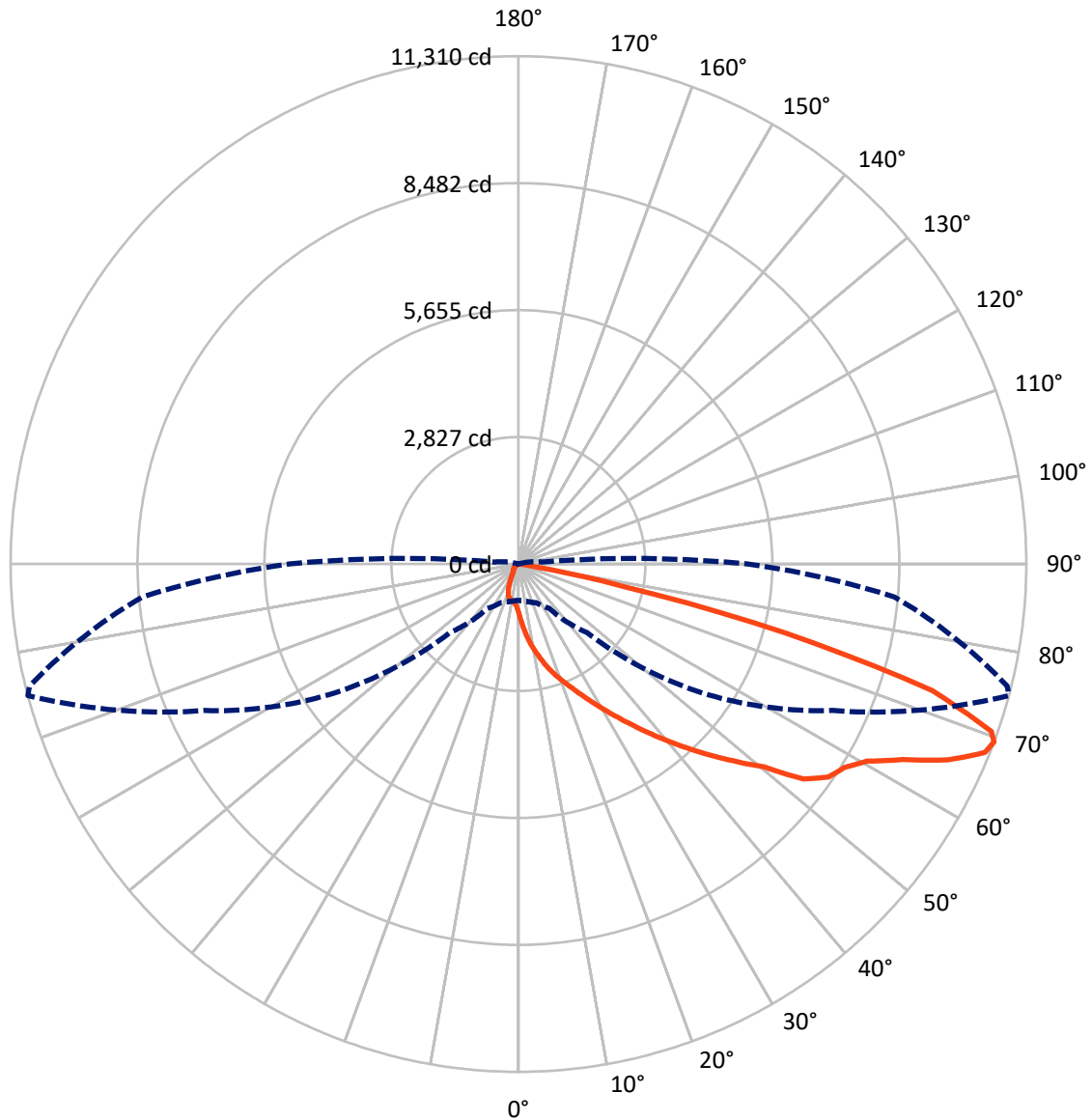


Based on 20 foot mounting height. Maximum calculated value = 7.5 fc
 Type II - Medium - Full Cutoff

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Luminous Intensity Polar Plot



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

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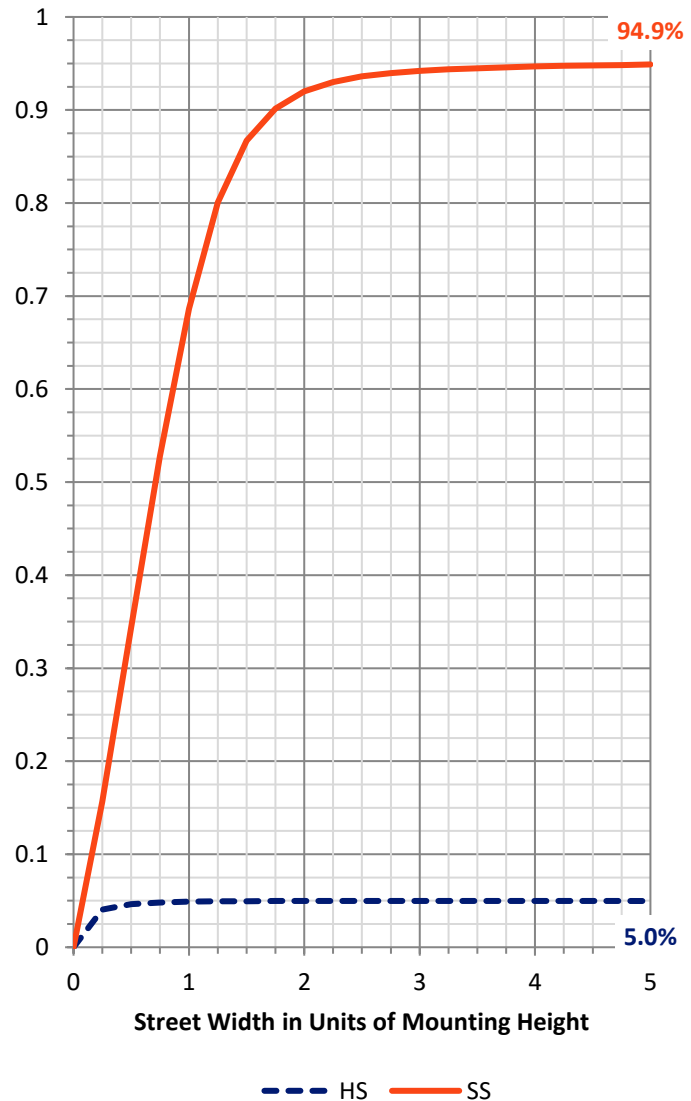
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	586.5	0.0	586.5
	% Fixture	5.0	0.0	5.0
Street Side	Lumens	11169.5	0.0	11169.5
	% Fixture	95.0	0.0	95.0
Total	Lumens	11756.0	0.0	11756.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	127.6	1.1
10°-20°	456.0	3.9
20°-30°	870.6	7.4
30°-40°	1561.6	13.3
40°-50°	2392.5	20.4
50°-60°	2780.7	23.7
60°-70°	2462.4	20.9
70°-80°	1062.1	9.0
80°-90°	42.5	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°	11756.0	100.0
0°-180°	11756.0	100.0



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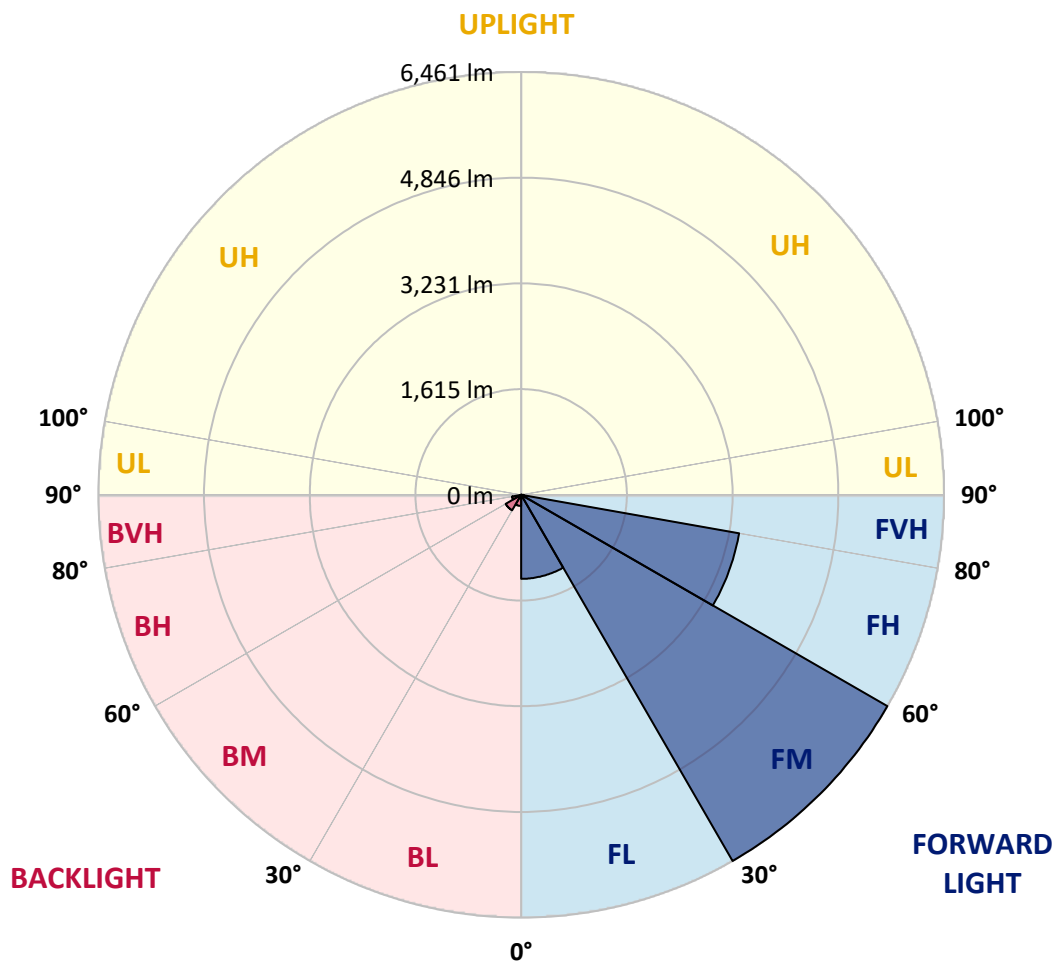
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1283.8	10.9			
FM	(30°-60°)	6461.4	55.0			
FH	(60°-80°)	3382.4	28.8			G2/5000
FVH	(80°-90°)	41.9	0.4			G1/100
BL	(0°-30°)	170.4	1.4	B1/500		
BM	(30°-60°)	273.5	2.3	B1/1000		
BH	(60°-80°)	142.1	1.2	B1/500		G1/500
BVH	(80°-90°)	0.6	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°	1093.9	1093.9	1093.9	1093.9	1093.9	1093.9	1093.9	1093.9	1093.9	1093.9	1093.9
2.5°	1802.0	1784.2	1766.5	1746.2	1700.5	1621.8	1522.8	1416.2	1284.2	1261.4	1154.8
5°	2187.8	2180.2	2162.4	2134.5	2083.7	1997.4	1885.8	1728.4	1507.6	1469.5	1243.6
7.5°	2459.4	2454.3	2439.0	2406.1	2360.4	2274.1	2157.3	1987.3	1730.9	1687.8	1355.3
10°	2703.0	2700.5	2687.8	2657.3	2611.6	2517.7	2393.4	2215.7	1944.1	1895.9	1484.7
12.5°	2923.8	2926.3	2921.3	2906.0	2873.1	2784.2	2642.1	2449.2	2149.7	2096.4	1639.6
15°	3053.3	3060.9	3081.2	3111.6	3121.8	3050.7	2903.5	2690.3	2360.4	2314.7	1817.2
17.5°	3010.1	3017.7	3081.2	3185.2	3284.2	3294.4	3162.4	2918.7	2568.5	2522.8	1992.4
20°	2906.0	2916.2	2982.2	3124.3	3317.2	3451.7	3398.4	3167.5	2766.5	2710.6	2159.9
22.5°	3022.8	3022.8	3043.1	3129.4	3304.5	3515.2	3586.2	3416.2	2969.5	2901.0	2327.4
25°	3423.8	3416.2	3373.0	3337.5	3393.3	3581.2	3728.4	3670.0	3208.1	3129.4	2505.0
27.5°	3931.4	3966.9	3885.7	3756.3	3629.4	3710.6	3855.3	3921.3	3472.0	3390.8	2687.8
30°	4499.9	4515.2	4418.7	4246.1	4022.8	3944.1	4005.0	4137.0	3758.8	3670.0	2878.1
32.5°	5012.6	4999.9	4918.7	4738.5	4461.9	4291.8	4197.9	4309.6	4071.0	3969.5	3073.6
35°	5466.9	5477.1	5378.1	5170.0	4898.4	4718.2	4494.9	4505.0	4421.3	4304.5	3299.4
37.5°	5875.5	5857.8	5763.9	5555.8	5309.6	5114.1	4878.1	4708.0	4804.5	4682.7	3553.2
40°	6208.0	6190.3	6091.3	5888.2	5657.3	5497.4	5312.1	4979.6	5208.0	5068.4	3824.8
42.5°	6472.0	6451.7	6367.9	6172.5	5949.1	5807.0	5718.2	5314.6	5639.5	5499.9	4129.4
45°	6601.4	6583.7	6532.9	6385.7	6190.3	6065.9	6109.0	5700.4	6101.4	5984.7	4464.4
47.5°	6449.1	6441.5	6499.9	6474.5	6362.8	6296.9	6446.6	6121.7	6586.2	6472.0	4850.2
50°	5987.2	5999.9	6170.0	6380.6	6433.9	6512.6	6723.2	6565.9	7106.5	6984.7	5294.3
52.5°	4847.6	4933.9	5446.6	5954.2	6347.6	6644.6	7048.1	7200.4	7954.2	7834.9	5987.2
55°	3619.2	3654.8	4213.1	5081.1	5999.9	6634.4	7289.2	7573.5	8373.0	8251.1	6170.0
57.5°	2870.5	2883.2	3159.8	4045.6	5284.2	6406.0	7416.1	7708.0	8555.7	8454.2	6441.5
60°	2253.8	2269.0	2469.5	3078.6	4276.6	5789.2	7233.4	7824.7	8913.6	8832.3	6916.1
62.5°	1753.8	1769.0	1890.8	2248.7	3208.1	4840.0	6865.4	8012.6	9593.8	9555.7	7692.8
65°	1357.8	1362.9	1446.7	1614.2	2266.5	3812.1	6416.1	8187.7	10512.5	10479.5	8322.2
67.5°	1002.5	1010.1	1068.5	1172.6	1530.4	2738.5	5680.1	8053.2	11205.4	11109.0	8550.6
69°	809.6	817.2	868.0	951.8	1208.1	2157.3	5007.5	7720.7	11309.5	11218.1	8406.0
70°	692.9	698.0	748.7	819.8	1030.4	1832.5	4474.5	7433.9	11172.4	11083.6	8076.0
72.5°	444.2	469.5	520.3	566.0	682.7	1213.2	3020.3	6164.9	9639.4	9487.2	6324.8
75°	246.2	253.8	345.2	401.0	454.3	789.3	1680.2	3845.1	6131.9	6025.3	3383.2
77.5°	203.0	208.1	243.7	304.6	304.6	441.6	634.5	1515.2	2332.5	2104.0	916.2
80°	142.1	147.2	185.3	200.5	218.3	248.7	205.6	332.5	360.4	319.8	137.1
82.5°	99.0	104.1	126.9	165.0	175.1	116.7	76.1	99.0	104.1	104.1	53.3
85°	17.8	25.4	93.9	137.1	104.1	35.5	43.1	35.5	33.0	35.5	12.7
87.5°	0.0	0.0	58.4	66.0	55.8	15.2	17.8	12.7	7.6	10.2	5.1
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°	1093.9	1093.9	1093.9	1093.9	1093.9	1093.9	1093.9	1093.9	1093.9	1093.9	1093.9
2.5°	1101.5	1048.2	956.8	890.8	835.0	791.9	774.1	746.2	725.9	736.0	723.3
5°	1132.0	1038.1	890.8	796.9	731.0	675.1	629.4	593.9	566.0	560.9	555.8
7.5°	1180.2	1045.7	852.8	736.0	637.0	550.8	479.7	426.4	385.8	385.8	370.6
10°	1246.2	1066.0	829.9	675.1	527.9	411.2	340.1	289.3	269.0	266.5	261.4
12.5°	1337.5	1104.0	812.2	596.4	411.2	299.5	256.3	238.6	231.0	228.4	225.9
15°	1461.9	1159.9	791.9	500.0	312.2	246.2	228.4	213.2	205.6	203.0	200.5
17.5°	1581.2	1210.6	748.7	401.0	253.8	223.3	203.0	190.4	180.2	177.7	177.7
20°	1692.9	1253.8	675.1	312.2	228.4	200.5	180.2	165.0	154.8	152.3	152.3
22.5°	1809.6	1289.3	583.7	253.8	208.1	177.7	157.4	142.1	132.0	129.4	126.9
25°	1934.0	1314.7	479.7	225.9	187.8	157.4	134.5	121.8	114.2	111.7	109.1
27.5°	2068.5	1324.9	380.7	205.6	165.0	137.1	116.7	104.1	99.0	96.4	96.4
30°	2190.3	1314.7	294.4	182.7	144.7	119.3	101.5	91.4	86.3	83.8	83.8
32.5°	2317.2	1289.3	236.0	162.4	126.9	101.5	86.3	78.7	76.1	73.6	73.6
35°	2451.7	1256.3	203.0	144.7	109.1	88.8	76.1	71.1	68.5	66.0	66.0
37.5°	2609.1	1215.7	185.3	129.4	96.4	78.7	66.0	63.5	60.9	60.9	60.9
40°	2786.8	1165.0	172.6	116.7	86.3	68.5	58.4	55.8	53.3	53.3	53.3
42.5°	2974.6	1106.6	159.9	104.1	76.1	58.4	50.8	50.8	48.2	48.2	45.7
45°	3185.2	1048.2	147.2	91.4	66.0	50.8	43.1	40.6	40.6	38.1	38.1
47.5°	3434.0	994.9	134.5	81.2	58.4	43.1	38.1	35.5	33.0	30.5	30.5
50°	3784.2	989.8	119.3	71.1	53.3	35.5	30.5	27.9	25.4	22.8	22.8
52.5°	4131.9	944.1	101.5	58.4	43.1	30.5	22.8	20.3	17.8	17.8	15.2
55°	4210.6	868.0	88.8	50.8	33.0	22.8	17.8	12.7	12.7	10.2	10.2
57.5°	4383.2	832.5	76.1	40.6	25.4	17.8	10.2	7.6	7.6	7.6	7.6
60°	4723.3	822.3	66.0	35.5	17.8	12.7	7.6	5.1	5.1	2.5	2.5
62.5°	5192.8	812.2	55.8	30.5	12.7	7.6	5.1	2.5	0.0	0.0	0.0
65°	5451.7	743.6	45.7	22.8	10.2	7.6	2.5	0.0	0.0	0.0	0.0
67.5°	5383.2	614.2	40.6	15.2	7.6	5.1	2.5	0.0	0.0	0.0	0.0
69°	5096.4	517.8	33.0	12.7	7.6	5.1	2.5	0.0	0.0	0.0	0.0
70°	4751.2	446.7	30.5	10.2	5.1	2.5	2.5	0.0	0.0	0.0	0.0
72.5°	3373.0	233.5	20.3	7.6	5.1	2.5	0.0	0.0	0.0	0.0	0.0
75°	1576.1	104.1	12.7	5.1	2.5	2.5	0.0	0.0	0.0	0.0	0.0
77.5°	347.7	48.2	7.6	5.1	2.5	0.0	0.0	0.0	0.0	0.0	0.0
80°	66.0	17.8	5.1	2.5	2.5	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	22.8	7.6	2.5	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	7.6	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	2.5	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)