

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: P231087

Luminaire Tested: **ARCH-M-AF48-160-D-U-T2R-7030-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P231087
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-7030-HSS
Description: ARCHEON-M ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 3000K, 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: 13393 lumens
Efficiency: N/A
Efficacy: 83.2 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 (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

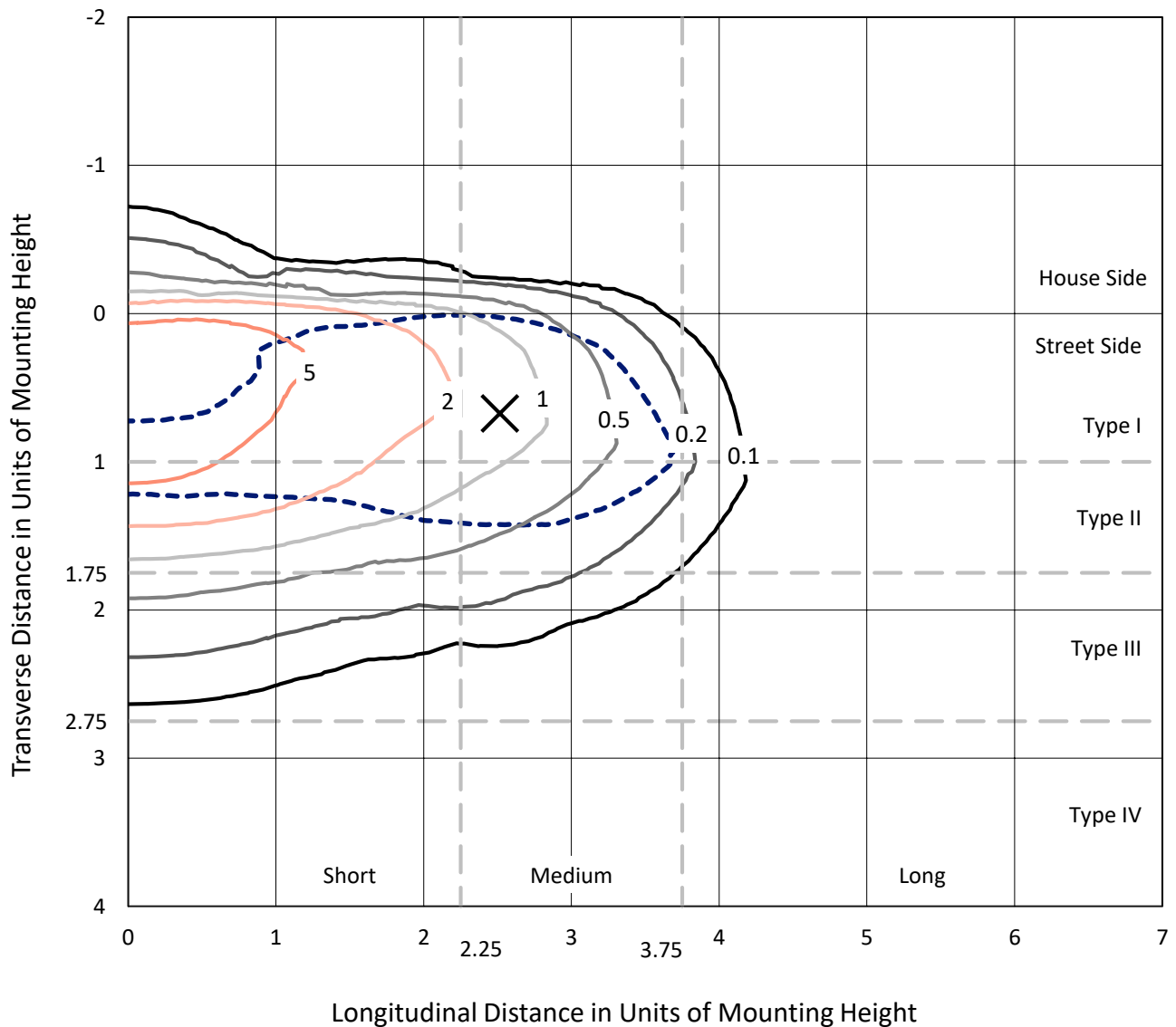


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

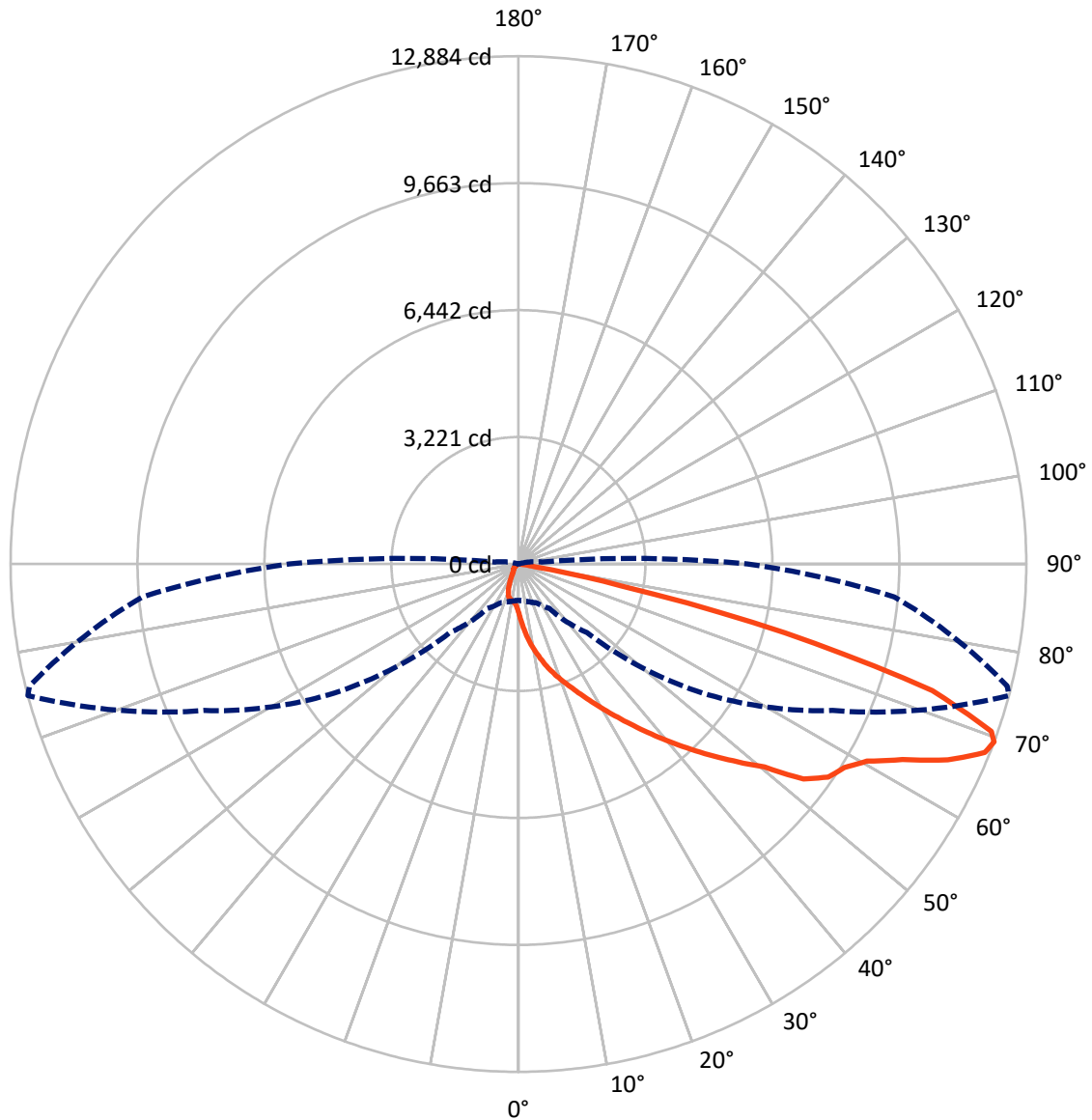


Based on 20 foot mounting height. Maximum calculated value = 8.5 fc
 Type II - Medium - Full Cutoff

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Luminous Intensity Polar Plot



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



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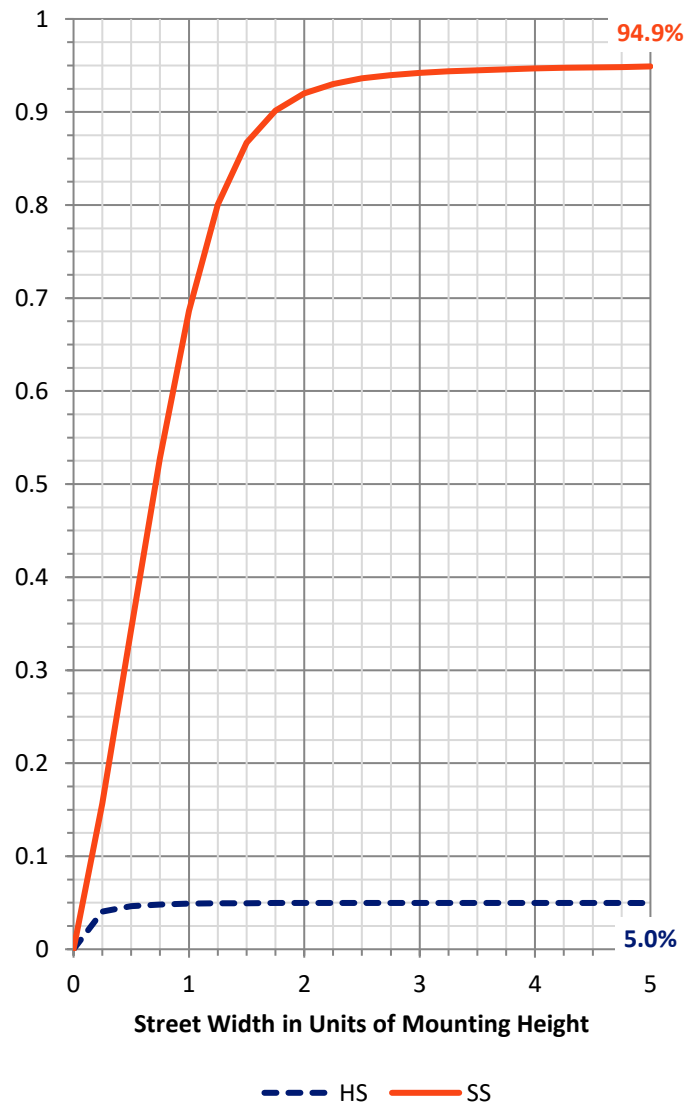
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	668.2	0.0	668.2
	% Fixture	5.0	0.0	5.0
Street Side	Lumens	12724.8	0.0	12724.8
	% Fixture	95.0	0.0	95.0
Total	Lumens	13393.0	0.0	13393.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	145.3	1.1
10°-20°	519.5	3.9
20°-30°	991.8	7.4
30°-40°	1779.1	13.3
40°-50°	2725.7	20.4
50°-60°	3167.9	23.7
60°-70°	2805.2	20.9
70°-80°	1210.0	9.0
80°-90°	48.5	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°	13393.0	100.0
0°-180°	13393.0	100.0

Coefficient of Utilization



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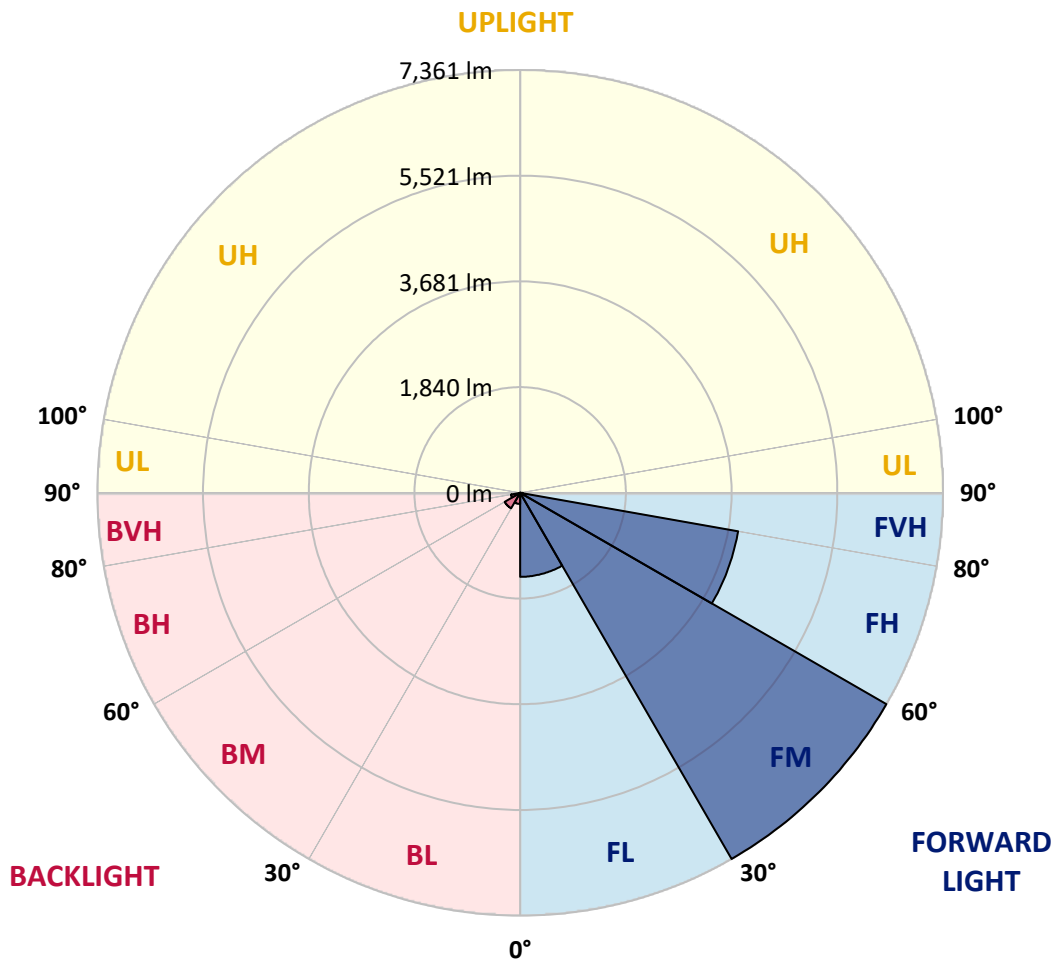
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1462.5	10.9			
FM	(30°-60°)	7361.1	55.0			
FH	(60°-80°)	3853.3	28.8			G2/5000
FVH	(80°-90°)	47.8	0.4			G1/100
BL	(0°-30°)	194.1	1.4	B1/500		
BM	(30°-60°)	311.5	2.3	B1/1000		
BH	(60°-80°)	161.9	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°	1246.2	1246.2	1246.2	1246.2	1246.2	1246.2	1246.2	1246.2	1246.2	1246.2	1246.2
2.5°	2052.9	2032.7	2012.4	1989.3	1937.3	1847.6	1734.9	1613.4	1463.1	1437.0	1315.6
5°	2492.4	2483.8	2463.5	2431.7	2373.9	2275.6	2148.3	1969.1	1717.5	1674.1	1416.8
7.5°	2801.8	2796.0	2778.7	2741.1	2689.0	2590.7	2457.7	2264.0	1972.0	1922.8	1544.0
10°	3079.4	3076.5	3062.0	3027.3	2975.3	2868.3	2726.6	2524.2	2214.8	2159.9	1691.5
12.5°	3330.9	3333.8	3328.1	3310.7	3273.1	3171.9	3010.0	2790.2	2449.1	2388.3	1867.9
15°	3478.4	3487.1	3510.2	3544.9	3556.5	3475.5	3307.8	3064.9	2689.0	2637.0	2070.3
17.5°	3429.3	3437.9	3510.2	3628.8	3741.5	3753.1	3602.7	3325.2	2926.1	2874.1	2269.8
20°	3310.7	3322.3	3397.5	3559.4	3779.1	3932.4	3871.6	3608.5	3151.7	3088.1	2460.6
22.5°	3443.7	3443.7	3466.8	3565.2	3764.7	4004.7	4085.6	3891.9	3383.0	3304.9	2651.5
25°	3900.6	3891.9	3842.7	3802.3	3865.9	4079.8	4247.5	4181.0	3654.8	3565.2	2853.9
27.5°	4478.9	4519.3	4426.8	4279.3	4134.8	4227.3	4392.1	4467.3	3955.5	3863.0	3062.0
30°	5126.5	5143.9	5034.0	4837.4	4582.9	4493.3	4562.7	4713.1	4282.2	4181.0	3278.9
32.5°	5710.6	5696.2	5603.6	5398.3	5083.2	4889.4	4782.5	4909.7	4637.9	4522.2	3501.5
35°	6228.2	6239.7	6127.0	5889.9	5580.5	5375.2	5120.8	5132.3	5036.9	4903.9	3758.9
37.5°	6693.7	6673.5	6566.5	6329.4	6048.9	5826.3	5557.4	5363.6	5473.5	5334.7	4048.0
40°	7072.5	7052.2	6939.5	6708.2	6445.0	6262.9	6051.8	5673.0	5933.2	5774.2	4357.4
42.5°	7373.2	7350.1	7254.6	7032.0	6777.6	6615.6	6514.4	6054.7	6424.8	6265.8	4704.4
45°	7520.7	7500.4	7442.6	7274.9	7052.2	6910.6	6959.7	6494.2	6951.0	6818.0	5086.1
47.5°	7347.2	7338.5	7405.0	7376.1	7248.9	7173.7	7344.3	6974.2	7503.3	7373.2	5525.6
50°	6820.9	6835.4	7029.1	7269.1	7329.8	7419.5	7659.4	7480.2	8096.1	7957.3	6031.6
52.5°	5522.7	5621.0	6205.0	6783.3	7231.5	7569.8	8029.5	8203.0	9061.8	8925.9	6820.9
55°	4123.2	4163.7	4799.8	5788.7	6835.4	7558.2	8304.2	8628.1	9538.9	9400.1	7029.1
57.5°	3270.2	3284.7	3599.9	4609.0	6020.0	7298.0	8448.8	8781.3	9747.1	9631.4	7338.5
60°	2567.6	2585.0	2813.4	3507.3	4872.1	6595.4	8240.6	8914.3	10154.8	10062.2	7879.2
62.5°	1998.0	2015.3	2154.1	2561.8	3654.8	5514.0	7821.4	9128.3	10929.7	10886.3	8764.0
65°	1546.9	1552.7	1648.1	1839.0	2582.1	4343.0	7309.6	9327.8	11976.4	11938.8	9481.1
67.5°	1142.1	1150.8	1217.3	1335.8	1743.5	3119.9	6471.1	9174.6	12765.7	12655.9	9741.3
69°	922.4	931.0	988.9	1084.3	1376.3	2457.7	5704.8	8795.8	12884.3	12780.2	9576.5
70°	789.4	795.1	853.0	933.9	1173.9	2087.6	5097.6	8469.0	12728.1	12626.9	9200.6
72.5°	506.0	534.9	592.7	644.8	777.8	1382.1	3440.8	7023.3	10981.7	10808.2	7205.5
75°	280.5	289.1	393.2	456.8	517.6	899.2	1914.1	4380.5	6985.7	6864.3	3854.3
77.5°	231.3	237.1	277.6	347.0	347.0	503.1	722.9	1726.2	2657.2	2397.0	1043.8
80°	161.9	167.7	211.1	228.4	248.7	283.4	234.2	378.8	410.6	364.3	156.1
82.5°	112.8	118.5	144.6	187.9	199.5	133.0	86.7	112.8	118.5	118.5	60.7
85°	20.2	28.9	107.0	156.1	118.5	40.5	49.2	40.5	37.6	40.5	14.5
87.5°	0.0	0.0	66.5	75.2	63.6	17.3	20.2	14.5	8.7	11.6	5.8
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°	1246.2	1246.2	1246.2	1246.2	1246.2	1246.2	1246.2	1246.2	1246.2	1246.2	1246.2
2.5°	1254.9	1194.2	1090.1	1014.9	951.3	902.1	881.9	850.1	827.0	838.5	824.1
5°	1289.6	1182.6	1014.9	907.9	832.7	769.1	717.1	676.6	644.8	639.0	633.2
7.5°	1344.5	1191.3	971.5	838.5	725.8	627.4	546.5	485.8	439.5	439.5	422.2
10°	1419.7	1214.4	945.5	769.1	601.4	468.4	387.5	329.6	306.5	303.6	297.8
12.5°	1523.8	1257.8	925.3	679.5	468.4	341.2	292.0	271.8	263.1	260.2	257.3
15°	1665.5	1321.4	902.1	569.6	355.6	280.5	260.2	242.9	234.2	231.3	228.4
17.5°	1801.4	1379.2	853.0	456.8	289.1	254.4	231.3	216.9	205.3	202.4	202.4
20°	1928.6	1428.4	769.1	355.6	260.2	228.4	205.3	187.9	176.4	173.5	173.5
22.5°	2061.6	1468.9	665.0	289.1	237.1	202.4	179.3	161.9	150.4	147.5	144.6
25°	2203.3	1497.8	546.5	257.3	214.0	179.3	153.2	138.8	130.1	127.2	124.3
27.5°	2356.5	1509.3	433.7	234.2	187.9	156.1	133.0	118.5	112.8	109.9	109.9
30°	2495.3	1497.8	335.4	208.2	164.8	135.9	115.7	104.1	98.3	95.4	95.4
32.5°	2639.9	1468.9	268.9	185.1	144.6	115.7	98.3	89.6	86.7	83.9	83.9
35°	2793.1	1431.3	231.3	164.8	124.3	101.2	86.7	81.0	78.1	75.2	75.2
37.5°	2972.4	1385.0	211.1	147.5	109.9	89.6	75.2	72.3	69.4	69.4	69.4
40°	3174.8	1327.2	196.6	133.0	98.3	78.1	66.5	63.6	60.7	60.7	60.7
42.5°	3388.8	1260.7	182.2	118.5	86.7	66.5	57.8	57.8	54.9	54.9	52.0
45°	3628.8	1194.2	167.7	104.1	75.2	57.8	49.2	46.3	46.3	43.4	43.4
47.5°	3912.1	1133.4	153.2	92.5	66.5	49.2	43.4	40.5	37.6	34.7	34.7
50°	4311.1	1127.7	135.9	81.0	60.7	40.5	34.7	31.8	28.9	26.0	26.0
52.5°	4707.3	1075.6	115.7	66.5	49.2	34.7	26.0	23.1	20.2	20.2	17.3
55°	4796.9	988.9	101.2	57.8	37.6	26.0	20.2	14.5	14.5	11.6	11.6
57.5°	4993.5	948.4	86.7	46.3	28.9	20.2	11.6	8.7	8.7	8.7	8.7
60°	5381.0	936.8	75.2	40.5	20.2	14.5	8.7	5.8	5.8	2.9	2.9
62.5°	5915.9	925.3	63.6	34.7	14.5	8.7	5.8	2.9	0.0	0.0	0.0
65°	6210.8	847.2	52.0	26.0	11.6	8.7	2.9	0.0	0.0	0.0	0.0
67.5°	6132.8	699.7	46.3	17.3	8.7	5.8	2.9	0.0	0.0	0.0	0.0
69°	5806.0	589.9	37.6	14.5	8.7	5.8	2.9	0.0	0.0	0.0	0.0
70°	5412.8	508.9	34.7	11.6	5.8	2.9	2.9	0.0	0.0	0.0	0.0
72.5°	3842.7	266.0	23.1	8.7	5.8	2.9	0.0	0.0	0.0	0.0	0.0
75°	1795.6	118.5	14.5	5.8	2.9	2.9	0.0	0.0	0.0	0.0	0.0
77.5°	396.1	54.9	8.7	5.8	2.9	0.0	0.0	0.0	0.0	0.0	0.0
80°	75.2	20.2	5.8	2.9	2.9	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	26.0	8.7	2.9	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	8.7	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	2.9	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)