

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: P234708

Luminaire Tested: **ARCH-AF24-90-D-U-T2R-8027-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P234708  
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-AF24-90-D-U-T2R-8027-HSS  
Description: ARCHEON ROADWAY AND AREA LUMINAIRE  
(1) 80 CRI, 2700K, 1180mA LIGHT ENGINE 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: 5911 lumens  
Efficiency: N/A  
Efficacy: 62.9 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.75' x H: 0')  
IES Classification: Type II - Medium - Full Cutoff  
BUG Rating: B0 - U0 - G1

Input Watts (W): 94  
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

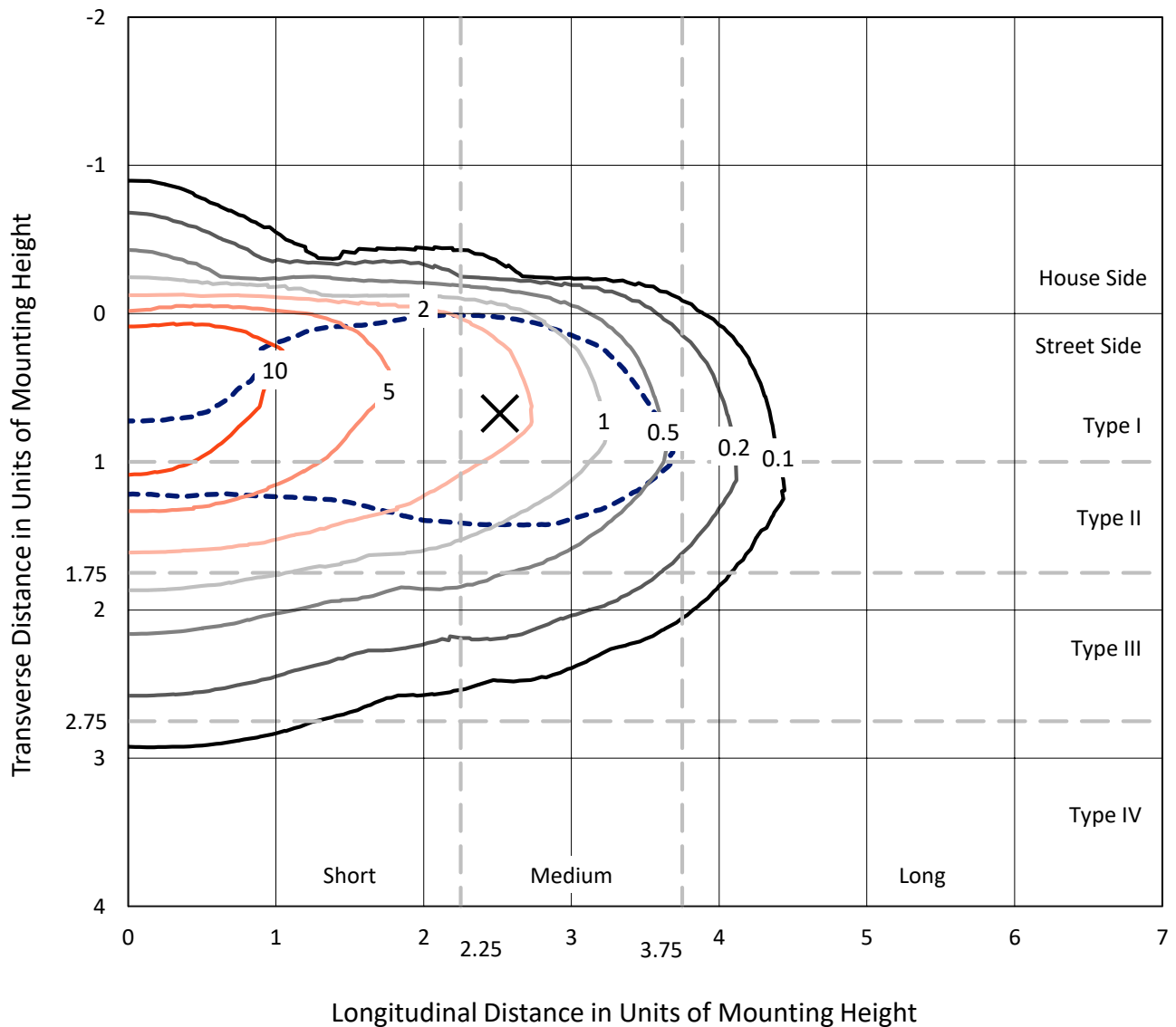


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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

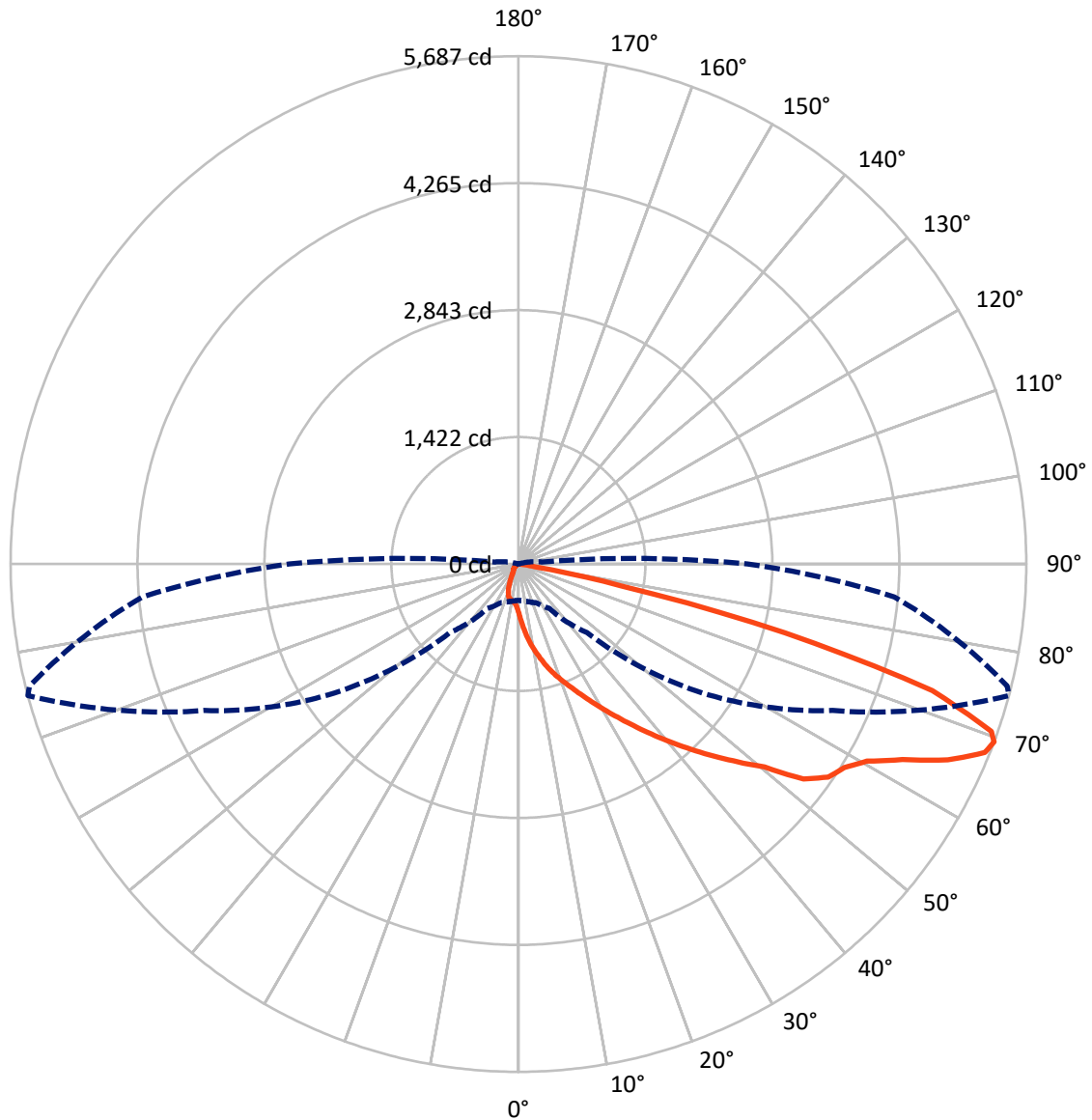


Based on 10 foot mounting height. Maximum calculated value = 15.1 fc  
 Type II - Medium - Full Cutoff

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### Luminous Intensity Polar Plot



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

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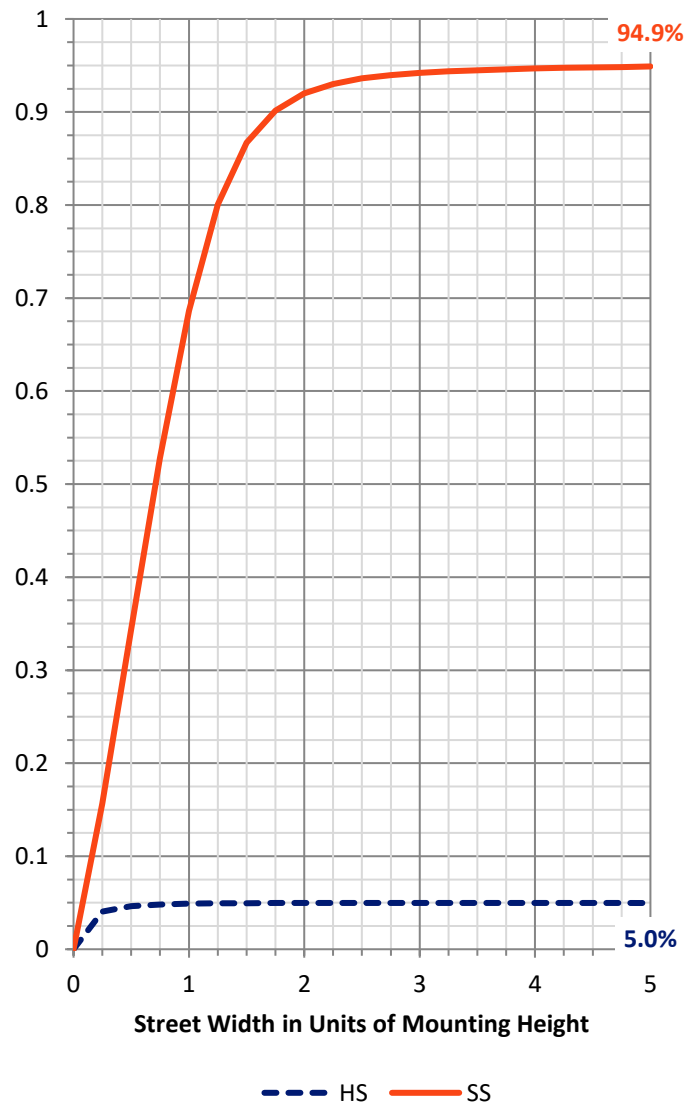
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	294.9	0.0	294.9
	% Fixture	5.0	0.0	5.0
<b>Street Side</b>	Lumens	5616.1	0.0	5616.1
	% Fixture	95.0	0.0	95.0
<b>Total</b>	Lumens	5911.0	0.0	5911.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	64.1	1.1
10°-20°	229.3	3.9
20°-30°	437.7	7.4
30°-40°	785.2	13.3
40°-50°	1203.0	20.4
50°-60°	1398.2	23.7
60°-70°	1238.1	20.9
70°-80°	534.0	9.0
80°-90°	21.4	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°	5911.0	100.0
0°-180°	5911.0	100.0

**Coefficient of Utilization**



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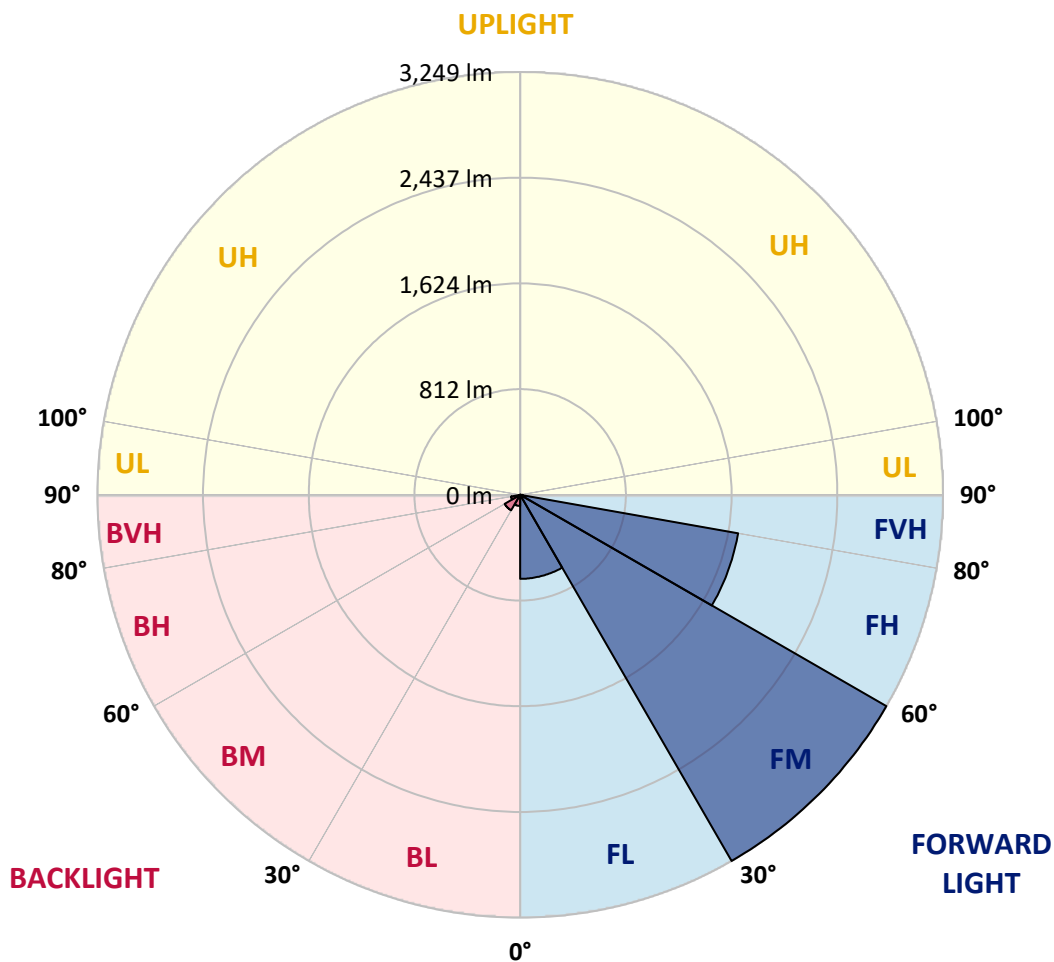
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	645.5	10.9			
FM	(30°-60°)	3248.8	55.0			
FH	(60°-80°)	1700.7	28.8			G1/1800
FVH	(80°-90°)	21.1	0.4			G1/100
BL	(0°-30°)	85.7	1.4	B0/110		
BM	(30°-60°)	137.5	2.3	B0/220		
BH	(60°-80°)	71.5	1.2	B0/110		G0/110
BVH	(80°-90°)	0.3	0.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B0-U0-G1**

Type II Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	76°	85°
0°	550.0	550.0	550.0	550.0	550.0	550.0	550.0	550.0	550.0	550.0	550.0
2.5°	906.1	897.1	888.2	878.0	855.0	815.5	765.7	712.1	645.7	634.2	580.6
5°	1100.0	1096.2	1087.3	1073.2	1047.7	1004.3	948.2	869.1	758.0	738.9	625.3
7.5°	1236.6	1234.0	1226.4	1209.8	1186.8	1143.4	1084.7	999.2	870.3	848.6	681.5
10°	1359.1	1357.8	1351.4	1336.1	1313.1	1265.9	1203.4	1114.1	977.5	953.3	746.5
12.5°	1470.1	1471.4	1468.8	1461.2	1444.6	1399.9	1328.5	1231.5	1080.9	1054.1	824.4
15°	1535.2	1539.0	1549.2	1564.5	1569.7	1533.9	1459.9	1352.7	1186.8	1163.8	913.7
17.5°	1513.5	1517.3	1549.2	1601.6	1651.3	1656.4	1590.1	1467.6	1291.5	1268.5	1001.8
20°	1461.2	1466.3	1499.5	1570.9	1667.9	1735.6	1708.8	1592.6	1391.0	1362.9	1086.0
22.5°	1519.9	1519.9	1530.1	1573.5	1661.5	1767.5	1803.2	1717.7	1493.1	1458.6	1170.2
25°	1721.5	1717.7	1696.0	1678.1	1706.2	1800.6	1874.6	1845.3	1613.0	1573.5	1259.6
27.5°	1976.7	1994.6	1953.8	1888.7	1824.9	1865.7	1938.5	1971.6	1745.8	1704.9	1351.4
30°	2262.6	2270.3	2221.8	2135.0	2022.7	1983.1	2013.7	2080.1	1890.0	1845.3	1447.1
32.5°	2520.4	2514.0	2473.2	2382.6	2243.5	2158.0	2110.7	2166.9	2046.9	1995.9	1545.4
35°	2748.8	2753.9	2704.1	2599.5	2463.0	2372.3	2260.0	2265.1	2223.0	2164.3	1659.0
37.5°	2954.3	2945.3	2898.1	2793.5	2669.7	2571.4	2452.7	2367.2	2415.7	2354.5	1786.6
40°	3121.4	3112.5	3062.7	2960.6	2844.5	2764.1	2671.0	2503.8	2618.6	2548.5	1923.1
42.5°	3254.2	3243.9	3201.8	3103.6	2991.3	2919.8	2875.1	2672.2	2835.6	2765.4	2076.3
45°	3319.2	3310.3	3284.8	3210.8	3112.5	3050.0	3071.7	2866.2	3067.8	3009.1	2244.7
47.5°	3242.7	3238.8	3268.2	3255.4	3199.3	3166.1	3241.4	3078.0	3311.6	3254.2	2438.7
50°	3010.4	3016.8	3102.3	3208.2	3235.0	3274.6	3380.5	3301.4	3573.2	3511.9	2662.0
52.5°	2437.4	2480.8	2738.6	2993.8	3191.6	3340.9	3543.8	3620.4	3999.4	3939.4	3010.4
55°	1819.8	1837.6	2118.4	2554.8	3016.8	3335.8	3665.1	3808.0	4210.0	4148.7	3102.3
57.5°	1443.3	1449.7	1588.8	2034.2	2656.9	3221.0	3728.9	3875.6	4301.9	4250.8	3238.8
60°	1133.2	1140.9	1241.7	1548.0	2150.3	2910.9	3637.0	3934.3	4481.8	4441.0	3477.5
62.5°	881.8	889.5	950.7	1130.7	1613.0	2433.6	3452.0	4028.8	4823.8	4804.7	3868.0
65°	682.7	685.3	727.4	811.6	1139.6	1916.8	3226.1	4116.8	5285.8	5269.2	4184.5
67.5°	504.1	507.9	537.3	589.6	769.5	1377.0	2856.0	4049.2	5634.2	5585.7	4299.3
69°	407.1	410.9	436.4	478.6	607.4	1084.7	2517.8	3882.0	5686.5	5640.5	4226.6
70°	348.4	350.9	376.5	412.2	518.1	921.4	2249.8	3737.8	5617.6	5572.9	4060.7
72.5°	223.3	236.1	261.6	284.6	343.3	610.0	1518.6	3099.7	4846.8	4770.2	3180.1
75°	123.8	127.6	173.6	201.6	228.4	396.9	844.8	1933.4	3083.2	3029.6	1701.1
77.5°	102.1	104.6	122.5	153.1	153.1	222.0	319.0	761.9	1172.8	1057.9	460.7
80°	71.5	74.0	93.2	100.8	109.7	125.1	103.4	167.2	181.2	160.8	68.9
82.5°	49.8	52.3	63.8	82.9	88.1	58.7	38.3	49.8	52.3	52.3	26.8
85°	8.9	12.8	47.2	68.9	52.3	17.9	21.7	17.9	16.6	17.9	6.4
87.5°	0.0	0.0	29.4	33.2	28.1	7.7	8.9	6.4	3.8	5.1	2.6
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°	550.0	550.0	550.0	550.0	550.0	550.0	550.0	550.0	550.0	550.0	550.0
2.5°	553.8	527.0	481.1	447.9	419.9	398.2	389.2	375.2	365.0	370.1	363.7
5°	569.2	521.9	447.9	400.7	367.5	339.5	316.5	298.6	284.6	282.0	279.5
7.5°	593.4	525.8	428.8	370.1	320.3	276.9	241.2	214.4	194.0	194.0	186.3
10°	626.6	536.0	417.3	339.5	265.4	206.7	171.0	145.5	135.3	134.0	131.4
12.5°	672.5	555.1	408.4	299.9	206.7	150.6	128.9	120.0	116.1	114.9	113.6
15°	735.1	583.2	398.2	251.4	157.0	123.8	114.9	107.2	103.4	102.1	100.8
17.5°	795.0	608.7	376.5	201.6	127.6	112.3	102.1	95.7	90.6	89.3	89.3
20°	851.2	630.4	339.5	157.0	114.9	100.8	90.6	82.9	77.8	76.6	76.6
22.5°	909.9	648.3	293.5	127.6	104.6	89.3	79.1	71.5	66.4	65.1	63.8
25°	972.4	661.0	241.2	113.6	94.4	79.1	67.6	61.3	57.4	56.2	54.9
27.5°	1040.1	666.1	191.4	103.4	82.9	68.9	58.7	52.3	49.8	48.5	48.5
30°	1101.3	661.0	148.0	91.9	72.7	60.0	51.0	45.9	43.4	42.1	42.1
32.5°	1165.1	648.3	118.7	81.7	63.8	51.0	43.4	39.6	38.3	37.0	37.0
35°	1232.8	631.7	102.1	72.7	54.9	44.7	38.3	35.7	34.5	33.2	33.2
37.5°	1311.9	611.3	93.2	65.1	48.5	39.6	33.2	31.9	30.6	30.6	30.6
40°	1401.2	585.7	86.8	58.7	43.4	34.5	29.4	28.1	26.8	26.8	26.8
42.5°	1495.6	556.4	80.4	52.3	38.3	29.4	25.5	25.5	24.2	24.2	23.0
45°	1601.6	527.0	74.0	45.9	33.2	25.5	21.7	20.4	20.4	19.1	19.1
47.5°	1726.6	500.2	67.6	40.8	29.4	21.7	19.1	17.9	16.6	15.3	15.3
50°	1902.7	497.7	60.0	35.7	26.8	17.9	15.3	14.0	12.8	11.5	11.5
52.5°	2077.6	474.7	51.0	29.4	21.7	15.3	11.5	10.2	8.9	8.9	7.7
55°	2117.1	436.4	44.7	25.5	16.6	11.5	8.9	6.4	6.4	5.1	5.1
57.5°	2203.9	418.6	38.3	20.4	12.8	8.9	5.1	3.8	3.8	3.8	3.8
60°	2374.9	413.5	33.2	17.9	8.9	6.4	3.8	2.6	2.6	1.3	1.3
62.5°	2611.0	408.4	28.1	15.3	6.4	3.8	2.6	1.3	0.0	0.0	0.0
65°	2741.1	373.9	23.0	11.5	5.1	3.8	1.3	0.0	0.0	0.0	0.0
67.5°	2706.7	308.8	20.4	7.7	3.8	2.6	1.3	0.0	0.0	0.0	0.0
69°	2562.5	260.3	16.6	6.4	3.8	2.6	1.3	0.0	0.0	0.0	0.0
70°	2388.9	224.6	15.3	5.1	2.6	1.3	1.3	0.0	0.0	0.0	0.0
72.5°	1696.0	117.4	10.2	3.8	2.6	1.3	0.0	0.0	0.0	0.0	0.0
75°	792.5	52.3	6.4	2.6	1.3	1.3	0.0	0.0	0.0	0.0	0.0
77.5°	174.8	24.2	3.8	2.6	1.3	0.0	0.0	0.0	0.0	0.0	0.0
80°	33.2	8.9	2.6	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	11.5	3.8	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	3.8	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	1.3	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)