

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: P231092

Luminaire Tested: **ARCH-M-AF48-80-D-U-T2R-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P231092  
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-AF48-80-D-U-T2R-HSS  
Description: ARCHEON-M ROADWAY AND AREA LUMINAIRE  
(2) 70 CRI, 4000K, 535mA 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: 9276.1 lumens  
Efficiency: N/A  
Efficacy: 111.8 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

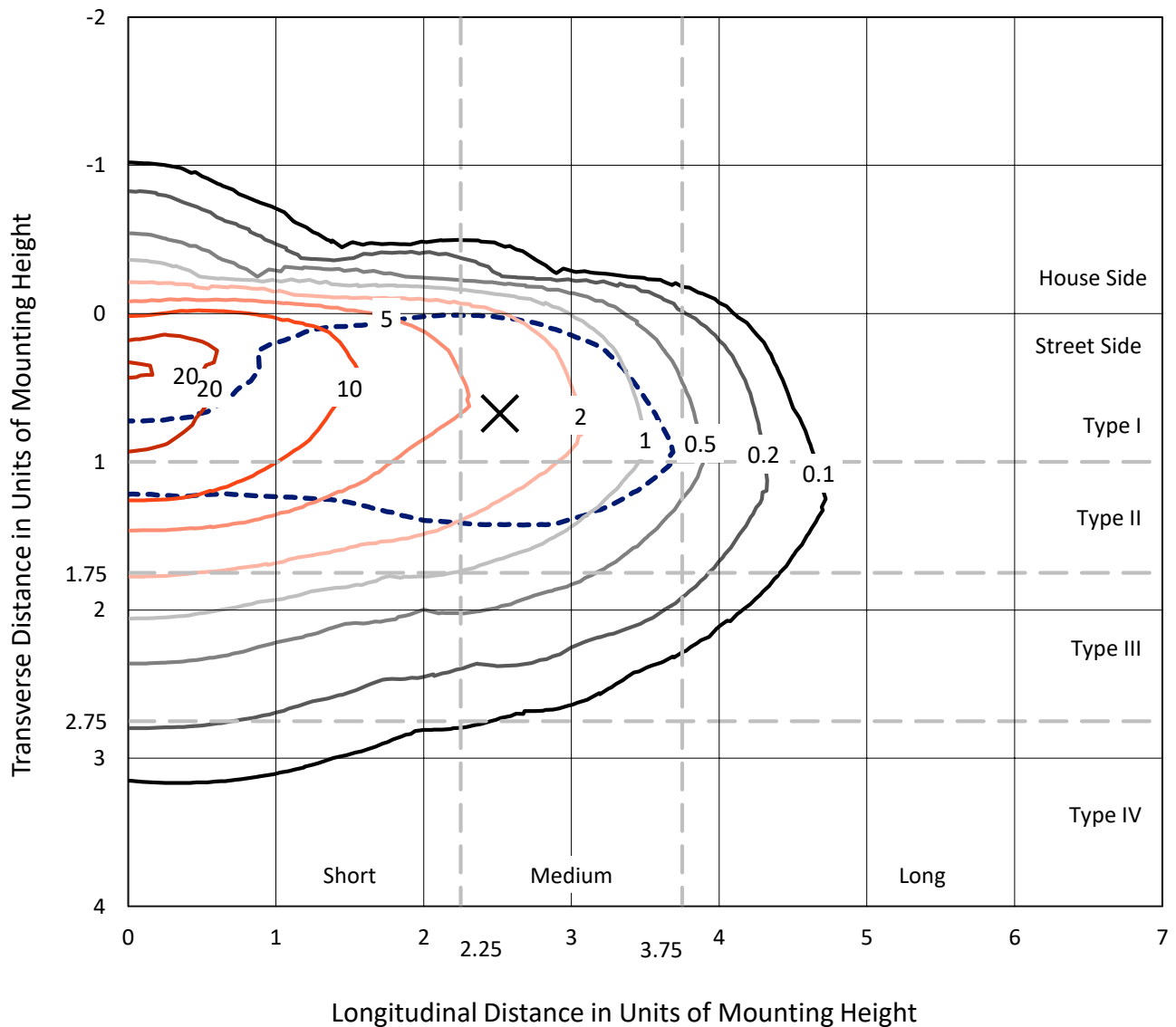
Input Watts (W): 83  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

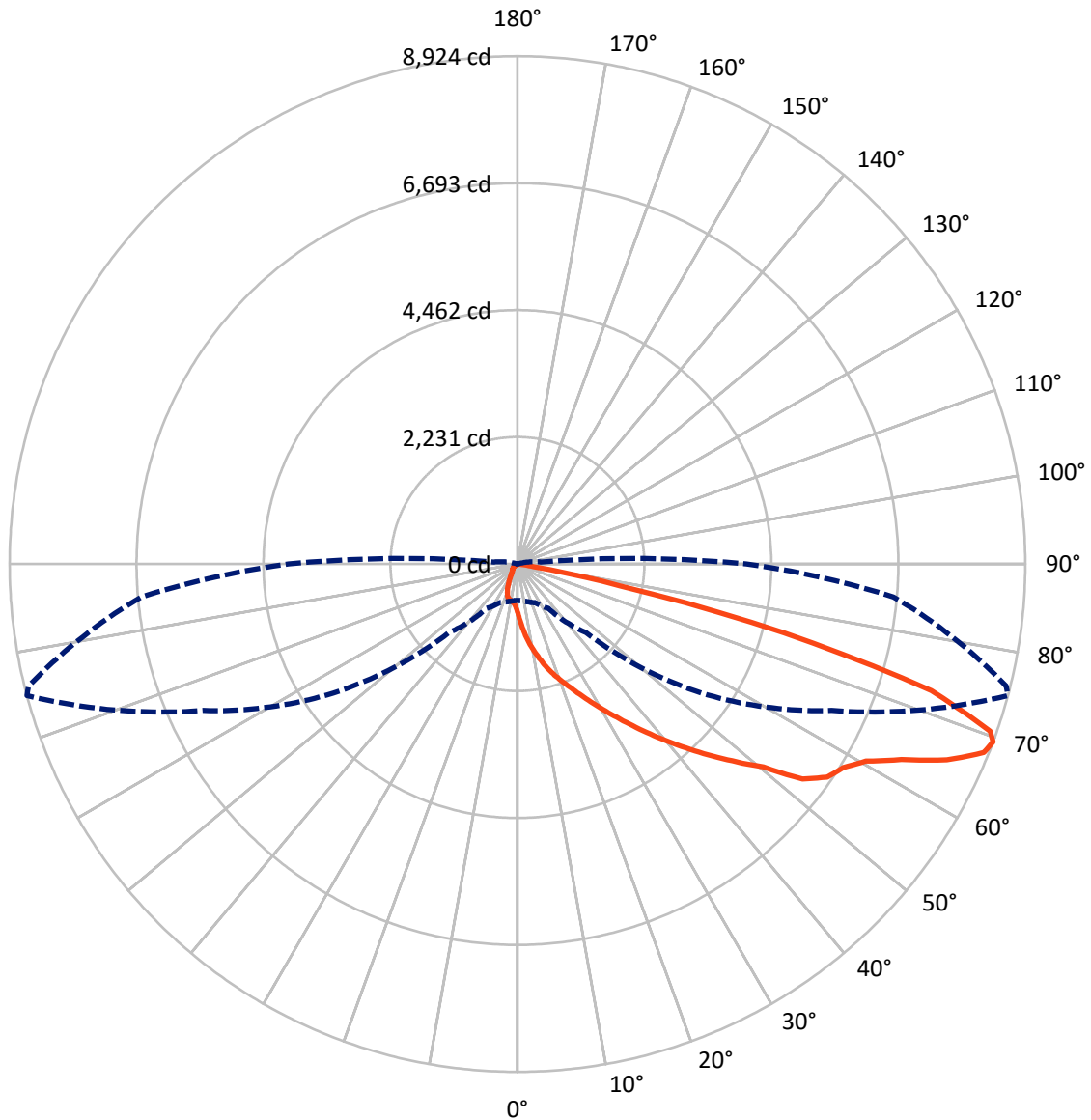
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 23.6 fc  
 Type II - Medium - Full Cutoff

REPORT NUMBER: P231092  
CATALOG NUMBER: ARCH-M-AF48-80-D-U-T2R-HSS

### Luminous Intensity Polar Plot



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

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CATALOG NUMBER: ARCH-M-AF48-80-D-U-T2R-HSS

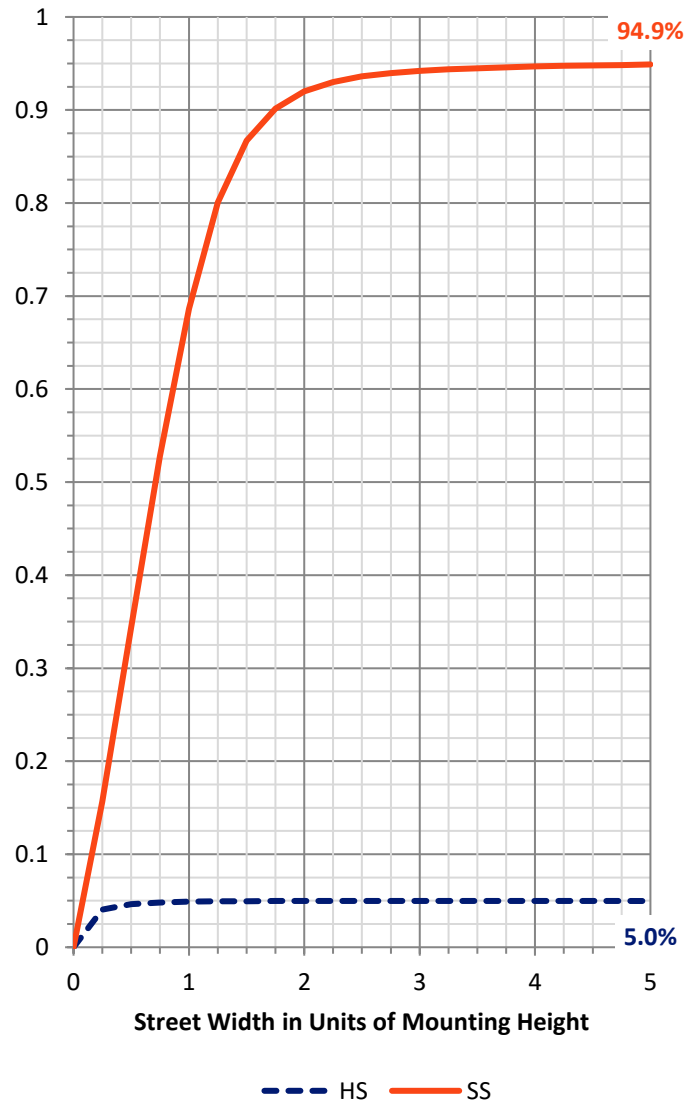
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	462.8	0.0	462.8
	% Fixture	5.0	0.0	5.0
<b>Street Side</b>	Lumens	8813.3	0.0	8813.3
	% Fixture	95.0	0.0	95.0
<b>Total</b>	Lumens	9276.1	0.0	9276.1
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	100.6	1.1
10°-20°	359.8	3.9
20°-30°	686.9	7.4
30°-40°	1232.2	13.3
40°-50°	1887.8	20.4
50°-60°	2194.1	23.7
60°-70°	1942.9	20.9
70°-80°	838.1	9.0
80°-90°	33.6	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°	9276.1	100.0
0°-180°	9276.1	100.0

**Coefficient of Utilization**



REPORT NUMBER: P231092

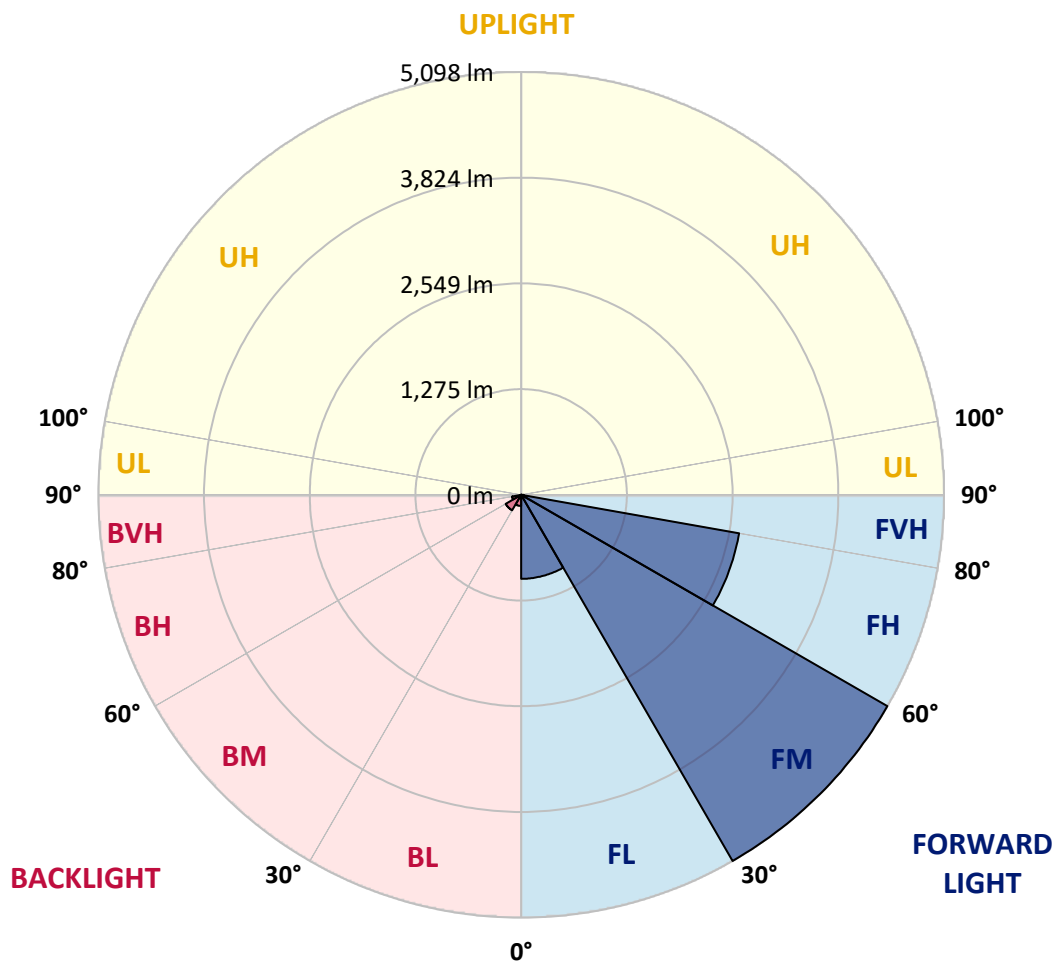
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1013.0	10.9			
FM	(30°-60°)	5098.4	55.0			
FH	(60°-80°)	2668.9	28.8			G2/5000
FVH	(80°-90°)	33.1	0.4			G1/100
BL	(0°-30°)	134.4	1.4	B1/500		
BM	(30°-60°)	215.8	2.3	B0/220		
BH	(60°-80°)	112.1	1.2	B1/500		G1/500
BVH	(80°-90°)	0.5	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





REPORT NUMBER: P231092

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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	76°	85°
0°	863.2	863.2	863.2	863.2	863.2	863.2	863.2	863.2	863.2	863.2	863.2
2.5°	1421.9	1407.9	1393.9	1377.8	1341.8	1279.7	1201.6	1117.5	1013.3	995.3	911.2
5°	1726.2	1720.3	1706.3	1684.2	1644.2	1576.1	1488.0	1363.8	1189.6	1159.5	981.3
7.5°	1940.5	1936.5	1924.6	1898.5	1862.5	1794.4	1702.3	1568.1	1365.8	1331.8	1069.4
10°	2132.9	2130.8	2120.8	2096.7	2060.7	1986.7	1888.5	1748.3	1534.0	1496.0	1171.6
12.5°	2307.1	2309.0	2305.0	2293.0	2267.0	2196.9	2084.8	1932.6	1696.3	1654.2	1293.7
15°	2409.2	2415.2	2431.2	2455.3	2463.3	2407.2	2291.0	2122.8	1862.5	1826.4	1433.9
17.5°	2375.1	2381.1	2431.2	2513.3	2591.4	2599.4	2495.3	2303.1	2026.7	1990.7	1572.1
20°	2293.0	2301.0	2353.1	2465.2	2617.4	2723.6	2681.6	2499.3	2182.9	2138.8	1704.2
22.5°	2385.1	2385.1	2401.2	2469.3	2607.4	2773.6	2829.7	2695.6	2343.1	2289.1	1836.4
25°	2701.6	2695.6	2661.5	2633.5	2677.6	2825.7	2941.9	2895.9	2531.3	2469.3	1976.6
27.5°	3102.1	3130.1	3066.1	2963.9	2863.8	2927.9	3042.1	3094.1	2739.7	2675.5	2120.8
30°	3550.7	3562.7	3486.6	3350.5	3174.2	3112.1	3160.2	3264.3	2965.9	2895.9	2271.0
32.5°	3955.2	3945.2	3881.1	3738.9	3520.7	3386.5	3312.4	3400.5	3212.3	3132.2	2425.2
35°	4313.7	4321.7	4243.6	4079.4	3865.1	3722.9	3546.7	3554.7	3488.6	3396.5	2603.4
37.5°	4636.1	4622.1	4548.0	4383.8	4189.5	4035.3	3849.1	3714.9	3791.0	3694.9	2803.7
40°	4898.5	4884.5	4806.3	4646.1	4463.9	4337.7	4191.5	3929.2	4109.4	3999.3	3018.0
42.5°	5106.8	5090.7	5024.6	4870.5	4694.2	4582.0	4511.9	4193.5	4449.8	4339.8	3258.3
45°	5208.9	5194.9	5154.9	5038.6	4884.5	4786.3	4820.3	4497.9	4814.3	4722.2	3522.6
47.5°	5088.7	5082.7	5128.8	5108.7	5020.6	4968.6	5086.7	4830.4	5196.9	5106.8	3827.1
50°	4724.2	4734.2	4868.4	5034.7	5076.7	5138.8	5305.0	5180.8	5607.4	5511.2	4177.5
52.5°	3825.0	3893.1	4297.7	4698.2	5008.6	5242.9	5561.4	5681.5	6276.3	6182.2	4724.2
55°	2855.8	2883.8	3324.4	4009.3	4734.2	5235.0	5751.5	5975.9	6606.7	6510.6	4868.4
57.5°	2265.0	2275.0	2493.3	3192.2	4169.5	5054.7	5851.7	6082.1	6750.9	6670.8	5082.7
60°	1778.3	1790.4	1948.6	2429.2	3374.4	4568.0	5707.6	6174.1	7033.3	6969.2	5457.2
62.5°	1383.8	1395.8	1492.0	1774.3	2531.3	3819.1	5417.1	6322.3	7570.0	7540.0	6070.0
65°	1071.4	1075.4	1141.5	1273.7	1788.3	3008.0	5062.7	6460.5	8294.9	8268.9	6566.6
67.5°	791.0	797.1	843.1	925.3	1207.6	2160.9	4482.0	6354.4	8841.7	8765.6	6746.9
69°	638.8	644.9	684.9	750.9	953.3	1702.3	3951.2	6092.1	8923.8	8851.7	6632.7
70°	546.8	550.8	590.8	646.8	813.0	1445.9	3530.6	5865.7	8815.6	8745.5	6372.4
72.5°	350.5	370.5	410.5	446.6	538.7	957.3	2383.2	4864.4	7606.0	7485.9	4990.6
75°	194.3	200.3	272.3	316.4	358.4	622.8	1325.7	3034.0	4838.4	4754.3	2669.5
77.5°	160.2	164.2	192.2	240.3	240.3	348.4	500.6	1195.6	1840.4	1660.1	722.9
80°	112.1	116.1	146.2	158.3	172.3	196.3	162.2	262.4	284.4	252.4	108.1
82.5°	78.2	82.1	100.1	130.2	138.2	92.2	60.0	78.2	82.1	82.1	42.0
85°	14.0	20.0	74.1	108.1	82.1	28.0	34.1	28.0	26.1	28.0	10.0
87.5°	0.0	0.0	46.0	52.1	44.1	12.0	14.0	10.0	6.0	8.0	4.0
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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CATALOG NUMBER: ARCH-M-AF48-80-D-U-T2R-HSS

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	863.2	863.2	863.2	863.2	863.2	863.2	863.2	863.2	863.2	863.2	863.2
2.5°	869.1	827.1	755.0	703.0	658.9	624.8	610.8	588.8	572.8	580.7	570.7
5°	893.1	819.1	703.0	628.8	576.7	532.8	496.6	468.6	446.6	442.6	438.5
7.5°	931.2	825.1	672.9	580.7	502.7	434.5	378.5	336.4	304.4	304.4	292.4
10°	983.3	841.1	654.9	532.8	416.5	324.4	268.3	228.3	212.3	210.3	206.2
12.5°	1055.4	871.1	640.9	470.7	324.4	236.3	202.2	188.2	182.3	180.2	178.2
15°	1153.5	915.2	624.8	394.6	246.3	194.3	180.2	168.2	162.2	160.2	158.3
17.5°	1247.7	955.2	590.8	316.4	200.3	176.3	160.2	150.2	142.2	140.1	140.1
20°	1335.8	989.3	532.8	246.3	180.2	158.3	142.2	130.2	122.1	120.2	120.2
22.5°	1427.8	1017.3	460.6	200.3	164.2	140.1	124.2	112.1	104.1	102.1	100.1
25°	1526.0	1037.4	378.5	178.2	148.2	124.2	106.2	96.2	90.1	88.1	86.1
27.5°	1632.1	1045.4	300.4	162.2	130.2	108.1	92.2	82.1	78.2	76.1	76.1
30°	1728.3	1037.4	232.3	144.2	114.2	94.1	80.1	72.1	68.1	66.1	66.1
32.5°	1828.4	1017.3	186.3	128.2	100.1	80.1	68.1	62.1	60.0	58.1	58.1
35°	1934.6	991.3	160.2	114.2	86.1	70.1	60.0	56.1	54.1	52.1	52.1
37.5°	2058.7	959.2	146.2	102.1	76.1	62.1	52.1	50.0	48.1	48.1	48.1
40°	2198.9	919.2	136.2	92.2	68.1	54.1	46.0	44.1	42.0	42.0	42.0
42.5°	2347.1	873.2	126.1	82.1	60.0	46.0	40.1	40.1	38.1	38.1	36.0
45°	2513.3	827.1	116.1	72.1	52.1	40.1	34.1	32.0	32.0	30.1	30.1
47.5°	2709.6	785.0	106.2	64.0	46.0	34.1	30.1	28.0	26.1	24.0	24.0
50°	2985.9	781.0	94.1	56.1	42.0	28.0	24.0	22.0	20.0	18.0	18.0
52.5°	3260.3	745.0	80.1	46.0	34.1	24.0	18.0	16.1	14.0	14.0	12.0
55°	3322.3	684.9	70.1	40.1	26.1	18.0	14.0	10.0	10.0	8.0	8.0
57.5°	3458.6	656.8	60.0	32.0	20.0	14.0	8.0	6.0	6.0	6.0	6.0
60°	3726.9	648.9	52.1	28.0	14.0	10.0	6.0	4.0	4.0	2.0	2.0
62.5°	4097.4	640.9	44.1	24.0	10.0	6.0	4.0	2.0	0.0	0.0	0.0
65°	4301.7	586.8	36.0	18.0	8.0	6.0	2.0	0.0	0.0	0.0	0.0
67.5°	4247.6	484.7	32.0	12.0	6.0	4.0	2.0	0.0	0.0	0.0	0.0
69°	4021.3	408.6	26.1	10.0	6.0	4.0	2.0	0.0	0.0	0.0	0.0
70°	3748.9	352.5	24.0	8.0	4.0	2.0	2.0	0.0	0.0	0.0	0.0
72.5°	2661.5	184.2	16.1	6.0	4.0	2.0	0.0	0.0	0.0	0.0	0.0
75°	1243.6	82.1	10.0	4.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0
77.5°	274.4	38.1	6.0	4.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	52.1	14.0	4.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	18.0	6.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	6.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	2.0	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)