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# Product Specification Document

ACAD- 490LB/BF Rev 2

**Product ID: 490LB/BF Ultrabrite 90 (Luxal® Enhanced)**

**Application: Lighting Reflectors**

**Material Specification:**

Alloy: 1090

Temper: H19

**Mechanical Properties (typical):**

Tensile Strength: 180 N/mm<sup>2</sup> ( 26,000 psi)

Yield Strength: 165 N/mm<sup>2</sup> ( 24,000 psi)

Elongation: 4%

Minimum Bend Radii: 1T

**For White Paint:**

1T bend: n/a

1T bend – dry heat: n/a

0T bend: n/a

**Optical / Anodized Properties:**

|   |   |         |    |     |   |
|---|---|---------|----|-----|---|
| Total Reflectance (TR%) <sup>1</sup> :    | 90% minimum                                     |         |    |     | <sup>1</sup> (Technidyne TR-2 (ASTM 1651-94))         |
| Distinctness of Image (DI) <sup>2</sup> : | 95 minimum                                      |         |    |     | <sup>2</sup> (Hunter Labs D47 Dorigon (ASTM E430-83)) |
| Specular Reflectance (RS) <sup>2</sup> :  | 75 minimum                                      |         |    |     | <sup>3</sup> (DIN 67530)                              |
| 15° Diffuseness (15°) <sup>2</sup> :      | 0.0 maximum                                     |         |    |     | <sup>4</sup> (Byk Gardner Micro Gloss Meter)          |
| Dr. Lange 60° <sup>3</sup> :              | w/g n/a   | a/g n/a |    |     | <sup>5</sup> (ASTM B137-89)                           |
| Gardner 60° Gloss <sup>4</sup> :          | w/g n/a   | a/g n/a |    |     | <sup>6</sup> (Hunter Lab mini-Scan XE Plus)           |
| Anodize Film Thickness <sup>5</sup> :     | 0.18 to 0.25 microns ( .000007 to .000010 inch) |         |    |     |   |
| Iridescence Rating:                       | Premium Low Iridescence                         |         |    |     |   |
| Color <sup>6</sup> :                      | L*  | n/a     | a* | n/a | b* n/a  |

**Availability: Sheet and Coil**

Gage: 0.3 to 1.0 mm ( 0.012 to 0.040 inch)

Width: 12.7 to 1250 mm ( 0.50 to 49.213 inch)

Length: up to 3660 mm (up to 144 inch)

**Tolerances (standard):** (Tighter tolerance may be possible. Contact your sales representative.)

|             |                          |                 |              |  |
|-------------|--------------------------|-----------------|--------------|--|
| Gage:       | From:                    | 0.25 to 0.40 mm | +/- 0.025 mm | (0.010 to 0.016 inch, +/- 0.001 inch)  |
|             |                          | 0.41 to 0.80 mm | +/- 0.040 mm | (0.017 to 0.032 inch, +/- 0.0015 inch) |
|             |                          | 0.81 to 1.00 mm | +/- 0.050 mm | (0.033 to 0.040 inch, +/- 0.002 inch)  |
| Slit Width: | From:                    | 12.5 to 305 mm  | +/- 0.125 mm | (0.5 to 12 inch, +/- 0.005 inch)       |
|             |                          | 306 to 610 mm   | +/- 0.38 mm  | (12.1 to 24 inch, +/- 0.015 inch)      |
|             |                          | 611 to 1250 mm  | +/- 0.50 mm  | (24.1 to 50 inch, +/- 0.020 inch)      |
| Sheet:      | Length:                  | Up to 1524 mm   | +/- 1.0 mm   | (Up to 60 inch, +/- 0.040 inch)        |
|             |                          | 1525 to 3050 mm | +/- 1.5 mm   | (60 to 120 inch, +/- 0.060 inch)       |
|             |                          | 3051 to 3660 mm | +/- 2.0 mm   | (120 to 144 inch, +/- 0.080 inch)      |
|             | Squareness: <sup>1</sup> | Up to 1200 mm   | +/- 0.5 mm   | (Up to 48 inch, +/- 0.020 inch)        |
|             |                          | 1201 to 2400 mm | +/- 1.0 mm   | (49 to 95 inch, +/- 0.040 inch)        |
|             |                          | 2401 to 3660 mm | +/- 1.5 mm   | (96 to 144 inch, +/- 0.060 inch)       |

<sup>1</sup> Difference in diagonals

Lateral Bow (in one meter):  
 Width Under 300 mm: 2.5 mm max. (Width Under 12 inch: 0.100 inch)  
 Width Over 300 mm: 1.25 mm max. (Width Over 12 inch: 0.050 inch)

Flatness: Height between waves: 1% of wave length, 8mm (0.32 inch) maximum.

Burr: 10% of gage Not to exceed .08 mm (.003 inch)