

Application Brief

LIFI® for Petroleum Retail Lighting



Key Benefits of LIFI® in Petroleum Retail:

- 22000 lumens from a single compact source
- Highest white light source efficiency (120 Lumens/Watt)
- Low maintenance (30,000 hrs lifetime)
- High CRI
- Low glare

Other benefits:

- 5X faster ignition and re-strike
- Improved safety (low voltage and no hot filaments)
- Rugged and impact resistant
- Reduced environmental costs (smaller source & fixture)

Recommended Product:

LIFI-STA-40-01

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Proposed Example Light Fixture Types:

- Canopy
- Recessed canopy
- Walkway

Value Proposition - Operating Cost:

| Fixture Technology | Canopy PS Metal Halide | Canopy LED | Canopy Solid State High Intensity |
|-----------------------------------|------------------------|--------------|-----------------------------------|
| Lamp Model | MH-400-HOR-PS | White LED | LIFI-STA-40-01 |
| Lamp Power (W) | 400 | 350 | 187 |
| Ballast/Driver Eff. (%) | 90% | 90% | 75% |
| AC/DC Eff. (%) | 100% | 90% | 90% |
| Tot. Power (W) | 444 | 389 | 277 |
| Source Lumens/Watt | 92 | 70 | 120 |
| Initial Source Lumens | 36800 | 24500 | 22440 |
| Mean Source Lumens | 25760 | 20825 | 19074 |
| Fixture Eff. (%) | 65% | 85% | 93% |
| Mean Fixture Lumens | 16744 | 17701 | 17739 |
| Daily Usage (hrs) | 12 | 12 | 12 |
| Dimming Level | 1 | 1 | 1 |
| Dimming (hrs) | 0 | 0 | 0 |
| Annual KW-Hr (Full Power) | 1947 | 1703 | 1213 |
| Annual KW-Hr (Dim) | 0 | 0 | 0 |
| \$/KW-Hr | 0.13 | 0.13 | 0.13 |
| Annual Operating Cost (\$) | 253 | 221 | 158 |
| Lifetime (hrs) | 15000 | 50000 | 30000 |
| Replacement Lumen Level | 70% | 70% | 70% |
| Replacement Cycle (Hrs) | 10500 | 50000 | 30000 |
| #Lamps/Yr | 0.42 | 0.09 | 0.15 |
| Replacement Cost/Lamp (\$) | 200 | 400 | 200 |
| Annual Maint Cost (\$) | 83 | 35 | 29 |
| Total Annual Cost (\$) | 336 | 256 | 187 |
| LIFI Annual Savings (\$) | 150 | 70 | |

Light fixture data based on commercially available products.

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