

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: HALO

Report Number: P407850

Luminaire Tested: **ALS7A40**

Issue Date: 08/27/2020

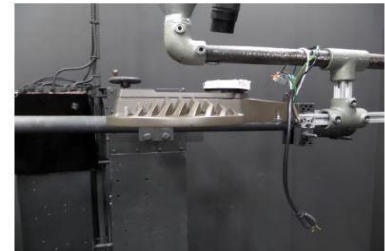
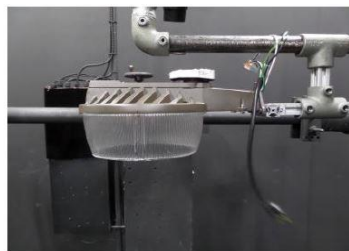
Test Information

Test Method: LM-79-08
Report Number: P407850
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2006-852-3)
Test Lab: INNOVATIONS CENTER(G1)
Issue Date: 08/27/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO
Catalog Number: ALS7A40
Description: HALO OUTDOOR BARN LIGHT STANDARD 7000LM
Light Source: (78) 4000K CCT, 70 CRI LEDs
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7104.8 lumens
Efficiency: N/A
Efficacy: 148.3 lumens/watt
Luminous Opening: Circular (Dia: 0.67' x H: 0')
IES Classification: Type V - Short - Full Cutoff
BUG Rating: B3 - U0 - G1

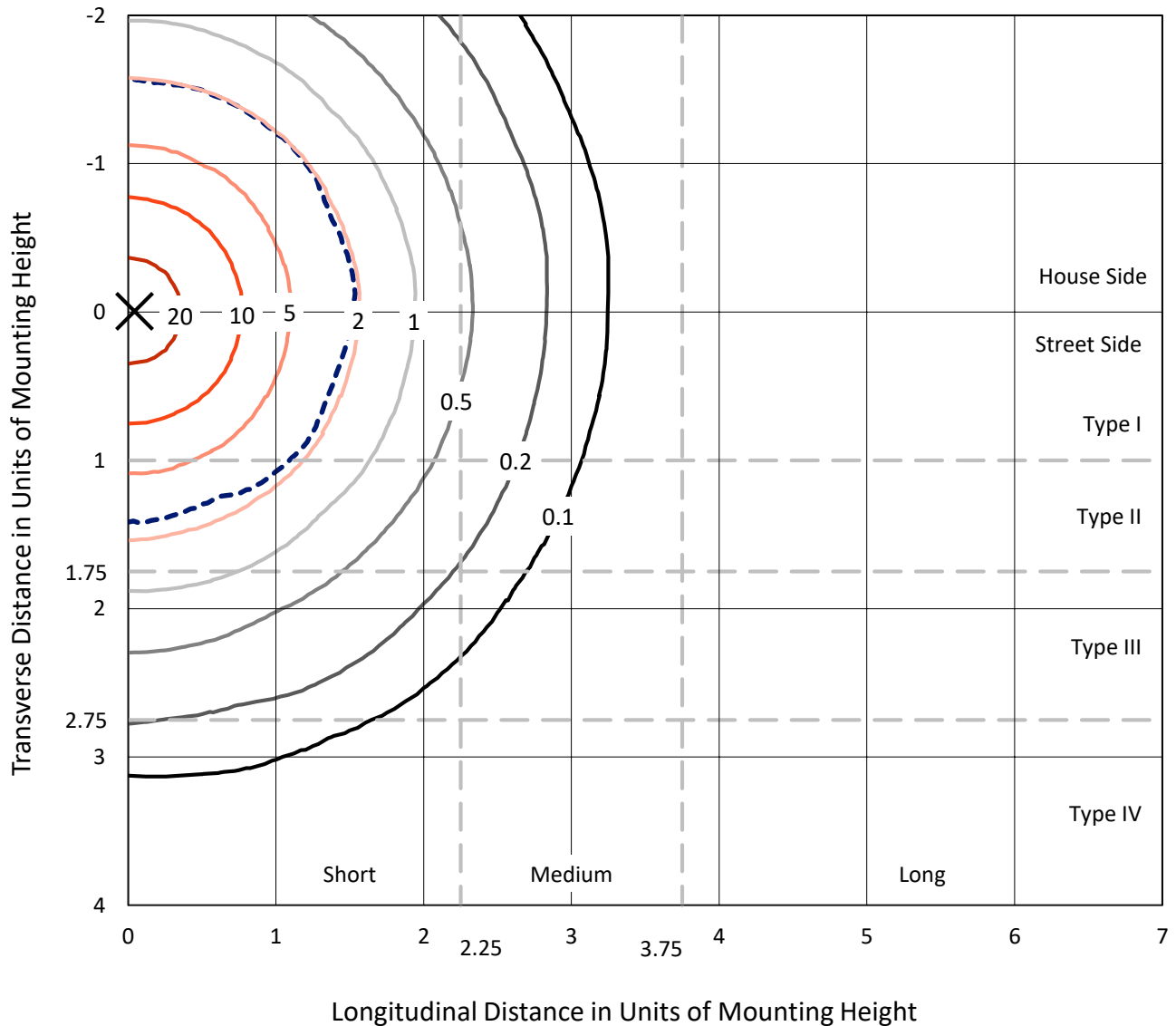
Input Watts (W): 47.9
Input Voltage (V): 120.0
Input Current (Ain): 0.404
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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 CATALOG NUMBER: ALS7A40

Iso-Footcandle Lines of Horizontal Illumination

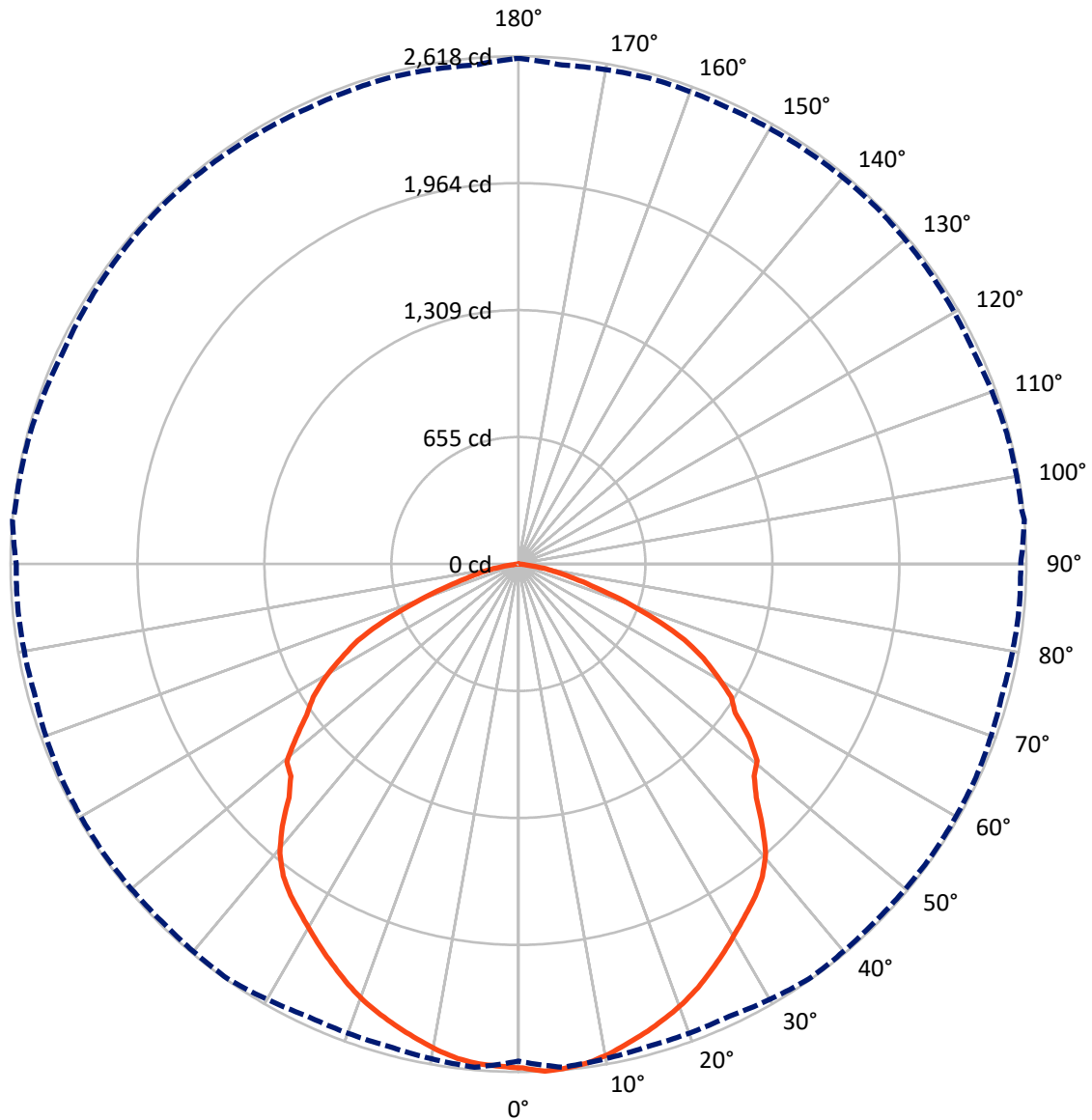
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 26 fc
 Type V - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 95-Deg Lateral - - - Horizontal Cone Through 2.5-Deg Vertical

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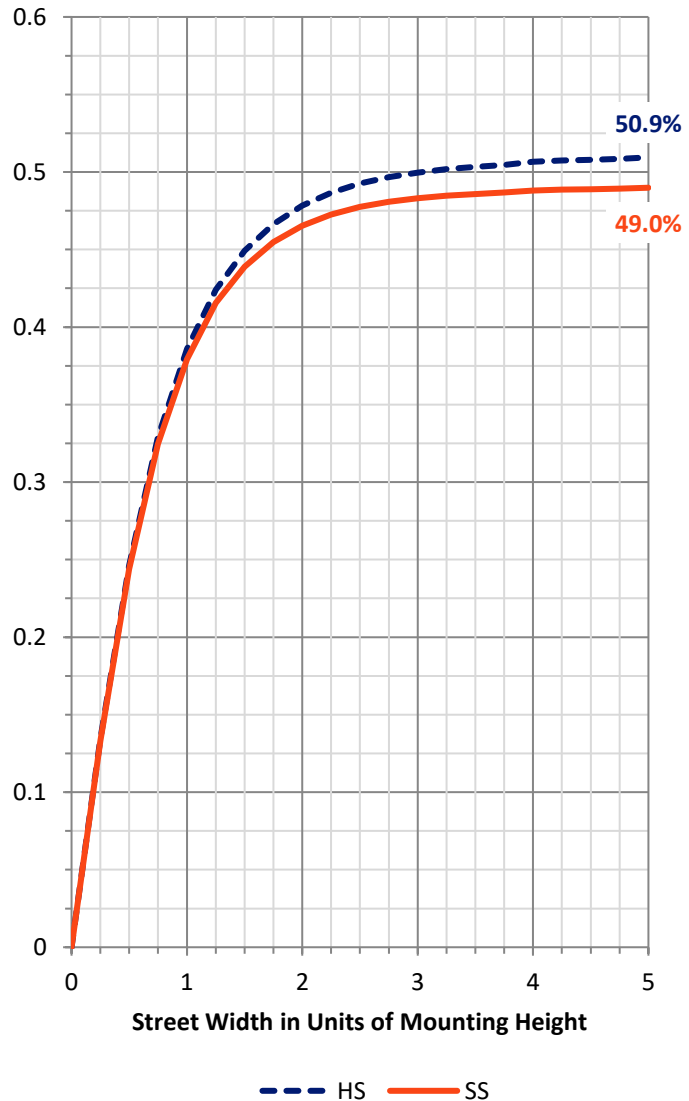
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 3632.9 | 0.0 | 3632.9 |
| | % Fixture | 51.1 | 0.0 | 51.1 |
| Street Side | Lumens | 3471.9 | 0.0 | 3471.9 |
| | % Fixture | 48.9 | 0.0 | 48.9 |
| Total | Lumens | 7104.8 | 0.0 | 7104.8 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 245.6 | 3.5 |
| 10°-20° | 700.3 | 9.9 |
| 20°-30° | 1064.3 | 15.0 |
| 30°-40° | 1292.0 | 18.2 |
| 40°-50° | 1343.5 | 18.9 |
| 50°-60° | 1211.5 | 17.1 |
| 60°-70° | 877.6 | 12.4 |
| 70°-80° | 340.0 | 4.8 |
| 80°-90° | 30.1 | 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° | 7104.8 | 100.0 |
| 0°-180° | 7104.8 | 100.0 |



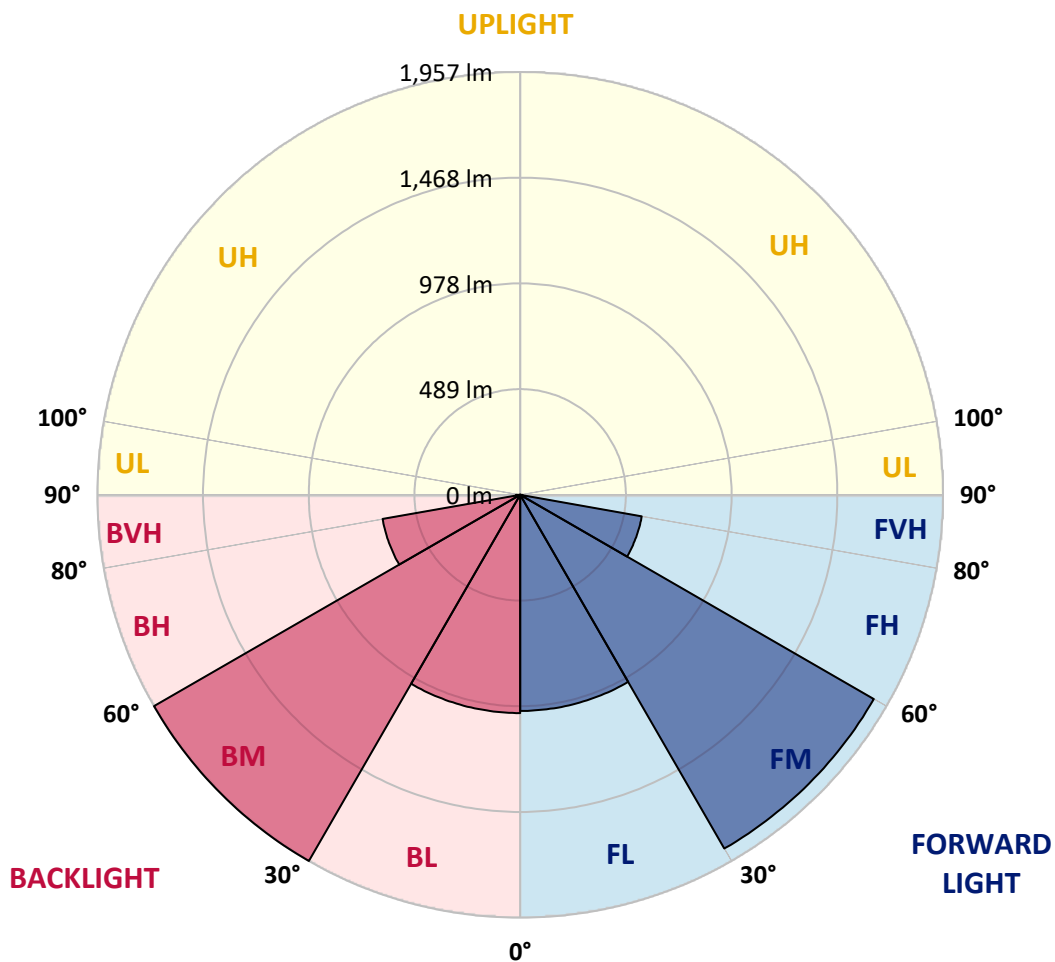
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|--------|
| | | | | B | U | G |
| FL | (0°-30°) | 1000.1 | 14.1 | | | |
| FM | (30°-60°) | 1890.0 | 26.6 | | | |
| FH | (60°-80°) | 571.2 | 8.0 | | | G0/660 |
| FVH | (80°-90°) | 10.6 | 0.1 | | | G1/100 |
| BL | (0°-30°) | 1010.2 | 14.2 | B3/2500 | | |
| BM | (30°-60°) | 1956.9 | 27.5 | B2/2500 | | |
| BH | (60°-80°) | 646.4 | 9.1 | B2/1000 | | G0/660 |
| BVH | (80°-90°) | 19.4 | 0.3 | | | G1/100 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B3-U0-G1

Type V Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 85° | 90° |
|-------|------|------|------|------|------|------|------|------|------|------|------|
| 0° | 2598 | 2598 | 2598 | 2598 | 2598 | 2598 | 2598 | 2598 | 2598 | 2598 | 2598 |
| 2.5° | 2563 | 2604 | 2575 | 2572 | 2611 | 2603 | 2607 | 2602 | 2583 | 2591 | 2589 |
| 5° | 2551 | 2593 | 2566 | 2564 | 2601 | 2592 | 2597 | 2594 | 2575 | 2585 | 2581 |
| 7.5° | 2534 | 2574 | 2548 | 2547 | 2585 | 2575 | 2583 | 2579 | 2559 | 2568 | 2568 |
| 10° | 2510 | 2549 | 2524 | 2520 | 2561 | 2551 | 2556 | 2551 | 2532 | 2540 | 2541 |
| 12.5° | 2481 | 2515 | 2494 | 2489 | 2530 | 2518 | 2522 | 2517 | 2498 | 2504 | 2505 |
| 15° | 2449 | 2482 | 2460 | 2457 | 2493 | 2479 | 2485 | 2480 | 2460 | 2468 | 2468 |
| 17.5° | 2408 | 2442 | 2425 | 2419 | 2457 | 2443 | 2447 | 2440 | 2422 | 2429 | 2431 |
| 20° | 2366 | 2400 | 2381 | 2376 | 2413 | 2400 | 2403 | 2398 | 2378 | 2388 | 2391 |
| 22.5° | 2317 | 2348 | 2333 | 2328 | 2370 | 2352 | 2357 | 2347 | 2332 | 2339 | 2342 |
| 25° | 2258 | 2291 | 2280 | 2280 | 2320 | 2305 | 2307 | 2294 | 2277 | 2284 | 2290 |
| 27.5° | 2199 | 2227 | 2223 | 2225 | 2262 | 2246 | 2249 | 2242 | 2220 | 2230 | 2231 |
| 30° | 2132 | 2158 | 2158 | 2159 | 2201 | 2188 | 2194 | 2187 | 2164 | 2175 | 2180 |
| 32.5° | 2064 | 2097 | 2090 | 2090 | 2134 | 2126 | 2137 | 2126 | 2112 | 2122 | 2131 |
| 35° | 2004 | 2029 | 2020 | 2016 | 2057 | 2050 | 2067 | 2065 | 2048 | 2073 | 2078 |
| 37.5° | 1949 | 1970 | 1944 | 1931 | 1958 | 1963 | 1992 | 1993 | 1985 | 2014 | 2023 |
| 40° | 1882 | 1899 | 1866 | 1842 | 1857 | 1868 | 1914 | 1908 | 1907 | 1933 | 1937 |
| 42.5° | 1806 | 1822 | 1793 | 1757 | 1778 | 1788 | 1832 | 1818 | 1800 | 1819 | 1815 |
| 45° | 1718 | 1729 | 1702 | 1673 | 1705 | 1715 | 1750 | 1726 | 1699 | 1687 | 1691 |
| 47.5° | 1608 | 1639 | 1638 | 1607 | 1663 | 1645 | 1621 | 1625 | 1615 | 1604 | 1604 |
| 50° | 1441 | 1474 | 1537 | 1527 | 1540 | 1535 | 1485 | 1523 | 1542 | 1570 | 1580 |
| 52.5° | 1339 | 1357 | 1373 | 1360 | 1466 | 1435 | 1407 | 1475 | 1448 | 1453 | 1494 |
| 55° | 1304 | 1303 | 1280 | 1255 | 1327 | 1338 | 1359 | 1336 | 1328 | 1341 | 1338 |
| 57.5° | 1222 | 1206 | 1183 | 1216 | 1182 | 1226 | 1240 | 1201 | 1234 | 1261 | 1269 |
| 60° | 1067 | 1103 | 1104 | 1090 | 1075 | 1103 | 1110 | 1147 | 1158 | 1158 | 1182 |
| 62.5° | 939 | 946 | 955 | 984 | 979 | 930 | 1011 | 1001 | 1013 | 1034 | 1029 |
| 65° | 862 | 868 | 837 | 789 | 835 | 834 | 829 | 881 | 899 | 918 | 930 |
| 67.5° | 726 | 719 | 720 | 689 | 674 | 694 | 722 | 720 | 708 | 753 | 767 |
| 70° | 526 | 508 | 494 | 562 | 568 | 548 | 561 | 557 | 560 | 568 | 575 |
| 72.5° | 335 | 348 | 372 | 368 | 400 | 405 | 385 | 395 | 398 | 411 | 408 |
| 75° | 282 | 282 | 264 | 256 | 264 | 267 | 288 | 268 | 282 | 280 | 298 |
| 77.5° | 165 | 170 | 160 | 168 | 174 | 168 | 185 | 185 | 187 | 199 | 209 |
| 80° | 103 | 97 | 100 | 103 | 99 | 109 | 111 | 117 | 129 | 132 | 137 |
| 82.5° | 18 | 17 | 17 | 17 | 19 | 17 | 20 | 18 | 22 | 34 | 38 |
| 85° | 2 | 1 | 1 | 2 | 2 | 2 | 4 | 3 | 4 | 5 | 5 |
| 87.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 90° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |



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 CATALOG NUMBER: ALS7A40

CANDELA DISTRIBUTION (continued):

| | 95° | 96° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|------|------|------|------|------|------|------|------|------|------|------|
| 0° | 2598 | 2598 | 2598 | 2598 | 2598 | 2598 | 2598 | 2598 | 2598 | 2598 | 2598 |
| 2.5° | 2618 | 2610 | 2606 | 2589 | 2599 | 2605 | 2597 | 2588 | 2594 | 2582 | 2607 |
| 5° | 2610 | 2602 | 2596 | 2580 | 2589 | 2594 | 2589 | 2579 | 2587 | 2572 | 2598 |
| 7.5° | 2596 | 2591 | 2585 | 2568 | 2578 | 2582 | 2575 | 2564 | 2571 | 2559 | 2583 |
| 10° | 2568 | 2566 | 2558 | 2543 | 2553 | 2560 | 2556 | 2545 | 2550 | 2535 | 2557 |
| 12.5° | 2532 | 2528 | 2518 | 2507 | 2521 | 2529 | 2529 | 2514 | 2520 | 2507 | 2527 |
| 15° | 2498 | 2492 | 2485 | 2470 | 2487 | 2496 | 2499 | 2482 | 2486 | 2475 | 2491 |
| 17.5° | 2459 | 2454 | 2449 | 2438 | 2451 | 2460 | 2464 | 2451 | 2453 | 2438 | 2456 |
| 20° | 2419 | 2413 | 2411 | 2398 | 2411 | 2422 | 2429 | 2417 | 2420 | 2403 | 2421 |
| 22.5° | 2371 | 2367 | 2366 | 2357 | 2372 | 2380 | 2389 | 2377 | 2382 | 2369 | 2383 |
| 25° | 2316 | 2316 | 2314 | 2305 | 2322 | 2334 | 2343 | 2331 | 2342 | 2330 | 2341 |
| 27.5° | 2262 | 2257 | 2261 | 2251 | 2269 | 2276 | 2290 | 2280 | 2296 | 2284 | 2297 |
| 30° | 2205 | 2203 | 2204 | 2195 | 2209 | 2220 | 2232 | 2227 | 2239 | 2227 | 2236 |
| 32.5° | 2153 | 2149 | 2149 | 2134 | 2150 | 2159 | 2175 | 2162 | 2170 | 2153 | 2163 |
| 35° | 2103 | 2100 | 2088 | 2072 | 2087 | 2090 | 2101 | 2089 | 2086 | 2075 | 2085 |
| 37.5° | 2043 | 2043 | 2016 | 2002 | 2015 | 2006 | 2018 | 1999 | 2010 | 2013 | 2027 |
| 40° | 1962 | 1956 | 1937 | 1925 | 1936 | 1918 | 1924 | 1921 | 1942 | 1958 | 1969 |
| 42.5° | 1843 | 1836 | 1840 | 1838 | 1853 | 1845 | 1845 | 1851 | 1884 | 1891 | 1900 |
| 45° | 1718 | 1719 | 1744 | 1748 | 1789 | 1790 | 1780 | 1775 | 1806 | 1798 | 1794 |
| 47.5° | 1635 | 1637 | 1659 | 1635 | 1669 | 1700 | 1712 | 1676 | 1718 | 1728 | 1733 |
| 50° | 1595 | 1592 | 1579 | 1532 | 1536 | 1593 | 1629 | 1618 | 1661 | 1652 | 1659 |
| 52.5° | 1491 | 1490 | 1470 | 1495 | 1464 | 1520 | 1538 | 1491 | 1500 | 1454 | 1436 |
| 55° | 1356 | 1355 | 1366 | 1398 | 1393 | 1405 | 1447 | 1376 | 1376 | 1367 | 1378 |
| 57.5° | 1293 | 1292 | 1275 | 1235 | 1291 | 1300 | 1288 | 1309 | 1304 | 1292 | 1303 |
| 60° | 1180 | 1179 | 1200 | 1156 | 1176 | 1192 | 1167 | 1203 | 1184 | 1214 | 1221 |
| 62.5° | 1070 | 1075 | 1053 | 1052 | 1064 | 1025 | 1074 | 1077 | 1099 | 1109 | 1087 |
| 65° | 939 | 940 | 933 | 916 | 911 | 918 | 966 | 933 | 955 | 960 | 967 |
| 67.5° | 760 | 768 | 751 | 770 | 765 | 780 | 779 | 817 | 854 | 889 | 887 |
| 70° | 588 | 601 | 611 | 598 | 636 | 642 | 671 | 702 | 695 | 709 | 697 |
| 72.5° | 418 | 426 | 430 | 423 | 450 | 486 | 510 | 474 | 482 | 478 | 478 |
| 75° | 298 | 298 | 301 | 315 | 314 | 358 | 342 | 344 | 366 | 347 | 344 |
| 77.5° | 200 | 205 | 218 | 214 | 232 | 226 | 236 | 256 | 231 | 228 | 230 |
| 80° | 134 | 134 | 137 | 145 | 143 | 149 | 151 | 145 | 150 | 156 | 159 |
| 82.5° | 37 | 44 | 52 | 64 | 69 | 74 | 70 | 66 | 61 | 68 | 56 |
| 85° | 6 | 6 | 8 | 7 | 9 | 8 | 9 | 8 | 9 | 8 | 9 |
| 87.5° | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| 90° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

(END OF REPORT)