

Scaled data based on original data using

LM-41-14 Approved Method for Photometric Testing Of Indoor Fluorescent Luminaires

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: HALO

Report Number: P130047

Luminaire Tested: **HL618TAT - HLM6927 - HL6FL - 71PS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P130047
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33457)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO
Catalog Number: HL618TAT - HLM6927 - HL6FL - 71PS
Description: HALO ALLSLOPE 6" 30W, Drop Opal Glass Lens, White Polymer Trim Ring
"Dead Front", Wet Location - Showerlight using 40 Degree Optic at a 6-12
Pitch
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 998.0 lumens
Efficiency: N/A
Efficacy: 36.2 lumens/watt
Spacing Criteria (0/90/45): 1.32 / 1.3 / 1.45
Luminous Opening: Vertical Cylinder (Dia: 0.48' x H: 0.1')
CIE Type: Direct

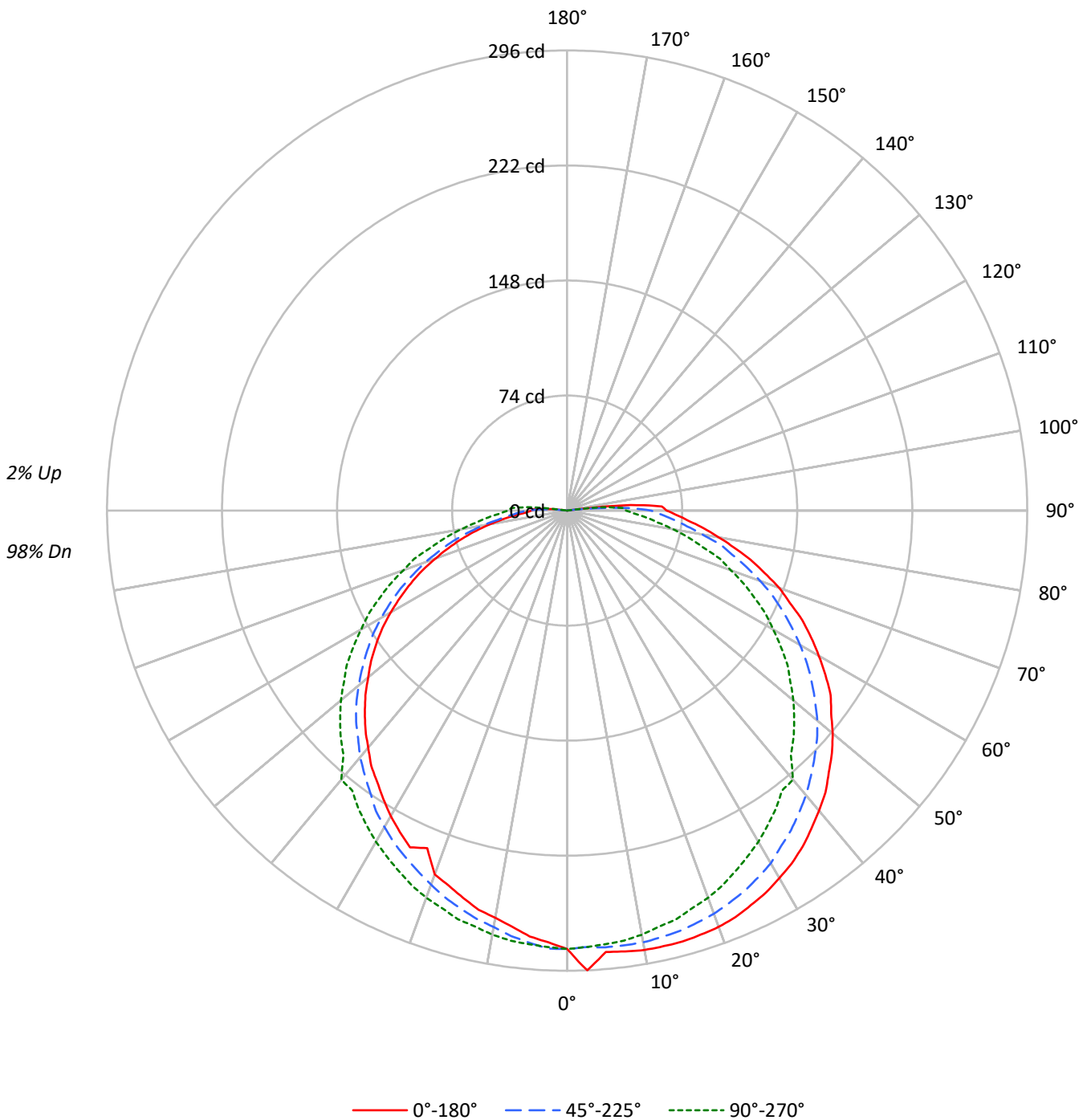
Input Watts (W): 27.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P130047

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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

| | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|
| RF | 20 | | | | 20 | | | | 20 | | | | 20 | | | | 20 | |
| RC | 80 | | | | 70 | | | | 50 | | | | 30 | | | | 10 | 0 |
| RW | 70 | 50 | 30 | 10 | 70 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 0 |
| RCR | | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 110 | 110 | 110 | 105 | 105 | 105 | 100 | 100 | 100 | 98 |
| 1 | 106 | 100 | 95 | 90 | 103 | 98 | 93 | 89 | 93 | 89 | 86 | 89 | 85 | 83 | 85 | 82 | 80 | 77 |
| 2 | 95 | 86 | 78 | 72 | 92 | 84 | 77 | 71 | 80 | 74 | 69 | 76 | 71 | 67 | 73 | 69 | 65 | 63 |
| 3 | 86 | 75 | 66 | 59 | 84 | 73 | 65 | 58 | 70 | 62 | 57 | 66 | 60 | 55 | 64 | 58 | 54 | 52 |
| 4 | 79 | 66 | 56 | 49 | 76 | 64 | 55 | 48 | 61 | 54 | 48 | 59 | 52 | 47 | 56 | 51 | 46 | 43 |
| 5 | 72 | 58 | 49 | 42 | 70 | 57 | 48 | 41 | 55 | 47 | 41 | 52 | 46 | 40 | 50 | 44 | 39 | 37 |
| 6 | 67 | 52 | 43 | 36 | 64 | 51 | 42 | 36 | 49 | 41 | 35 | 47 | 40 | 35 | 46 | 39 | 34 | 32 |
| 7 | 62 | 47 | 38 | 32 | 60 | 46 | 38 | 31 | 45 | 37 | 31 | 43 | 36 | 31 | 41 | 35 | 30 | 28 |
| 8 | 57 | 43 | 34 | 28 | 56 | 42 | 34 | 28 | 41 | 33 | 28 | 39 | 32 | 27 | 38 | 32 | 27 | 25 |
| 9 | 53 | 39 | 31 | 25 | 52 | 39 | 31 | 25 | 37 | 30 | 25 | 36 | 29 | 24 | 35 | 29 | 24 | 22 |
| 10 | 50 | 36 | 28 | 23 | 49 | 36 | 28 | 23 | 35 | 27 | 22 | 33 | 27 | 22 | 32 | 26 | 22 | 20 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 90° | 180° |
|-----|-------|-------|-------|
| 0° | 16833 | 16833 | 16833 |
| 5° | 16689 | 16396 | 16103 |
| 10° | 16617 | 16038 | 15401 |
| 15° | 16557 | 15691 | 14884 |
| 20° | 16507 | 15349 | 14422 |
| 25° | 16408 | 15002 | 14005 |
| 30° | 16314 | 14700 | 13565 |
| 35° | 16220 | 14376 | 13086 |
| 40° | 16056 | 14399 | 12679 |
| 45° | 15873 | 13739 | 12272 |
| 50° | 15728 | 13400 | 11778 |
| 55° | 15616 | 13051 | 11316 |
| 60° | 15288 | 12508 | 10710 |
| 65° | 15025 | 11966 | 9987 |
| 70° | 14627 | 11298 | 9079 |
| 75° | 14127 | 10422 | 8106 |
| 80° | 13574 | 9461 | 6856 |
| 85° | 13402 | 8652 | 5598 |



TEST NUMBER: P130047

CATALOG NUMBER: HL618TAT - HLM6927 - HL6FL - 71PS

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 26.7 | 2.7 |
| 10°-20° | 77.0 | 7.7 |
| 20°-30° | 119.0 | 11.9 |
| 30°-40° | 147.9 | 14.8 |
| 40°-50° | 160.7 | 16.1 |
| 50°-60° | 156.1 | 15.6 |
| 60°-70° | 134.0 | 13.4 |
| 70°-80° | 97.9 | 9.8 |
| 80°-90° | 58.7 | 5.9 |
| 90°-100° | 19.9 | 2.0 |
| 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°-30° | 222.8 | 22.3 |
| 0°-40° | 370.6 | 37.1 |
| 0°-60° | 687.5 | 68.9 |
| 0°-90° | 978.1 | 98.0 |
| 90°-120° | 19.9 | 2.0 |
| 90°-150° | 19.9 | 2.0 |
| 90°-180° | 20.0 | 2.0 |
| 0°-180° | 998.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|------|-----|-----|-----|------|------|------|
| 0° | 282 | 282 | 282 | 282 | 282 | |
| 5° | 285 | 282 | 280 | 279 | 275 | 27 |
| 15° | 287 | 280 | 272 | 265 | 258 | 81 |
| 25° | 280 | 270 | 256 | 246 | 239 | 129 |
| 35° | 264 | 251 | 234 | 221 | 213 | 165 |
| 45° | 238 | 225 | 206 | 192 | 184 | 184 |
| 55° | 207 | 192 | 173 | 157 | 150 | 184 |
| 65° | 167 | 153 | 133 | 118 | 111 | 165 |
| 75° | 122 | 110 | 90 | 76 | 70 | 129 |
| 85° | 79 | 69 | 51 | 37 | 33 | 69 |
| 90° | 64 | 54 | 38 | 26 | 23 | 36 |
| 95° | 41 | 13 | 25 | 5 | 12 | 20 |
| 105° | 0 | 0 | 0 | 0 | 0 | 0 |
| 115° | 0 | 0 | 0 | 0 | 0 | 0 |
| 125° | 0 | 0 | 0 | 0 | 0 | 0 |
| 135° | 0 | 0 | 0 | 0 | 0 | 0 |
| 145° | 0 | 0 | 0 | 0 | 0 | 0 |
| 155° | 0 | 0 | 0 | 0 | 0 | 0 |
| 165° | 0 | 0 | 0 | 0 | 0 | 0 |
| 175° | 0 | 0 | 0 | 0 | 0 | 0 |
| 180° | 0 | 0 | 0 | 0 | 0 | 0 |



TEST NUMBER: P130047

CATALOG NUMBER: HL618TAT - HLM6927 - HL6FL - 71PS

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 10° | 15° | 20° | 25° | 30° | 35° | 40° | 45° | 50° |
|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 0° | 282 | 282 | 282 | 282 | 282 | 282 | 282 | 282 | 282 | 282 | 282 |
| 2.5° | 296 | 283 | 288 | 285 | 282 | 285 | 283 | 287 | 280 | 281 | 282 |
| 5° | 285 | 285 | 290 | 287 | 283 | 286 | 285 | 288 | 281 | 282 | 283 |
| 7.5° | 286 | 287 | 291 | 287 | 284 | 287 | 285 | 288 | 282 | 282 | 283 |
| 10° | 287 | 287 | 291 | 288 | 285 | 287 | 285 | 288 | 282 | 282 | 283 |
| 12.5° | 287 | 288 | 292 | 288 | 285 | 287 | 285 | 287 | 282 | 281 | 282 |
| 15° | 287 | 293 | 291 | 287 | 284 | 286 | 284 | 287 | 280 | 280 | 281 |
| 17.5° | 286 | 286 | 290 | 286 | 283 | 285 | 282 | 285 | 278 | 278 | 279 |
| 20° | 285 | 285 | 288 | 284 | 282 | 283 | 280 | 283 | 277 | 276 | 276 |
| 22.5° | 283 | 282 | 285 | 282 | 279 | 280 | 277 | 280 | 274 | 273 | 274 |
| 25° | 280 | 280 | 282 | 279 | 276 | 277 | 274 | 276 | 271 | 270 | 270 |
| 27.5° | 277 | 276 | 279 | 275 | 273 | 273 | 270 | 273 | 267 | 266 | 266 |
| 30° | 273 | 272 | 275 | 271 | 269 | 269 | 266 | 268 | 263 | 262 | 262 |
| 32.5° | 269 | 267 | 270 | 266 | 264 | 264 | 261 | 263 | 257 | 256 | 256 |
| 35° | 264 | 262 | 264 | 260 | 259 | 258 | 255 | 257 | 252 | 251 | 250 |
| 37.5° | 258 | 257 | 258 | 255 | 253 | 253 | 249 | 251 | 246 | 245 | 245 |
| 40° | 252 | 251 | 252 | 249 | 247 | 246 | 243 | 245 | 240 | 239 | 238 |
| 42.5° | 246 | 244 | 245 | 242 | 240 | 240 | 237 | 237 | 233 | 232 | 232 |
| 45° | 238 | 237 | 238 | 235 | 233 | 233 | 229 | 230 | 226 | 225 | 224 |
| 47.5° | 231 | 230 | 231 | 228 | 226 | 225 | 222 | 223 | 219 | 218 | 217 |
| 50° | 223 | 222 | 222 | 220 | 218 | 217 | 214 | 214 | 211 | 210 | 209 |
| 52.5° | 214 | 213 | 214 | 211 | 210 | 208 | 206 | 205 | 203 | 201 | 200 |
| 55° | 207 | 205 | 205 | 202 | 201 | 200 | 197 | 196 | 194 | 192 | 191 |
| 57.5° | 197 | 195 | 195 | 192 | 192 | 190 | 188 | 187 | 184 | 183 | 182 |
| 60° | 187 | 186 | 185 | 183 | 182 | 181 | 178 | 177 | 175 | 173 | 172 |
| 62.5° | 177 | 176 | 175 | 173 | 173 | 171 | 168 | 167 | 165 | 163 | 162 |
| 65° | 167 | 165 | 165 | 163 | 162 | 160 | 157 | 157 | 155 | 153 | 152 |
| 67.5° | 155 | 155 | 154 | 152 | 151 | 150 | 147 | 143 | 144 | 143 | 141 |
| 70° | 145 | 143 | 142 | 141 | 141 | 139 | 136 | 133 | 133 | 132 | 130 |
| 72.5° | 133 | 132 | 131 | 130 | 129 | 128 | 125 | 124 | 122 | 121 | 119 |
| 75° | 122 | 121 | 120 | 119 | 118 | 117 | 114 | 113 | 111 | 110 | 108 |
| 77.5° | 110 | 109 | 109 | 107 | 107 | 106 | 103 | 102 | 100 | 101 | 97 |
| 80° | 99 | 98 | 98 | 96 | 96 | 94 | 92 | 91 | 89 | 88 | 86 |
| 82.5° | 89 | 88 | 87 | 86 | 86 | 84 | 82 | 80 | 79 | 78 | 76 |
| 85° | 79 | 78 | 78 | 76 | 76 | 74 | 72 | 71 | 70 | 69 | 67 |
| 87.5° | 71 | 70 | 69 | 68 | 68 | 67 | 64 | 63 | 62 | 61 | 59 |
| 90° | 64 | 63 | 63 | 62 | 61 | 60 | 58 | 56 | 55 | 54 | 52 |
| 92.5° | 61 | 60 | 60 | 57 | 56 | 53 | 49 | 45 | 41 | 39 | 39 |
| 95° | 41 | 40 | 41 | 37 | 35 | 29 | 24 | 20 | 16 | 13 | 13 |
| 97.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 100° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 102.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 105° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 107.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 110° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |



TEST NUMBER: P130047

CATALOG NUMBER: HL618TAT - HLM6927 - HL6FL - 71PS

CANDELA DISTRIBUTION (continued):

| | 0° | 5° | 10° | 15° | 20° | 25° | 30° | 35° | 40° | 45° | 50° |
|--------|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 112.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 115° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 117.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 120° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 122.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 125° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 127.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 130° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 132.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 135° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 137.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 140° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 142.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 145° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 147.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 150° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 152.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 155° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 157.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 160° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 162.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 165° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 167.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 170° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 172.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 175° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 177.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 180° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |



TEST NUMBER: P130047

CATALOG NUMBER: HL618TAT - HLM6927 - HL6FL - 71PS

CANDELA DISTRIBUTION (continued):

| | 55° | 60° | 65° | 70° | 75° | 80° | 85° | 90° | 95° | 100° | 105° |
|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|
| 0° | 282 | 282 | 282 | 282 | 282 | 282 | 282 | 282 | 282 | 282 | 282 |
| 2.5° | 281 | 284 | 279 | 282 | 285 | 283 | 285 | 281 | 280 | 279 | 280 |
| 5° | 281 | 284 | 280 | 282 | 285 | 282 | 285 | 280 | 279 | 278 | 279 |
| 7.5° | 281 | 284 | 279 | 281 | 285 | 281 | 283 | 279 | 277 | 276 | 276 |
| 10° | 281 | 283 | 278 | 280 | 283 | 279 | 281 | 277 | 275 | 273 | 274 |
| 12.5° | 279 | 281 | 277 | 278 | 281 | 277 | 279 | 274 | 272 | 271 | 271 |
| 15° | 278 | 280 | 275 | 276 | 282 | 274 | 276 | 272 | 269 | 267 | 267 |
| 17.5° | 275 | 270 | 272 | 273 | 276 | 271 | 273 | 268 | 266 | 264 | 263 |
| 20° | 273 | 274 | 270 | 270 | 273 | 268 | 269 | 265 | 267 | 261 | 259 |
| 22.5° | 270 | 270 | 266 | 266 | 270 | 264 | 265 | 261 | 258 | 256 | 255 |
| 25° | 266 | 267 | 263 | 263 | 266 | 260 | 261 | 256 | 253 | 252 | 250 |
| 27.5° | 262 | 262 | 258 | 258 | 261 | 255 | 255 | 251 | 248 | 247 | 245 |
| 30° | 257 | 257 | 253 | 253 | 256 | 249 | 250 | 246 | 243 | 241 | 239 |
| 32.5° | 251 | 251 | 248 | 247 | 250 | 244 | 244 | 240 | 241 | 235 | 233 |
| 35° | 246 | 246 | 242 | 241 | 244 | 237 | 237 | 234 | 230 | 229 | 227 |
| 37.5° | 240 | 239 | 236 | 235 | 237 | 230 | 231 | 227 | 224 | 222 | 220 |
| 40° | 234 | 233 | 230 | 229 | 231 | 224 | 224 | 226 | 217 | 220 | 213 |
| 42.5° | 226 | 226 | 223 | 221 | 223 | 216 | 217 | 213 | 209 | 208 | 205 |
| 45° | 219 | 218 | 216 | 214 | 215 | 209 | 209 | 206 | 202 | 200 | 198 |
| 47.5° | 212 | 211 | 207 | 206 | 207 | 201 | 201 | 198 | 194 | 193 | 190 |
| 50° | 204 | 203 | 200 | 198 | 199 | 193 | 193 | 190 | 186 | 184 | 182 |
| 52.5° | 195 | 194 | 191 | 189 | 190 | 184 | 184 | 181 | 180 | 175 | 173 |
| 55° | 187 | 185 | 182 | 180 | 181 | 175 | 175 | 173 | 168 | 167 | 164 |
| 57.5° | 178 | 176 | 173 | 171 | 172 | 166 | 166 | 163 | 159 | 157 | 155 |
| 60° | 168 | 166 | 164 | 162 | 162 | 157 | 156 | 153 | 149 | 148 | 145 |
| 62.5° | 158 | 156 | 154 | 152 | 152 | 147 | 146 | 144 | 140 | 138 | 135 |
| 65° | 148 | 146 | 143 | 141 | 141 | 136 | 136 | 133 | 129 | 128 | 125 |
| 67.5° | 137 | 136 | 133 | 131 | 131 | 126 | 125 | 123 | 119 | 117 | 115 |
| 70° | 127 | 125 | 122 | 120 | 120 | 116 | 115 | 112 | 109 | 107 | 104 |
| 72.5° | 116 | 114 | 111 | 110 | 109 | 105 | 104 | 103 | 98 | 97 | 94 |
| 75° | 105 | 103 | 101 | 99 | 98 | 94 | 93 | 90 | 87 | 86 | 83 |
| 77.5° | 94 | 92 | 90 | 88 | 87 | 83 | 82 | 80 | 77 | 75 | 73 |
| 80° | 83 | 81 | 79 | 77 | 76 | 73 | 71 | 69 | 66 | 67 | 62 |
| 82.5° | 74 | 71 | 69 | 67 | 66 | 63 | 61 | 59 | 56 | 55 | 53 |
| 85° | 65 | 62 | 60 | 58 | 57 | 54 | 52 | 51 | 48 | 47 | 44 |
| 87.5° | 57 | 54 | 53 | 51 | 49 | 46 | 45 | 43 | 40 | 39 | 37 |
| 90° | 50 | 48 | 47 | 45 | 43 | 40 | 39 | 38 | 35 | 34 | 32 |
| 92.5° | 39 | 40 | 40 | 39 | 40 | 38 | 37 | 36 | 34 | 32 | 30 |
| 95° | 15 | 18 | 20 | 22 | 25 | 25 | 25 | 25 | 23 | 21 | 19 |
| 97.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 100° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 102.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 105° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 107.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 110° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |



TEST NUMBER: P130047

CATALOG NUMBER: HL618TAT - HLM6927 - HL6FL - 71PS

CANDELA DISTRIBUTION (continued):

| | 55° | 60° | 65° | 70° | 75° | 80° | 85° | 90° | 95° | 100° | 105° |
|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|
| 112.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 115° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 117.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 120° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 122.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 125° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 127.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 130° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 132.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 135° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 137.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 140° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 142.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 145° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 147.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 150° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 152.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 155° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 157.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 160° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 162.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 165° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 167.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 170° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 172.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 175° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 177.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 180° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |



TEST NUMBER: P130047

CATALOG NUMBER: HL618TAT - HLM6927 - HL6FL - 71PS

CANDELA DISTRIBUTION (continued):

| | 110° | 115° | 120° | 125° | 130° | 135° | 140° | 145° | 150° | 155° | 160° |
|--------|------|------|------|------|------|------|------|------|------|------|------|
| 0° | 282 | 282 | 282 | 282 | 282 | 282 | 282 | 282 | 282 | 282 | 282 |
| 2.5° | 283 | 277 | 277 | 280 | 278 | 282 | 281 | 281 | 280 | 279 | 273 |
| 5° | 281 | 275 | 275 | 278 | 275 | 279 | 278 | 278 | 277 | 276 | 274 |
| 7.5° | 279 | 273 | 272 | 275 | 272 | 276 | 275 | 274 | 273 | 272 | 270 |
| 10° | 276 | 270 | 269 | 272 | 268 | 272 | 271 | 270 | 269 | 268 | 266 |
| 12.5° | 273 | 267 | 266 | 268 | 265 | 269 | 268 | 267 | 266 | 264 | 262 |
| 15° | 269 | 263 | 263 | 265 | 262 | 265 | 264 | 263 | 262 | 260 | 258 |
| 17.5° | 266 | 259 | 259 | 261 | 257 | 261 | 259 | 258 | 257 | 256 | 253 |
| 20° | 262 | 255 | 255 | 257 | 253 | 256 | 255 | 254 | 253 | 251 | 249 |
| 22.5° | 257 | 251 | 250 | 252 | 248 | 251 | 250 | 249 | 248 | 247 | 245 |
| 25° | 252 | 246 | 245 | 247 | 243 | 246 | 245 | 244 | 243 | 241 | 239 |
| 27.5° | 247 | 241 | 240 | 242 | 238 | 241 | 240 | 238 | 237 | 236 | 234 |
| 30° | 241 | 235 | 234 | 237 | 232 | 235 | 233 | 233 | 231 | 230 | 228 |
| 32.5° | 235 | 229 | 228 | 230 | 226 | 229 | 227 | 232 | 224 | 223 | 221 |
| 35° | 229 | 223 | 221 | 223 | 219 | 221 | 221 | 219 | 218 | 216 | 214 |
| 37.5° | 221 | 216 | 215 | 216 | 212 | 214 | 213 | 212 | 211 | 210 | 207 |
| 40° | 214 | 209 | 208 | 209 | 205 | 207 | 206 | 206 | 204 | 203 | 201 |
| 42.5° | 207 | 201 | 200 | 201 | 198 | 199 | 198 | 198 | 196 | 195 | 193 |
| 45° | 199 | 194 | 193 | 194 | 190 | 192 | 191 | 190 | 188 | 187 | 185 |
| 47.5° | 191 | 186 | 185 | 186 | 182 | 184 | 183 | 182 | 180 | 179 | 177 |
| 50° | 182 | 178 | 177 | 178 | 174 | 175 | 174 | 174 | 172 | 171 | 169 |
| 52.5° | 174 | 169 | 168 | 169 | 165 | 166 | 166 | 165 | 163 | 162 | 161 |
| 55° | 165 | 161 | 160 | 160 | 156 | 157 | 156 | 156 | 154 | 153 | 152 |
| 57.5° | 156 | 151 | 150 | 150 | 147 | 148 | 147 | 147 | 145 | 144 | 142 |
| 60° | 146 | 142 | 141 | 141 | 137 | 138 | 137 | 137 | 135 | 134 | 132 |
| 62.5° | 136 | 132 | 131 | 131 | 127 | 128 | 128 | 127 | 125 | 124 | 123 |
| 65° | 126 | 122 | 121 | 120 | 117 | 118 | 117 | 116 | 115 | 114 | 113 |
| 67.5° | 115 | 112 | 113 | 110 | 107 | 107 | 107 | 106 | 104 | 104 | 103 |
| 70° | 105 | 101 | 100 | 99 | 96 | 97 | 96 | 95 | 94 | 93 | 92 |
| 72.5° | 94 | 91 | 89 | 89 | 86 | 86 | 86 | 85 | 83 | 83 | 82 |
| 75° | 83 | 80 | 79 | 78 | 75 | 76 | 74 | 74 | 72 | 72 | 71 |
| 77.5° | 72 | 69 | 69 | 67 | 65 | 65 | 64 | 64 | 63 | 62 | 61 |
| 80° | 61 | 59 | 58 | 57 | 55 | 55 | 54 | 53 | 52 | 52 | 51 |
| 82.5° | 52 | 50 | 49 | 47 | 46 | 45 | 45 | 44 | 43 | 43 | 42 |
| 85° | 43 | 41 | 40 | 39 | 38 | 37 | 36 | 36 | 35 | 34 | 34 |
| 87.5° | 36 | 35 | 34 | 33 | 31 | 31 | 30 | 30 | 29 | 28 | 27 |
| 90° | 31 | 30 | 29 | 28 | 27 | 26 | 25 | 25 | 24 | 24 | 23 |
| 92.5° | 28 | 25 | 22 | 21 | 18 | 18 | 17 | 18 | 18 | 19 | 20 |
| 95° | 16 | 13 | 10 | 8 | 6 | 5 | 5 | 6 | 7 | 9 | 11 |
| 97.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 100° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 102.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 105° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 107.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 110° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |



TEST NUMBER: P130047

CATALOG NUMBER: HL618TAT - HLM6927 - HL6FL - 71PS

CANDELA DISTRIBUTION (continued):

| | 110° | 115° | 120° | 125° | 130° | 135° | 140° | 145° | 150° | 155° | 160° |
|--------|------|------|------|------|------|------|------|------|------|------|------|
| 112.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 115° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 117.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 120° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 122.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 125° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 127.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 130° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 132.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 135° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 137.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 140° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 142.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 145° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 147.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 150° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 152.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 155° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 157.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 160° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 162.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 165° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 167.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 170° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 172.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 175° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 177.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 180° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |



TEST NUMBER: P130047

CATALOG NUMBER: HL618TAT - HLM6927 - HL6FL - 71PS

CANDELA DISTRIBUTION (continued):

| | 165° | 170° | 175° | 180° |
|--------|------|------|------|------|
| 0° | 282 | 282 | 282 | 282 |
| 2.5° | 282 | 284 | 281 | 278 |
| 5° | 279 | 281 | 278 | 275 |
| 7.5° | 275 | 276 | 274 | 270 |
| 10° | 271 | 272 | 269 | 266 |
| 12.5° | 267 | 268 | 266 | 263 |
| 15° | 263 | 264 | 261 | 258 |
| 17.5° | 258 | 259 | 257 | 253 |
| 20° | 253 | 255 | 252 | 249 |
| 22.5° | 248 | 250 | 247 | 235 |
| 25° | 243 | 244 | 242 | 239 |
| 27.5° | 237 | 238 | 236 | 233 |
| 30° | 231 | 232 | 230 | 227 |
| 32.5° | 224 | 225 | 224 | 220 |
| 35° | 217 | 218 | 216 | 213 |
| 37.5° | 210 | 211 | 209 | 207 |
| 40° | 203 | 204 | 202 | 199 |
| 42.5° | 195 | 196 | 194 | 192 |
| 45° | 187 | 188 | 186 | 184 |
| 47.5° | 182 | 179 | 178 | 176 |
| 50° | 171 | 171 | 170 | 167 |
| 52.5° | 162 | 162 | 161 | 159 |
| 55° | 155 | 153 | 152 | 150 |
| 57.5° | 143 | 143 | 142 | 141 |
| 60° | 134 | 133 | 133 | 131 |
| 62.5° | 124 | 124 | 124 | 121 |
| 65° | 113 | 114 | 113 | 111 |
| 67.5° | 104 | 103 | 103 | 101 |
| 70° | 93 | 92 | 92 | 90 |
| 72.5° | 82 | 82 | 82 | 80 |
| 75° | 71 | 71 | 71 | 70 |
| 77.5° | 61 | 61 | 61 | 60 |
| 80° | 51 | 51 | 50 | 50 |
| 82.5° | 42 | 41 | 42 | 41 |
| 85° | 34 | 33 | 34 | 33 |
| 87.5° | 27 | 27 | 27 | 26 |
| 90° | 23 | 23 | 23 | 23 |
| 92.5° | 21 | 21 | 22 | 21 |
| 95° | 12 | 12 | 12 | 12 |
| 97.5° | 0 | 0 | 0 | 0 |
| 100° | 0 | 0 | 0 | 0 |
| 102.5° | 0 | 0 | 0 | 0 |
| 105° | 0 | 0 | 0 | 0 |
| 107.5° | 0 | 0 | 0 | 0 |
| 110° | 0 | 0 | 0 | 0 |



TEST NUMBER: P130047

CATALOG NUMBER: HL618TAT - HLM6927 - HL6FL - 71PS

CANDELA DISTRIBUTION (continued):

| | 165° | 170° | 175° | 180° |
|--------|------|------|------|------|
| 112.5° | 0 | 0 | 0 | 0 |
| 115° | 0 | 0 | 0 | 0 |
| 117.5° | 0 | 0 | 0 | 0 |
| 120° | 0 | 0 | 0 | 0 |
| 122.5° | 0 | 0 | 0 | 0 |
| 125° | 0 | 0 | 0 | 0 |
| 127.5° | 0 | 0 | 0 | 0 |
| 130° | 0 | 0 | 0 | 0 |
| 132.5° | 0 | 0 | 0 | 0 |
| 135° | 0 | 0 | 0 | 0 |
| 137.5° | 0 | 0 | 0 | 0 |
| 140° | 0 | 0 | 0 | 0 |
| 142.5° | 0 | 0 | 0 | 0 |
| 145° | 0 | 0 | 0 | 0 |
| 147.5° | 0 | 0 | 0 | 0 |
| 150° | 0 | 0 | 0 | 0 |
| 152.5° | 0 | 0 | 0 | 0 |
| 155° | 0 | 0 | 0 | 0 |
| 157.5° | 0 | 0 | 0 | 0 |
| 160° | 0 | 0 | 0 | 0 |
| 162.5° | 0 | 0 | 0 | 0 |
| 165° | 0 | 0 | 0 | 0 |
| 167.5° | 0 | 0 | 0 | 0 |
| 170° | 0 | 0 | 0 | 0 |
| 172.5° | 0 | 0 | 0 | 0 |
| 175° | 0 | 0 | 0 | 0 |
| 177.5° | 0 | 0 | 0 | 0 |
| 180° | 0 | 0 | 0 | 0 |

(END OF REPORT)