



INDEPENDENT TESTING LABORATORIES, INC.
3386 LONGHORN ROAD, BOULDER, CO 80302 USA

PHONE: (303)442-1255 • FAX: (303)449-5274 • E-MAIL: itl@itlboulder.com • WEBSITE: www.itlboulder.com

REPORT NUMBER: ITL46474

DATE: 06/04/97

PREPARED FOR: B-K LIGHTING, INC.

CATALOG NUMBER: MC-47-XXX-13-C

LUMINAIRE: MACHINED BRASS SOCKET MOUNT, CYLINDRICAL METAL LAMP
HOUSING WITH WHITE PAINTED GENERAL INTERIOR FINISH, CLEAR
FLAT GLASS ENCLOSURE WITH CLEAR LINEAR PRISMATIC GLASS
OVERLAY. PRISMS ORIENTED VERTICALLY.

LAMP: ONE 50-WATT PAR 20 HALOGEN INCANDESCENT, PHILIPS 50PAR20/H/NSP,
HORIZONTAL POSITION.

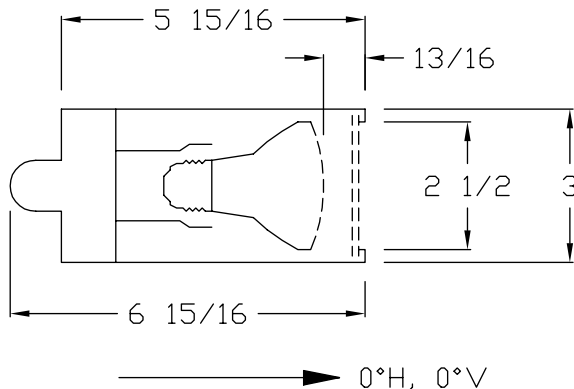
REPORT IS BASED ON 550 LUMENS PER LAMP.

FLOODLIGHT CHARACTERISTICS

PAGE 1

| | | | | |
|------------------------------|---------|------------|--------|-------|
| IES TYPE | 5H X 4V | | | |
| MAXIMUM CANDLEPOWER | 812. | AT | 0.0 H, | 0.5 V |
| HORIZONTAL BEAM ANGLE (50%) | 53.3 | deg | | |
| VERTICAL BEAM ANGLE (50%) | 16.4 | deg | | |
| HORIZONTAL FIELD ANGLE (10%) | 84.9 | deg | | |
| VERTICAL FIELD ANGLE (10%) | 49.2 | deg | | |
| BEAM LUMENS (EFFICIENCY) | 111. | (20.1 %) | | |
| FIELD LUMENS (EFFICIENCY) | 237. | (43.0 %) | | |
| TOTAL LUMENS (EFFICIENCY) | 319. | (57.9 %) | | |

| AXIAL CANDLEPOWER | DEG | HORIZ. | DEG | VERT. |
|-------------------|-------|--------|-------|-------|
| | 76.0 | 5. | 47.5 | 22. |
| | 68.0 | 10. | 42.5 | 25. |
| | 60.0 | 13. | 37.5 | 33. |
| | 52.0 | 24. | 32.5 | 50. |
| | 44.0 | 63. | 27.5 | 69. |
| | 36.0 | 158. | 22.5 | 96. |
| | 28.0 | 359. | 17.5 | 153. |
| | 20.0 | 642. | 12.5 | 259. |
| | 12.0 | 718. | 7.5 | 436. |
| | 4.0 | 787. | 2.5 | 745. |
| | 0.0 | 808. | 0.0 | 808. |
| | -4.0 | 787. | -2.5 | 729. |
| | -12.0 | 718. | -7.5 | 426. |
| | -20.0 | 642. | -12.5 | 225. |
| | -28.0 | 359. | -17.5 | 136. |
| | -36.0 | 158. | -22.5 | 89. |
| | -44.0 | 63. | -27.5 | 63. |
| | -52.0 | 24. | -32.5 | 40. |
| | -60.0 | 13. | -37.5 | 26. |
| | -68.0 | 10. | -42.5 | 22. |
| | -76.0 | 5. | -47.5 | 19. |

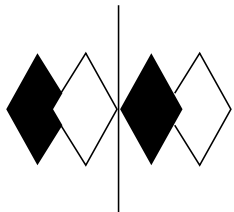


Checked MY

Approved R.P.BERGIN

ALL CANDELA AND LUMEN VALUES IN THIS REPORT ARE BASED ON RELATIVE
PHOTOMETRY WHICH ASSUMES A BALLAST FACTOR= 1.000. ANY CALCULATIONS
PREPARED FROM THESE DATA SHOULD INCLUDE AN APPROPRIATE BALLAST FACTOR.

THIS REPORT IS BASED ON PUBLISHED INDUSTRY PROCEDURES. FIELD PERFORMANCE MAY DIFFER FROM LABORATORY PERFORMANCE.



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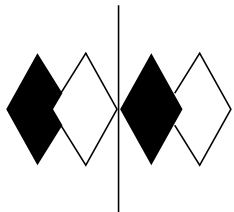
CANDELA TABULATION

PAGE 2

AVERAGE OF RIGHT AND LEFT SIDES

| | 0.0 | 4.0 | 12.0 | 20.0 | 28.0 | 36.0 | 44.0 | 52.0 | 60.0 | 68.0 | 76.0 |
|-------|------|------|------|------|------|------|------|------|------|------|------|
| 47.5 | 22. | 22. | 22. | 20. | 15. | 15. | 10. | 7. | 6. | 3. | 2. |
| 42.5 | 25. | 25. | 26. | 25. | 21. | 17. | 12. | 8. | 6. | 4. | 3. |
| 37.5 | 33. | 33. | 33. | 32. | 27. | 21. | 15. | 9. | 8. | 5. | 3. |
| 32.5 | 50. | 49. | 46. | 41. | 35. | 26. | 18. | 10. | 8. | 6. | 3. |
| 27.5 | 69. | 70. | 62. | 51. | 43. | 33. | 22. | 12. | 9. | 7. | 4. |
| 22.5 | 96. | 95. | 83. | 72. | 58. | 41. | 26. | 14. | 10. | 7. | 4. |
| 17.5 | 153. | 148. | 135. | 115. | 84. | 55. | 33. | 16. | 11. | 8. | 4. |
| 12.5 | 259. | 242. | 214. | 183. | 124. | 74. | 42. | 19. | 11. | 10. | 5. |
| 7.5 | 436. | 410. | 349. | 325. | 201. | 104. | 51. | 22. | 12. | 10. | 5. |
| 2.5 | 745. | 705. | 598. | 589. | 327. | 144. | 60. | 24. | 13. | 10. | 5. |
| 0.0 | 808. | 787. | 718. | 642. | 359. | 158. | 63. | 24. | 13. | 10. | 5. |
| -2.5 | 729. | 712. | 650. | 571. | 337. | 153. | 62. | 23. | 13. | 10. | 5. |
| -7.5 | 426. | 418. | 379. | 323. | 213. | 111. | 52. | 22. | 12. | 10. | 5. |
| -12.5 | 225. | 222. | 204. | 167. | 118. | 73. | 40. | 18. | 11. | 9. | 5. |
| -17.5 | 136. | 133. | 120. | 100. | 74. | 50. | 31. | 15. | 11. | 8. | 4. |
| -22.5 | 89. | 88. | 77. | 66. | 52. | 38. | 25. | 13. | 10. | 8. | 3. |
| -27.5 | 63. | 62. | 57. | 48. | 40. | 31. | 21. | 12. | 9. | 6. | 3. |
| -32.5 | 40. | 39. | 39. | 36. | 31. | 24. | 17. | 10. | 8. | 6. | 3. |
| -37.5 | 26. | 27. | 28. | 27. | 24. | 19. | 13. | 9. | 8. | 4. | 2. |
| -42.5 | 22. | 22. | 22. | 22. | 18. | 15. | 11. | 7. | 6. | 4. | 2. |
| -47.5 | 19. | 19. | 19. | 17. | 13. | 13. | 9. | 6. | 5. | 3. | 2. |

BEAM EDGE = 406. CP = 50% OF MAX.
FIELD EDGE = 81. CP = 10% OF MAX.



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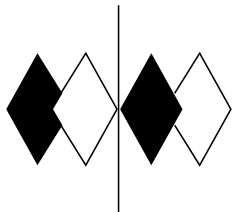
CANDELA TABULATION -- FIELD ONLY

PAGE 3

AVERAGE OF RIGHT AND LEFT SIDES

| | 0.0 | 4.0 | 12.0 | 20.0 | 28.0 | 36.0 | 44.0 | 52.0 | 60.0 | 68.0 | 76.0 |
|-------|------|------|------|------|------|------|------|------|------|------|------|
| 47.5 | | | | | | | | | | | |
| 42.5 | | | | | | | | | | | |
| 37.5 | | | | | | | | | | | |
| 32.5 | | | | | | | | | | | |
| 27.5 | | | | | | | | | | | |
| 22.5 | 96. | 95. | 83. | | | | | | | | |
| 17.5 | 153. | 148. | 135. | 115. | 84. | | | | | | |
| 12.5 | 259. | 242. | 214. | 183. | 124. | | | | | | |
| 7.5 | 436. | 410. | 349. | 325. | 201. | 104. | | | | | |
| 2.5 | 745. | 705. | 598. | 589. | 327. | 144. | | | | | |
| 0.0 | 808. | 787. | 718. | 642. | 359. | 158. | | | | | |
| -2.5 | 729. | 712. | 650. | 571. | 337. | 153. | | | | | |
| -7.5 | 426. | 418. | 379. | 323. | 213. | 111. | | | | | |
| -12.5 | 225. | 222. | 204. | 167. | 118. | | | | | | |
| -17.5 | 136. | 133. | 120. | 100. | | | | | | | |
| -22.5 | 89. | 88. | | | | | | | | | |
| -27.5 | | | | | | | | | | | |
| -32.5 | | | | | | | | | | | |
| -37.5 | | | | | | | | | | | |
| -42.5 | | | | | | | | | | | |
| -47.5 | | | | | | | | | | | |

BEAM EDGE = 406. CP = 50% OF MAX.
FIELD EDGE = 81. CP = 10% OF MAX.



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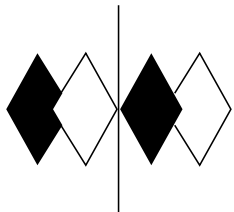
LUMEN TABULATION

PAGE 4

AVERAGE OF RIGHT AND LEFT SIDES

| | 0 | 8 | 16 | 24 | 32 | 40 | 48 | 56 | 64 | 72 | 80 | TOTAL |
|-----|-----|-----|-----|-----|-----|----|----|----|----|----|----|-------|
| 50 | | | | | | | | | | | | |
| 45 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 1. |
| 40 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 2. |
| 35 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 2. |
| 30 | 1. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 3. |
| 25 | 1. | 1. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 3. |
| 20 | 1. | 1. | 1. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 4. |
| 15 | 2. | 2. | 1. | 1. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 7. |
| 10 | 3. | 3. | 2. | 1. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 10. |
| 5 | 5. | 4. | 4. | 2. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 17. |
| 0 | 9. | 7. | 7. | 4. | 1. | 1. | 0. | 0. | 0. | 0. | 0. | 28. |
| -5 | 9. | 8. | 7. | 4. | 2. | 1. | 0. | 0. | 0. | 0. | 0. | 29. |
| -10 | 5. | 5. | 4. | 2. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 17. |
| -15 | 3. | 2. | 2. | 1. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 10. |
| -20 | 2. | 1. | 1. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 6. |
| -25 | 1. | 1. | 1. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 4. |
| -30 | 1. | 1. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 3. |
| -35 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 2. |
| -40 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 2. |
| -45 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 1. |
| -50 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 1. |
| | 43. | 38. | 32. | 20. | 10. | 5. | 2. | 1. | 1. | 0. | 0. | 152. |

LUMEN TOTAL THIS PAGE = 152.



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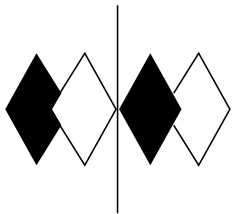
LUMEN TABULATION -- FIELD ONLY

PAGE 5

AVERAGE OF RIGHT AND LEFT SIDES

| | 0 | 8 | 16 | 24 | 32 | 40 | 48 | 56 | 64 | 72 | 80 | TOTAL |
|-----|-----|-----|-----|-----|----|----|----|----|----|----|----|-------|
| 50 | | | | | | | | | | | | 0. |
| 45 | | | | | | | | | | | | 0. |
| 40 | | | | | | | | | | | | 0. |
| 35 | | | | | | | | | | | | 0. |
| 30 | | | | | | | | | | | | 0. |
| 25 | | | | | | | | | | | | 0. |
| 20 | 1. | 1. | | | | | | | | | | 2. |
| 15 | 2. | 2. | 1. | 1. | | | | | | | | 6. |
| 10 | 3. | 3. | 2. | 1. | | | | | | | | 9. |
| 5 | 5. | 4. | 4. | 2. | 1. | | | | | | | 16. |
| 0 | 9. | 7. | 7. | 4. | 1. | | | | | | | 27. |
| -5 | 9. | 8. | 7. | 4. | 2. | | | | | | | 28. |
| -10 | 5. | 5. | 4. | 2. | 1. | | | | | | | 17. |
| -15 | 3. | 2. | 2. | 1. | | | | | | | | 8. |
| -20 | 2. | 1. | 1. | | | | | | | | | 4. |
| -25 | 1. | | | | | | | | | | | 1. |
| -30 | | | | | | | | | | | | 0. |
| -35 | | | | | | | | | | | | 0. |
| -40 | | | | | | | | | | | | 0. |
| -45 | | | | | | | | | | | | 0. |
| -50 | | | | | | | | | | | | 0. |
| | 39. | 33. | 27. | 15. | 5. | 0. | 0. | 0. | 0. | 0. | 0. | 118. |

LUMEN TOTAL THIS PAGE = 118.



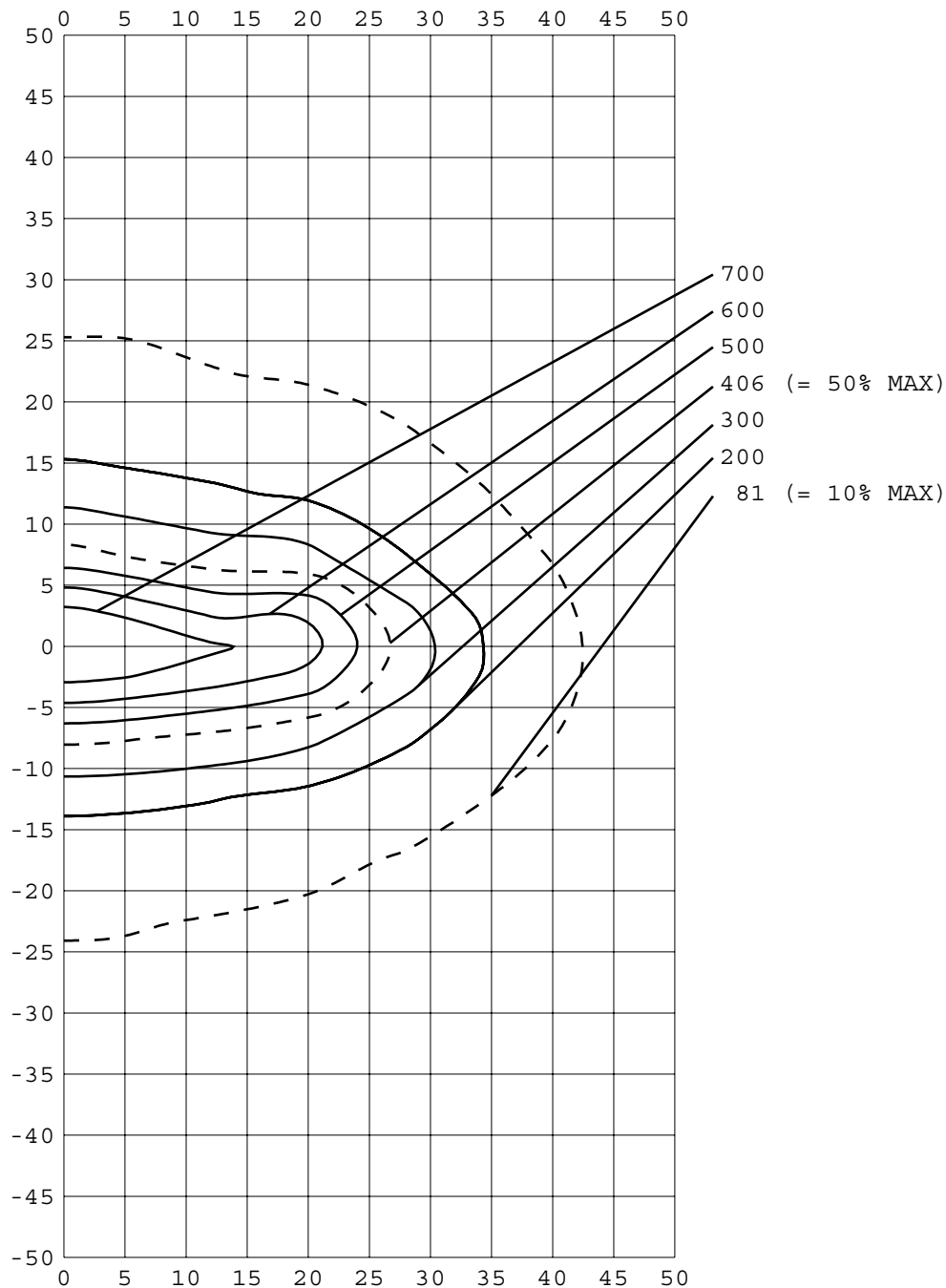
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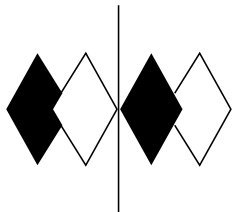
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ISOCANDELA CURVES

PAGE 6

AVERAGE OF RIGHT AND LEFT SIDES





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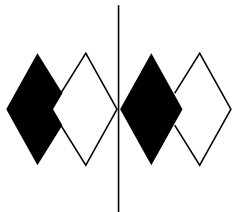
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CANDELA TABULATION -- 10 BY 10 INCREMENTS

PAGE 7

AVERAGE OF RIGHT AND LEFT SIDES

| | 0.0 | 5.0 | 15.0 | 25.0 | 35.0 | 45.0 | 55.0 | 65.0 | 75.0 | 85.0 |
|-------|------------|-----|------|------|------|------|------|------|------|------|
| 85.0 | 0. | 0. | 0. | 1. | 0. | 0. | 1. | 0. | 0. | 0. |
| 75.0 | 3. | 5. | 4. | 3. | 3. | 2. | 2. | 1. | 1. | 0. |
| 65.0 | 11. | 11. | 9. | 8. | 6. | 5. | 4. | 2. | 1. | 0. |
| 55.0 | 19. | 19. | 16. | 13. | 11. | 7. | 6. | 3. | 1. | 0. |
| 45.0 | | | | | | | | | | 0. |
| 35.0 | | | | | | | | | | 0. |
| 25.0 | | | | | | | | | | 0. |
| 15.0 | | | | | | | | | | 0. |
| 5.0 | | | | | | | | | | 1. |
| 0.0 | see page 2 | | | | | | | | | 1. |
| -5.0 | | | | | | | | | | 1. |
| -15.0 | | | | | | | | | | 1. |
| -25.0 | | | | | | | | | | 1. |
| -35.0 | | | | | | | | | | 1. |
| -45.0 | | | | | | | | | | 0. |
| -55.0 | 14. | 15. | 13. | 11. | 10. | 7. | 5. | 3. | 1. | 0. |
| -65.0 | 9. | 9. | 8. | 6. | 5. | 4. | 3. | 2. | 0. | 0. |
| -75.0 | 3. | 3. | 4. | 3. | 2. | 2. | 1. | 0. | 0. | 0. |
| -85.0 | 0. | 1. | 0. | 1. | 0. | 0. | 0. | 0. | 0. | 0. |



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LUMEN TABULATION -- 10 BY 10 INCREMENTS

PAGE 8

AVERAGE OF RIGHT AND LEFT SIDES

| | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | TOTAL |
|-----|------------|----|----|----|----|----|----|----|----|----|-------|
| 90 | | | | | | | | | | | |
| | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| 80 | | | | | | | | | | | |
| | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 1. |
| 70 | | | | | | | | | | | |
| | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 1. |
| 60 | | | | | | | | | | | |
| | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 2. |
| 50 | | | | | | | | | | | |
| | | | | | | | | | | 0. | |
| 40 | | | | | | | | | | | |
| | | | | | | | | | | 0. | |
| 30 | | | | | | | | | | | |
| | | | | | | | | | | 0. | |
| 20 | | | | | | | | | | | |
| | | | | | | | | | | 0. | |
| 10 | | | | | | | | | | | |
| | | | | | | | | | | 0. | |
| 0 | see page 4 | | | | | | | | | | 152. |
| | | | | | | | | | | 0. | |
| -10 | | | | | | | | | | | |
| | | | | | | | | | | 0. | |
| -20 | | | | | | | | | | | |
| | | | | | | | | | | 0. | |
| -30 | | | | | | | | | | | |
| | | | | | | | | | | 0. | |
| -40 | | | | | | | | | | | |
| | | | | | | | | | | 0. | |
| -50 | | | | | | | | | | | |
| | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 2. |
| -60 | | | | | | | | | | | |
| | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 1. |
| -70 | | | | | | | | | | | |
| | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| -80 | | | | | | | | | | | |
| | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| -90 | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | 0. | 159. |

LUMEN TOTAL THIS PAGE = 159.