



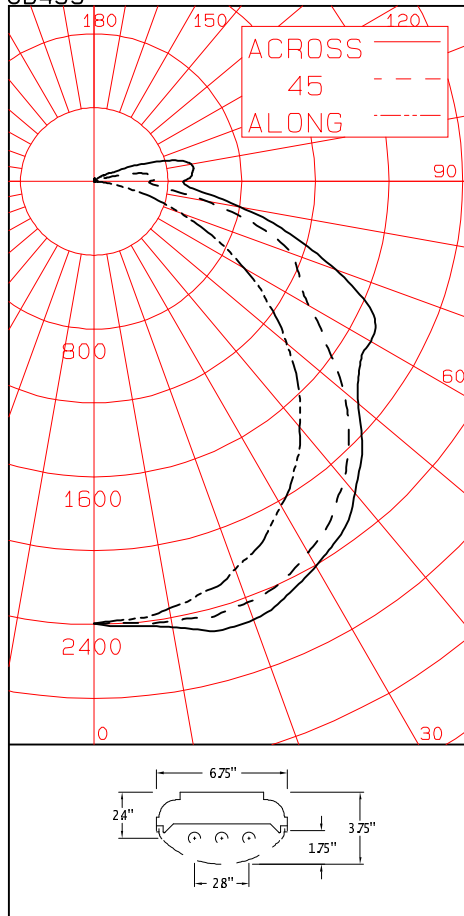
LIGHTING SCIENCES CANADA LTD.

440 Phillip St., Unit 19, Waterloo, Ontario, Canada N2L 5R9
Tel: (519) 746-3140 Fax: (519) 746-3156 lsc@lightingsciences.ca

CERTIFIED TEST REPORT NO. LSC B499
COMPUTED BY LSC PROGRAM **TEST-LITE**

BEGHELLI 4FT. LUMINAIRE CAT. NO. HZ100 4 HT F3 120V STEEL REFLECTOR
WITH WHITE PAINTED STEEL REFLECTOR AND CLEAR WRAP LENS
THREE 54W T5 HO FLUORESCENT LAMPS. LUMEN RATING = 4450 LMS.
ONE UNIVERSAL 120-277V 3 OR 4-LAMP ELECTRONIC BALLAST NO. B454IUNV-E

CB499



CANDLEPOWER SUMMARY

OUTPUT
LUMENS

| ANGLE | ALONG | 22.5 | 45 | 67.5 | ACROSS | |
|-------|-------|------|------|------|--------|------|
| 0 | 2396 | 2396 | 2396 | 2396 | 2396 | |
| 5 | 2381 | 2370 | 2401 | 2418 | 2417 | 233 |
| 15 | 2301 | 2329 | 2445 | 2501 | 2522 | 684 |
| 25 | 2157 | 2218 | 2397 | 2471 | 2475 | 1083 |
| 35 | 1897 | 2059 | 2239 | 2307 | 2334 | 1361 |
| 45 | 1568 | 1790 | 1956 | 2017 | 2058 | 1458 |
| 55 | 1154 | 1399 | 1538 | 1703 | 1760 | 1371 |
| 65 | 725 | 948 | 1234 | 1564 | 1665 | 1209 |
| 75 | 310 | 521 | 914 | 1072 | 1099 | 845 |
| 85 | 37 | 188 | 378 | 539 | 571 | 406 |
| 90 | 1 | 82 | 303 | 430 | 485 | |
| 95 | 18 | 71 | 334 | 481 | 533 | 303 |
| 105 | 0 | 18 | 116 | 348 | 438 | 185 |
| 115 | 0 | 0 | 36 | 105 | 135 | 60 |
| 125 | 0 | 0 | 4 | 30 | 61 | 17 |
| 135 | 0 | 0 | 2 | 15 | 5 | 3 |
| 145 | 0 | 0 | 1 | 0 | 5 | 2 |
| 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 | |

| ZONE | LUMENS | % LAMP | %LUMINAIRE |
|--------|--------|--------|------------|
| 0-30 | 1999 | 14.98 | 21.68 |
| 0-40 | 3360 | 25.17 | 36.45 |
| 0-60 | 6189 | 46.36 | 67.13 |
| 0-90 | 8649 | 64.79 | 93.82 |
| 40-90 | 5288 | 39.62 | 57.36 |
| 60-90 | 2460 | 18.43 | 26.68 |
| 90-180 | 570 | 4.27 | 6.18 |
| 0-180 | 9219 | 69.06 | 100.00 |

** EFFICIENCY = 69.1% **

LUMINANCE SUMMARY-CD. / SQ. M.

PAINT REFLECTANCE = .75 S/MH = 1.5
SC (ALONG) = 1.3, SC (ACROSS) = 1.5

| ANGLE | ALONG | 45 | ACROSS |
|-------|-------|-------|--------|
| 45 | 10217 | 10895 | 10977 |
| 55 | 9141 | 9820 | 10612 |
| 65 | 7612 | 9558 | 11957 |
| 75 | 5059 | 9349 | 10138 |
| 85 | 1434 | 5996 | 7686 |

CERTIFIED BY:

Charles Sison

DATE:
DEC 15, 2006

PREPARED FOR:

BEGHELLI NORTH AMERICA
MIRAMAR, FL, USA

TESTED ACCORDING TO IES PROCEDURES. TEST DISTANCE EXCEEDS FIVE
TIMES THE GREATEST LUMINOUS OPENING OF LUMINAIRE.

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 WITH WHITE PAINTED STEEL REFLECTOR AND CLEAR WRAP LENS
 THREE 54W T5 HO FLUORESCENT LAMPS. LUMEN RATING = 4450 LMS.
 ONE UNIVERSAL 120-277V 3 OR 4-LAMP ELECTRONIC BALLAST NO. B454IUNV-E

CANDLEPOWER DATA

| ANGLE | PLANE | | | | | | OUTPUT LUMENS |
|-------|-------|------|------|------|--------|---------|------------------|
| | ALONG | 22.5 | 45 | 67.5 | ACROSS | AVERAGE | |
| 0 | 2396 | 2396 | 2396 | 2396 | 2396 | 2396 | |
| 5 | 2381 | 2370 | 2401 | 2418 | 2417 | 2397 | 233 |
| 10 | 2348 | 2371 | 2419 | 2464 | 2453 | 2414 | |
| 15 | 2301 | 2329 | 2445 | 2501 | 2522 | 2422 | 684 |
| 20 | 2234 | 2289 | 2428 | 2521 | 2528 | 2405 | |
| 25 | 2157 | 2218 | 2397 | 2471 | 2475 | 2351 | 1083 |
| 30 | 2028 | 2156 | 2322 | 2392 | 2407 | 2272 | |
| 35 | 1897 | 2059 | 2239 | 2307 | 2334 | 2180 | 1361 |
| 40 | 1736 | 1934 | 2113 | 2191 | 2202 | 2052 | |
| 45 | 1568 | 1790 | 1956 | 2017 | 2058 | 1894 | 1458 |
| 50 | 1363 | 1616 | 1768 | 1861 | 1870 | 1716 | |
| 55 | 1154 | 1399 | 1538 | 1703 | 1760 | 1524 | 1371 |
| 60 | 940 | 1194 | 1344 | 1610 | 1735 | 1371 | |
| 65 | 725 | 948 | 1234 | 1564 | 1665 | 1235 | 1209 |
| 70 | 498 | 713 | 1141 | 1352 | 1394 | 1038 | |
| 75 | 310 | 521 | 914 | 1072 | 1099 | 803 | 845 |
| 80 | 137 | 401 | 621 | 781 | 803 | 568 | |
| 85 | 37 | 188 | 378 | 539 | 571 | 352 | 406 |
| 90 | 1 | 82 | 303 | 430 | 485 | 265 | |
| 95 | 18 | 71 | 334 | 481 | 533 | 290 | 303 |
| 100 | 5 | 27 | 259 | 453 | 535 | 252 | |
| 105 | 0 | 18 | 116 | 348 | 438 | 175 | 185 |
| 110 | 0 | 9 | 55 | 207 | 272 | 102 | |
| 115 | 0 | 0 | 36 | 105 | 135 | 52 | 60 |
| 120 | 0 | 0 | 30 | 68 | 88 | 36 | |
| 125 | 0 | 0 | 4 | 30 | 61 | 16 | 17 |
| 130 | 0 | 0 | 2 | 8 | 38 | 7 | |
| 135 | 0 | 0 | 2 | 15 | 5 | 5 | 3 |
| 140 | 0 | 0 | 2 | 5 | 7 | 3 | |
| 145 | 0 | 0 | 1 | 0 | 5 | 1 | 2 |
| 150 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 155 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 160 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 165 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 170 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 175 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 180 | 0 | 0 | 0 | 0 | 0 | 0 | |

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ONE UNIVERSAL 120-277V 3 OR 4-LAMP ELECTRONIC BALLAST NO. B454IUNV-E

AVERAGE LUMINANCE DATA

| ANGLE | ALONG | CD. / SQ. M. | | (FOOTLAMBERTS) | | ACROSS |
|-------|--------------|--------------|--|----------------|--|--------------|
| | | 22.5 | | 45 | | |
| 0 | 11426(3335) | 11426(3335) | | 11426(3335) | | 11426(3335) |
| 30 | 10948(3195) | 11042(3223) | | 11403(3328) | | 11470(3347) |
| 40 | 10498(3064) | 10840(3164) | | 11155(3256) | | 11180(3263) |
| 45 | 10217(2981) | 10644(3106) | | 10895(3179) | | 10977(3203) |
| 50 | 9706(2833) | 10363(3024) | | 10443(3048) | | 10504(3065) |
| 55 | 9141(2667) | 9763(2849) | | 9820(2866) | | 10612(3097) |
| 60 | 8449(2466) | 9257(2701) | | 9347(2728) | | 11283(3293) |
| 65 | 7612(2221) | 8299(2422) | | 9558(2789) | | 11957(3490) |
| 70 | 6338(1850) | 7267(2121) | | 10032(2928) | | 11177(3262) |
| 75 | 5059(1476) | 6399(1867) | | 9349(2728) | | 10138(2959) |
| 80 | 3132(914) | 6246(1823) | | 7713(2251) | | 8730(2548) |
| 85 | 1434(418) | 4054(1183) | | 5996(1750) | | 7686(2243) |

DETERMINED IN ACCORDANCE WITH CURRENT IES PUBLISHED PROCEDURES

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COEFFICIENTS OF UTILIZATION

ZONAL CAVITY METHOD

EFFECTIVE FLOOR CAVITY REFLECTANCE = .20

| CC WALL | 80 | | | | 70 | | | | 50 | | | | 30 | | | | 10 | | | | 0 |
|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | 70 | 50 | 30 | 10 | 70 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 0 |
| RCR | | | | | | | | | | | | | | | | | | | | | |
| 0 | .81 | .81 | .81 | .81 | .79 | .79 | .79 | .79 | .74 | .74 | .74 | .70 | .70 | .70 | .67 | .67 | .67 | .67 | .67 | .67 | .65 |
| 1 | .74 | .70 | .67 | .64 | .71 | .68 | .65 | .63 | .64 | .62 | .60 | .61 | .59 | .57 | .58 | .56 | .55 | .55 | .55 | .55 | .53 |
| 2 | .67 | .61 | .56 | .52 | .64 | .59 | .54 | .51 | .56 | .52 | .49 | .53 | .50 | .47 | .50 | .48 | .45 | .45 | .45 | .45 | .44 |
| 3 | .61 | .53 | .47 | .43 | .59 | .52 | .46 | .42 | .49 | .45 | .41 | .47 | .43 | .40 | .44 | .41 | .38 | .38 | .38 | .38 | .37 |
| 4 | .55 | .47 | .41 | .36 | .54 | .46 | .40 | .36 | .43 | .38 | .35 | .41 | .37 | .34 | .39 | .36 | .33 | .33 | .33 | .33 | .31 |
| 5 | .50 | .41 | .35 | .30 | .49 | .40 | .34 | .30 | .38 | .33 | .29 | .36 | .32 | .28 | .35 | .31 | .28 | .28 | .28 | .28 | .26 |
| 6 | .46 | .37 | .30 | .26 | .45 | .36 | .30 | .26 | .34 | .29 | .25 | .33 | .28 | .24 | .31 | .27 | .24 | .24 | .24 | .24 | .22 |
| 7 | .43 | .33 | .27 | .23 | .41 | .32 | .26 | .22 | .31 | .25 | .22 | .29 | .25 | .21 | .28 | .24 | .21 | .21 | .21 | .21 | .19 |
| 8 | .39 | .29 | .23 | .19 | .38 | .29 | .23 | .19 | .27 | .22 | .19 | .26 | .22 | .18 | .25 | .21 | .18 | .18 | .18 | .18 | .16 |
| 9 | .36 | .27 | .21 | .16 | .35 | .26 | .20 | .16 | .25 | .20 | .16 | .24 | .19 | .16 | .23 | .18 | .15 | .15 | .15 | .15 | .14 |
| 10 | .33 | .24 | .18 | .15 | .32 | .23 | .18 | .14 | .22 | .18 | .14 | .22 | .17 | .14 | .21 | .16 | .13 | .13 | .13 | .13 | .12 |

DETERMINED IN ACCORDANCE WITH CURRENT IES PUBLISHED PROCEDURES
LUMINAIRE INPUT WATTS = 155.0
LABORATORY RESULT MAY NOT BE REPRESENTATIVE OF FIELD PERFORMANCE.
BALLAST FACTORS HAVE NOT BEEN APPLIED.