

REPORT NUMBER: ITL79694

PAGE: 1 OF 7

ISSUE DATE: 11/08/13

PREPARED FOR: RAB LIGHTING, INC.

CATALOG NUMBER: BAYLED78 (FLAT GLASS LENS - CEILING AND/OR PENDENT MOUNT - STANDARD DISTRIBUTION W/ HI-CRI LED)

LUMINAIRE: CAST 2-PIECE WHITE PAINTED FINNED METAL HOUSING, 3 FLAT METAL HEAT SINKS WITH 3 EXTRUDED METAL HEAT SINKS, 3 CIRCUIT BOARDS EACH WITH 1 LED AND MOLDED PLASTIC REFLECTOR WITH SPECULAR FINISH, MOLDED PLASTIC REFLECTOR WITH SPECULAR FINISH AND 1 APERTURE PER LED, CLEAR FLAT GLASS LENS IN CAST WHITE PAINTED METAL LENS FRAME.

LAMPS: THREE WHITE MULTI-CHIP LIGHT EMITTING DIODES (LEDs), TILTED 30-DEGREES FROM VERTICAL BASE-UP POSITION.

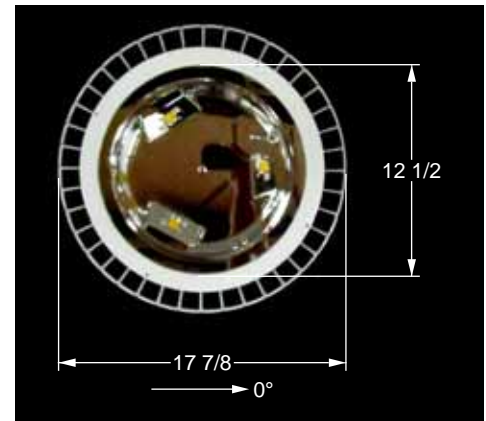
TOTAL INPUT WATTS = 88.7 AT 120.0 VOLTS

LED DRIVERS: THREE RAB RDF25U7-02

NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED AT RATED INPUT VOLTAGE (120VAC, 60Hz) TO THE LED DRIVERS.

TEST PROCEDURE: IESNA LM-79-08

TEST DISTANCE = 20.0 FEET



CANDELA DISTRIBUTION

FLUX

| | | | | | | |
|-----|------|------|------|-------|-------|------|
| | 0.0 | 45.0 | 90.0 | 135.0 | 180.0 | |
| 0 | 2806 | 2806 | 2806 | 2806 | 2806 | |
| 5 | 2834 | 2848 | 2814 | 2847 | 2814 | 271 |
| 15 | 2747 | 2790 | 2786 | 2737 | 2927 | 790 |
| 25 | 2597 | 2538 | 2615 | 2708 | 2939 | 1214 |
| 35 | 2181 | 2271 | 2318 | 2247 | 2311 | 1430 |
| 45 | 1682 | 1842 | 1716 | 1784 | 1732 | 1363 |
| 55 | 1329 | 1140 | 1271 | 1319 | 1341 | 1133 |
| 65 | 800 | 808 | 790 | 829 | 852 | 803 |
| 75 | 372 | 406 | 367 | 390 | 491 | 422 |
| 85 | 2 | 3 | 3 | 2 | 5 | 37 |
| 90 | 0 | 0 | 0 | 0 | 0 | |
| 95 | 0 | 0 | 0 | 0 | 0 | 0 |
| 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 |

ZONAL LUMEN SUMMARY

| ZONE | LUMENS | %FIXT |
|--------|--------|-------|
| 0- 30 | 2276 | 30.5 |
| 0- 40 | 3705 | 49.6 |
| 0- 60 | 6201 | 83.1 |
| 0- 90 | 7463 | 100.0 |
| 90-120 | 0 | 0.0 |
| 90-130 | 0 | 0.0 |
| 90-150 | 0 | 0.0 |
| 90-180 | 0 | 0.0 |
| 0-180 | 7463 | 100.0 |

EFFICACY = 84.1 lm/W

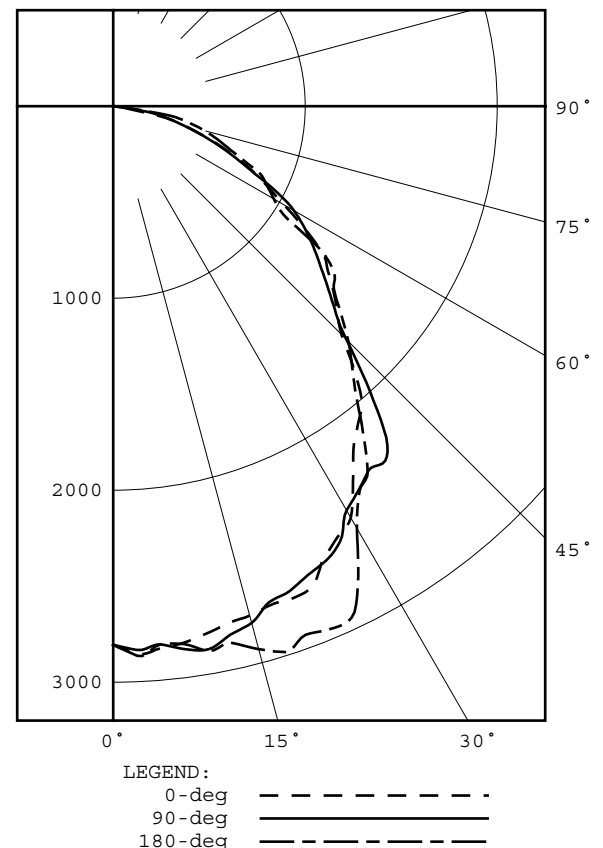
CIE TYPE - DIRECT

PLANE : 0-DEG 90-DEG 180-DEG

SPACING CRITERIA : 1.27 1.29 1.30

BEAM ANGLE (50%) : 100.9 X 98.4 DEGREES

FIELD ANGLE (10%) : 157.4 X 154.7 DEGREES



Checked S. BERGIN

Approved R. BEATTIE
Lighting Engineer



itl boulder
THE LIGHT CENTER OF THE INDUSTRY SINCE 1955



INDEPENDENT TESTING LABORATORIES, INC.
4066 CAMELOT CIRCLE, LONGMONT, CO 80504 USA

PHONE: (303) 442-1255 • FAX: (970) 535-3114 • E-MAIL: itl@itlboulder.com • WEBSITE: www.itlboulder.com

REPORT NUMBER: ITL79694
ISSUE DATE: 11/08/13
PREPARED FOR: RAB LIGHTING, INC.

PAGE: 2 OF 7

LUMINOUS DIAMETER: 12.500

| LUMINANCE DATA IN CANDELA/SQ M | | | |
|--------------------------------|------------------|-------------------|--------------------|
| ANGLE IN DEG | AVERAGE 0-DEG | AVERAGE 90-DEG | AVERAGE 180-DEG |
| 45 | 30044. | 30652. | 30938. |
| 55 | 29266. | 27988. | 29530. |
| 65 | 23909. | 23610. | 25463. |
| 75 | 18154. | 17910. | 23961. |
| 85 | 290. | 435. | 725. |



INDEPENDENT TESTING LABORATORIES, INC.
4066 CAMELOT CIRCLE, LONGMONT, CO 80504 USA

PHONE: (303) 442-1255 • FAX: (970) 535-3114 • E-MAIL: itl@itlboulder.com • WEBSITE: www.itlboulder.com

REPORT NUMBER: ITL79694

PAGE: 3 OF 7

ISSUE DATE: 11/08/13

PREPARED FOR: RAB LIGHTING, INC.

CANDELA DISTRIBUTION
LATERAL ANGLE

| | 0.0 | 22.5 | 45.0 | 67.5 | 90.0 | 112.5 | 135.0 | 157.5 | 180.0 |
|-------|------|------|------|------|------|-------|-------|-------|-------|
| 0.0 | 2806 | 2806 | 2806 | 2806 | 2806 | 2806 | 2806 | 2806 | 2806 |
| 5.0 | 2834 | 2826 | 2848 | 2861 | 2814 | 2833 | 2847 | 2863 | 2814 |
| 10.0 | 2790 | 2842 | 2834 | 2872 | 2872 | 2793 | 2811 | 2876 | 2881 |
| 15.0 | 2747 | 2729 | 2790 | 2877 | 2786 | 2743 | 2737 | 2851 | 2927 |
| 20.0 | 2728 | 2691 | 2680 | 2879 | 2687 | 2741 | 2748 | 2731 | 2930 |
| 25.0 | 2597 | 2611 | 2538 | 2601 | 2615 | 2622 | 2708 | 2641 | 2939 |
| 30.0 | 2474 | 2382 | 2437 | 2564 | 2431 | 2514 | 2442 | 2530 | 2540 |
| 35.0 | 2181 | 2256 | 2271 | 2260 | 2318 | 2246 | 2247 | 2371 | 2311 |
| 40.0 | 2014 | 1997 | 2069 | 1954 | 2192 | 2060 | 2082 | 2305 | 1968 |
| 45.0 | 1682 | 1708 | 1842 | 1722 | 1716 | 1740 | 1784 | 1843 | 1732 |
| 50.0 | 1497 | 1452 | 1405 | 1707 | 1456 | 1513 | 1542 | 1503 | 1504 |
| 55.0 | 1329 | 1277 | 1140 | 1136 | 1271 | 1315 | 1319 | 1290 | 1341 |
| 60.0 | 1028 | 1104 | 977 | 947 | 1088 | 1045 | 1127 | 1111 | 965 |
| 65.0 | 800 | 798 | 808 | 813 | 790 | 807 | 829 | 825 | 852 |
| 70.0 | 580 | 586 | 566 | 603 | 569 | 586 | 600 | 596 | 638 |
| 75.0 | 372 | 378 | 406 | 450 | 367 | 371 | 390 | 419 | 491 |
| 80.0 | 67 | 194 | 256 | 283 | 209 | 84 | 168 | 241 | 330 |
| 85.0 | 2 | 3 | 3 | 5 | 3 | 2 | 2 | 3 | 5 |
| 90.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 95.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 100.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 105.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 110.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 115.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 120.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 125.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 130.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 135.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 140.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 145.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 150.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 155.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 160.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 165.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 170.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 175.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 180.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |



INDEPENDENT TESTING LABORATORIES, INC.
4066 CAMELOT CIRCLE, LONGMONT, CO 80504 USA

PHONE: (303) 442-1255 • FAX: (970) 535-3114 • E-MAIL: itl@itlboulder.com • WEBSITE: www.itlboulder.com

REPORT NUMBER: ITL79694
ISSUE DATE: 11/08/13
PREPARED FOR: RAB LIGHTING, INC.

PAGE: 4 OF 7

5-DEGREE
ZONAL LUMEN SUMMARY

| | |
|---------|-----|
| 0- 5 | 68 |
| 5- 10 | 204 |
| 10- 15 | 334 |
| 15- 20 | 456 |
| 20- 25 | 566 |
| 25- 30 | 648 |
| 30- 35 | 698 |
| 35- 40 | 732 |
| 40- 45 | 711 |
| 45- 50 | 652 |
| 50- 55 | 601 |
| 55- 60 | 532 |
| 60- 65 | 451 |
| 65- 70 | 352 |
| 70- 75 | 258 |
| 75- 80 | 164 |
| 80- 85 | 36 |
| 85- 90 | 1 |
| 90- 95 | 0 |
| 95-100 | 0 |
| 100-105 | 0 |
| 105-110 | 0 |
| 110-115 | 0 |
| 115-120 | 0 |
| 120-125 | 0 |
| 125-130 | 0 |
| 130-135 | 0 |
| 135-140 | 0 |
| 140-145 | 0 |
| 145-150 | 0 |
| 150-155 | 0 |
| 155-160 | 0 |
| 160-165 | 0 |
| 165-170 | 0 |
| 170-175 | 0 |
| 175-180 | 0 |

10-DEGREE
ZONAL LUMEN SUMMARY

| | |
|-------|------|
| 0- 10 | 271 |
| 0- 20 | 1062 |
| 0- 30 | 2276 |
| 0- 40 | 3705 |
| 0- 50 | 5068 |
| 0- 60 | 6201 |
| 0- 70 | 7004 |
| 0- 80 | 7426 |
| 0- 90 | 7463 |
| 0-100 | 7463 |
| 0-110 | 7463 |
| 0-120 | 7463 |
| 0-130 | 7463 |
| 0-140 | 7463 |
| 0-150 | 7463 |
| 0-160 | 7463 |
| 0-170 | 7463 |
| 0-180 | 7463 |



REPORT NUMBER: ITL79694

PAGE: 5 OF 7

ISSUE DATE: 11/08/13

PREPARED FOR: RAB LIGHTING, INC.

COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

EFFECTIVE FLOOR CAVITY REFLECTANCE 0.20

| 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 |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |
| 1 | 110 | 105 | 101 | 98 | 107 | 103 | 100 | 96 | 99 | 96 | 93 | 95 | 93 | 90 | 91 | 90 | 88 | 86 |
| 2 | 100 | 93 | 86 | 81 | 98 | 91 | 85 | 80 | 87 | 82 | 78 | 84 | 80 | 76 | 81 | 77 | 74 | 72 |
| 3 | 92 | 82 | 74 | 68 | 89 | 80 | 73 | 67 | 77 | 71 | 66 | 74 | 69 | 65 | 72 | 68 | 64 | 62 |
| 4 | 84 | 73 | 64 | 58 | 82 | 71 | 64 | 57 | 69 | 62 | 57 | 67 | 61 | 56 | 64 | 59 | 55 | 53 |
| 5 | 78 | 65 | 57 | 50 | 76 | 64 | 56 | 50 | 62 | 55 | 49 | 60 | 54 | 49 | 58 | 53 | 48 | 46 |
| 6 | 72 | 59 | 50 | 44 | 70 | 58 | 50 | 44 | 56 | 49 | 43 | 54 | 48 | 43 | 53 | 47 | 43 | 41 |
| 7 | 67 | 54 | 45 | 39 | 65 | 53 | 45 | 39 | 51 | 44 | 39 | 50 | 43 | 38 | 48 | 43 | 38 | 36 |
| 8 | 62 | 49 | 41 | 35 | 61 | 48 | 40 | 35 | 47 | 40 | 35 | 46 | 39 | 34 | 45 | 39 | 34 | 32 |
| 9 | 58 | 45 | 37 | 31 | 57 | 44 | 37 | 31 | 43 | 36 | 31 | 42 | 36 | 31 | 41 | 35 | 31 | 29 |
| 10 | 54 | 42 | 34 | 29 | 53 | 41 | 34 | 29 | 40 | 33 | 28 | 39 | 33 | 28 | 38 | 32 | 28 | 26 |

ALL CANDELA, LUMENS, LUMINANCE, AND VCP VALUES IN THIS REPORT ARE BASED ON ABSOLUTE PHOTOMETRY. THE COEFFICIENT OF UTILIZATION VALUES ARE BASED ON THE TOTAL ABSOLUTE LUMEN OUTPUT OF THIS TEST SAMPLE.



REPORT NUMBER: ITL79694

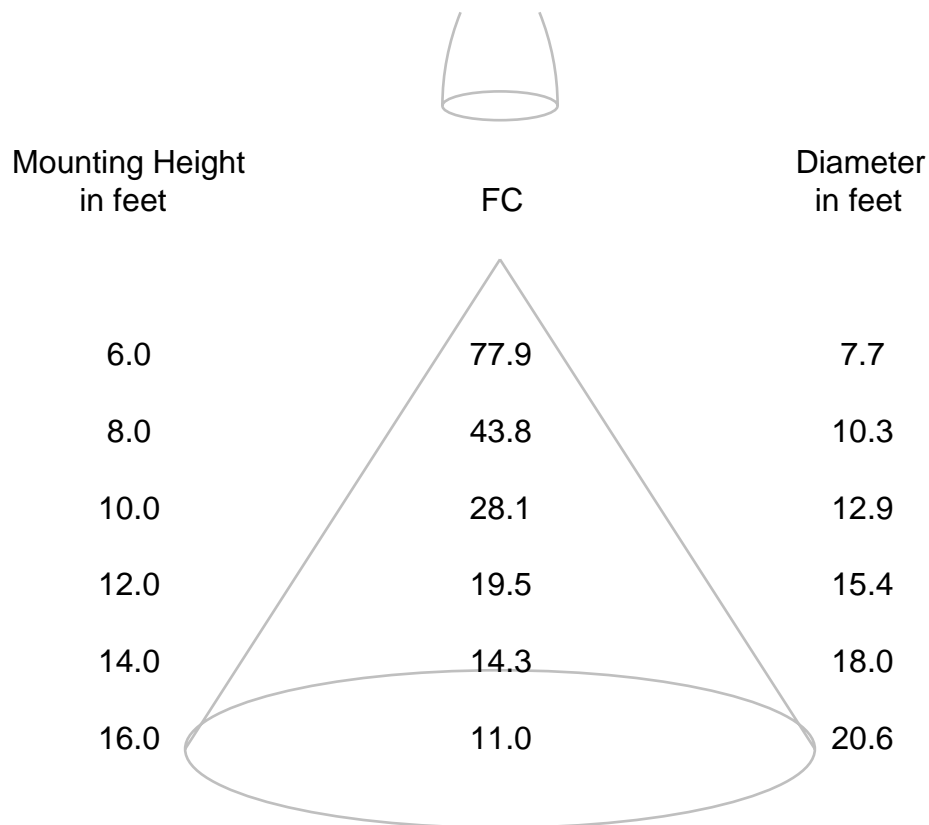
PAGE: 6 OF 7

ISSUE DATE: 11/08/13

PREPARED FOR: RAB LIGHTING, INC.

CONE OF LIGHT DIAGRAM

(diameter shown is where fc value is half the fc at nadir)



Note: The candela values used to generate this diagram were obtained by averaging the photometric data into a single plane.



itl boulder
THE LIGHT CENTER OF THE INDUSTRY SINCE 1955



INDEPENDENT TESTING LABORATORIES, INC.
4066 CAMELOT CIRCLE, LONGMONT, CO 80504 USA

PHONE: (303) 442-1255 • FAX: (970) 535-3114 • E-MAIL: itl@itlboulder.com • WEBSITE: www.itlboulder.com

REPORT NUMBER: ITL79694
ISSUE DATE: 11/08/13
PREPARED FOR: RAB LIGHTING, INC.

PAGE: 7 OF 7

ADDRESS: 170 LUDLOW AVE
NORTHVALE, NJ 07647

THIS ITL REPORT WITH THE USE OF THE NVLAP LOGO SHALL NOT BE USED BY THE CLIENT TO CLAIM PRODUCT CERTIFICATION, APPROVAL, OR ENDORSEMENT BY NVLAP, NIST, OR ANY AGENCY OF THE FEDERAL GOVERNMENT.



INDEPENDENT TESTING LABORATORIES, INC.
4066 CAMELOT CIRCLE, LONGMONT, CO 80504 USA

PHONE: (303)442-1255 • FAX: (970)535-3114 • E-MAIL: itl@itlboulder.com • WEBSITE: www.itlboulder.com

Page 1 of 4

REPORT NUMBER: ITL79697
DATE: 11/14/13
PREPARED FOR: RAB LIGHTING, INC.
CATALOG NUMBER: BAYLED78 (FLAT GLASS LENS - CEILING AND/OR PENDENT MOUNT - STANDARD DISTRIBUTION W/ HI-CRI LED)

ADDRESS: 170 LUDLOW AVE
NORTHVALE, NJ 07647

LUMINAIRE: CAST 2-PIECE WHITE PAINTED FINNED METAL HOUSING, 3 FLAT METAL HEAT SINKS WITH 3 EXTRUDED METAL HEAT SINKS, 3 CIRCUIT BOARDS EACH WITH 1 LED AND MOLDED PLASTIC REFLECTOR WITH SPECULAR FINISH, MOLDED PLASTIC REFLECTOR WITH SPECULAR FINISH AND 1 APERTURE PER LED, CLEAR FLAT GLASS LENS IN CAST WHITE PAINTED METAL LENS FRAME.

LAMP: THREE WHITE MULTI-CHIP LIGHT EMITTING DIODES (LEDs), TILTED 30-DEGREES FROM VERTICAL BASE-UP POSITION.

DRIVERS: THREE RAB RDF25U7-02

NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED AT RATED INPUT VOLTAGE (120.0 AND 277.0 VAC, 60Hz) TO THE LED DRIVERS.

| | Calibration Due: |
|--|------------------|
| INSTRUMENTS: | |
| Associated Power Technologies APT5040 AC Power Source | N/A |
| Yokogawa WT210 Digital Power Meter #9 | 02/28/14 |
| Ocean Optics QE65000 Spectroradiometer | 10/16/14 |
| ITL 2.0m Diameter Integrating Sphere S20-2, 4PI Geometry | 10/16/14 |

OBJECT OF TEST: Measure the Total Radiant Flux*, Spectral Power Distribution (SPD), Correlated Color Temperature (CCT), Color Rendering Indices (CRI_a,1-14), Chromaticity Coordinates (x,y; u'v'), ANSI C78.377 Duv, and electrical data including ANSI C82.77-2002 Power Factor (PF) and Total Harmonic Distortion (THD) to the test sample. Report Off-State Power. Measure electrical data including Total Harmonic Distortion (THD) at maximum rated voltage.

PROCEDURE: The test sample was provided by the customer and had an unknown number of operating hours. The test sample was mounted inside the integrating sphere and allowed to stabilize. After stabilization occurred, measurements were taken. In order to measure mean performance, multiple data sets were recorded and averaged. Readings were taken with the test sample operating at 120.0 VAC input. Electrical data was also recorded at maximum nominal rated input voltage (277.0 VAC). All testing performed in a 25 +/-1 degree Celsius free air ambient and in accordance with IESNA LM-79-08. All data are traceable to the National Institute of Standards and Technology. Off-State Power was reported with no voltage applied to the sample.

*NOTE: Proper calibration of integrating spheres for measuring total flux output of non-directional samples will produce reliable, repeatable results within the calibration tolerances of the equipment used. However, measurement of test samples with significant self absorption and/or directional output, even when these effects are compensated for, are likely to have a greater variation in results compared to the flux output calculated from a goniophotometric exploration since these artifacts do not affect the goniophotometric results.

RESULTS: (continued subsequent pages)

THIS ITL REPORT WITH THE USE OF THE NVLAP LOGO SHALL NOT BE USED BY THE CLIENT TO CLAIM PRODUCT CERTIFICATION, APPROVAL, OR ENDORSEMENT BY NVLAP, NIST, OR ANY AGENCY OF THE FEDERAL GOVERNMENT.

| | |
|----------|-------------------------------------|
| Checked | <u>P O'CONNOR</u> |
| Approved | <u>L GRABA</u> Lighting Engineer |



itl boulder

THE LIGHT CENTER OF THE INDUSTRY SINCE 1955

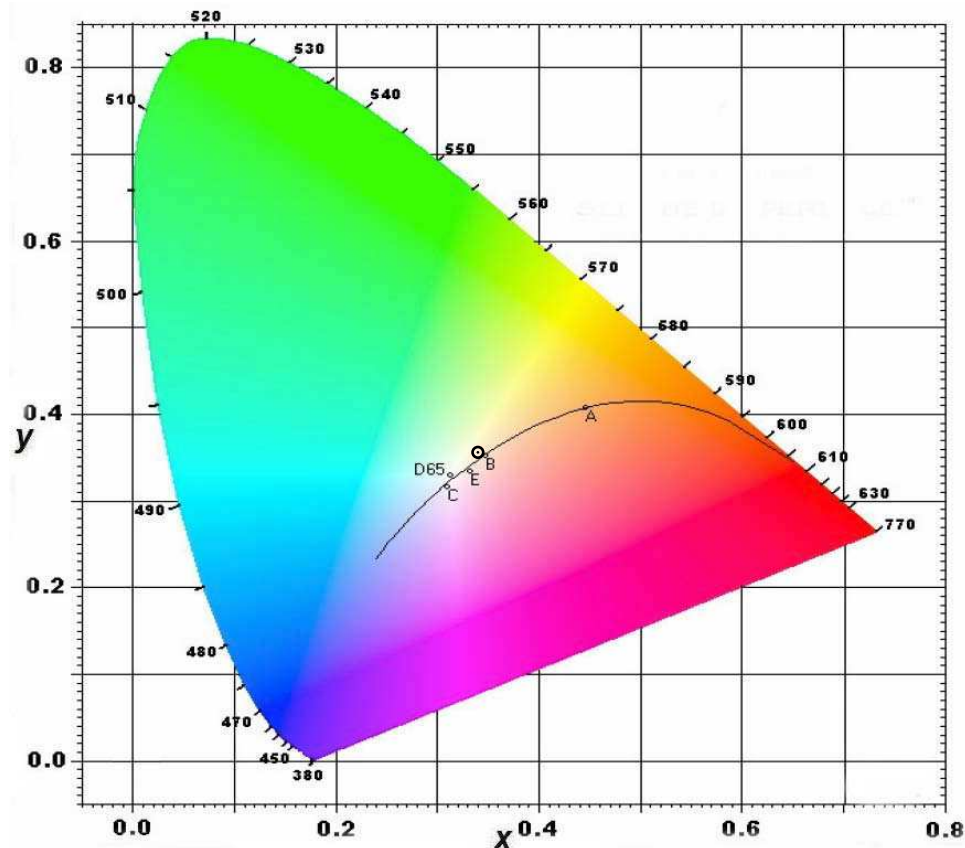
NVLAP
NVLAP LAB CODE: 200925-0

INDEPENDENT TESTING LABORATORIES, INC.
4066 CAMELOT CIRCLE, LONGMONT, CO 80504 USA

PHONE: (303)442-1255 • FAX: (970)535-3114 • E-MAIL: itl@itlboulder.com • WEBSITE: www.itlboulder.com
REPORT NUMBER: ITL79697
DATE: 11/14/13
PREPARED FOR: RAB LIGHTING, INC.
CATALOG NUMBER: BAYLED78 (FLAT GLASS LENS - CEILING AND/OR PENDENT MOUNT - STANDARD DISTRIBUTION W/ HI-CRI LED)

Page 4 of 4

CIE Chromaticity Diagram





INDEPENDENT TESTING LABORATORIES, INC.
4066 CAMELOT CIRCLE, LONGMONT, CO 80504 USA

PHONE: (303)442-1255 • FAX: (970)535-3114 • E-MAIL: itl@itlboulder.com • WEBSITE: www.itlboulder.com

Page 2 of 4

REPORT NUMBER: ITL79697
DATE: 11/14/13
PREPARED FOR: RAB LIGHTING, INC.
CATALOG NUMBER: BAYLED78 (FLAT GLASS LENS - CEILING AND/OR PENDENT MOUNT - STANDARD DISTRIBUTION W/ HI-CRI LED)

RESULTS:

| SPECTRORADIOMETRIC | |
|---------------------------------|-------------------|
| Observer | CIE 1931 2 degree |
| Chromaticity Ordinate x | 0.3397 |
| Chromaticity Ordinate y | 0.3557 |
| Observer | CIE 1976 2 degree |
| Chromaticity Ordinate u' | 0.2062 |
| Chromaticity Ordinate v' | 0.4859 |
| Correlated Color Temp CCT (K) | 5217 |
| ANSI C78.377-2008 Duv | 0.004 |
| Total Radiant Flux (milliWatts) | 23067 * |
| ELECTRICAL | |
| Input Voltage (Volts AC) | 120.0 |
| Input Current (Amps AC) | 0.747 |
| Input Power (Watts) | 88.9 |
| Input Power Factor (%) | 99.2 |
| Input Current THD (%) | 12.7 |
| Input Voltage THD (%) | 0.2 |
| Off-State Power (Watts) | |
| | 0.0 |
| ELECTRICAL AT MAX NONIMAL INPUT | |
| Input Voltage (Volts AC) | 277.0 |
| Input Current (Amps AC) | 0.372 |
| Input Power (Watts) | 89.3 |
| Input Power Factor (%) | 86.7 |
| Input Current THD (%) | 20.5 |
| Input Voltage THD (%) | 0.1 |

| COLOR RENDERING INDICES | CRI |
|---------------------------------|-----|
| Ra (Average 1-8) | 82 |
| R1 Light greyish red | 81 |
| R2 Dark greyish yellow | 85 |
| R3 Strong yellowish green | 88 |
| R4 Moderate yellowish green | 83 |
| R5 Light bluish green | 81 |
| R6 Light blue | 81 |
| R7 Light violet | 87 |
| R8 Light reddish purple | 68 |
| R9 Strong red | 5 |
| R10 Strong yellow | 65 |
| R11 Strong green | 83 |
| R12 Strong blue | 59 |
| R13 Light yellowish pink (skin) | 81 |
| R14 Moderate olive green (leaf) | 94 |

*NOTE:

Proper calibration of integrating spheres for measuring total flux output of non-directional samples will produce reliable, repeatable results within the calibration tolerances of the equipment used. However, measurement of test samples with significant self absorption and/or directional output, even when these effects are compensated for, are likely to have a greater variation in results compared to the flux output calculated from a goniophotometric exploration since these artifacts do not affect the goniophotometric results.



itl boulder
THE LIGHT CENTER OF THE INDUSTRY SINCE 1955

NVLAP
NVLAP LAB CODE: 200925-0

INDEPENDENT TESTING LABORATORIES, INC.
4066 CAMELOT CIRCLE, LONGMONT, CO 80504 USA

PHONE: (303)442-1255 • FAX: (970)535-3114 • E-MAIL: itl@itlboulder.com • WEBSITE: www.itlboulder.com

Page 3 of 4

REPORT NUMBER: ITL79697
DATE: 11/14/13
PREPARED FOR: RAB LIGHTING, INC.
CATALOG NUMBER: BAYLED78 (FLAT GLASS LENS - CEILING AND/OR PENDENT MOUNT - STANDARD DISTRIBUTION W/ HI-CRI LED)

RESULTS:

| Wavelength | mW per nm | Wavelength | mW per nm | Wavelength | mW per nm |
|------------|-----------|------------|-----------|------------|-----------|
| 380 | 0.656 | 515 | 99.841 | 650 | 52.141 |
| 385 | 0.678 | 520 | 105.858 | 655 | 46.290 |
| 390 | 0.730 | 525 | 109.605 | 660 | 40.983 |
| 395 | 0.867 | 530 | 111.447 | 665 | 36.170 |
| 400 | 1.119 | 535 | 112.079 | 670 | 31.820 |
| 405 | 1.663 | 540 | 111.855 | 675 | 27.750 |
| 410 | 2.770 | 545 | 111.463 | 680 | 24.021 |
| 415 | 5.018 | 550 | 110.893 | 685 | 20.643 |
| 420 | 9.722 | 555 | 110.628 | 690 | 17.733 |
| 425 | 19.157 | 560 | 110.869 | 695 | 15.236 |
| 430 | 36.352 | 565 | 111.474 | 700 | 13.035 |
| 435 | 63.795 | 570 | 112.127 | 705 | 11.188 |
| 440 | 107.878 | 575 | 112.986 | 710 | 9.584 |
| 445 | 168.562 | 580 | 113.529 | 715 | 8.200 |
| 450 | 194.311 | 585 | 113.781 | 720 | 7.014 |
| 455 | 153.055 | 590 | 113.398 | 725 | 5.996 |
| 460 | 103.569 | 595 | 112.259 | 730 | 5.131 |
| 465 | 74.723 | 600 | 110.222 | 735 | 4.382 |
| 470 | 54.376 | 605 | 107.082 | 740 | 3.749 |
| 475 | 41.580 | 610 | 102.944 | 745 | 3.222 |
| 480 | 37.601 | 615 | 97.715 | 750 | 2.773 |
| 485 | 39.662 | 620 | 91.772 | 755 | 2.379 |
| 490 | 46.086 | 625 | 85.334 | 760 | 2.050 |
| 495 | 56.286 | 630 | 78.507 | 765 | 1.766 |
| 500 | 68.634 | 635 | 71.705 | 770 | 1.525 |
| 505 | 80.791 | 640 | 65.078 | 775 | 1.317 |
| 510 | 91.499 | 645 | 58.489 | 780 | 1.141 |

