

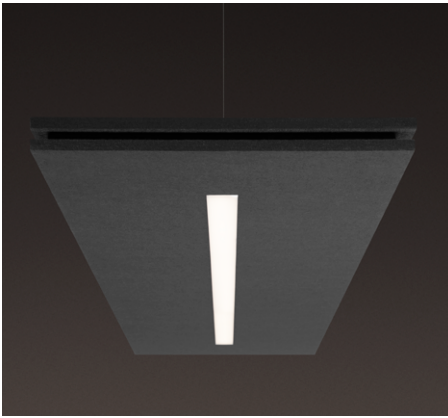
MIKRO

WAFER - STATIC WHITE, BIOS ST

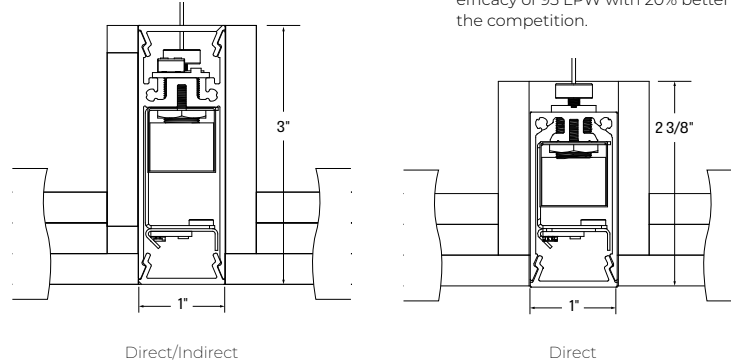
LUMENWERX

Project: _____

Type: _____



Section Views



Precise, refined, elegant, and just 1" wide luminaire with a horizontal acoustic high absorption sound panel, Mikro Wafer presents a crisp, brand new scale in linear acoustic LED luminaires, made practical by an integral driver - Mikrodrive™. Using high performance LEDs and a flat, high-efficiency Lambertian optic, Mikro Wafer delivers an efficacy of 95 LPW with 20% better sound absorption than the competition.

Order Guide

LUMINAIRE ID	DISTRIBUTION	DIRECT OPTICS	INDIRECT OPTICS	LIGHT SOURCE	CRI	DIRECT LUMEN PACKAGES	INDIRECT LUMEN PACKAGES
WAFERACOP		HLO	HLO				
WAFERACOP - Mikro Wafer Pendant	DI - Direct/Indirect D - Direct	HLO - High Efficiency Lambertian Optic	HLO - High Efficiency Lambertian Optic	SW - Static white BIOS-ST - Static biologically-optimized lighting	80 - 80CRI 90 ¹ - 90CRI ¹ Not available with BIOS.	350 - Min. low output 350lm/ft 500 - Medium output 500lm/ft 700 ^{2,3} - Max. high output 700lm/ft ² Not available with BIOS. ³ For DI fixtures, the max. high output (700lm/ft) can only be combined with 500lm/ft output or less.	350 - Min. low output 350lm/ft 500 - Medium output 500lm/ft 700 ^{2,3} - Max. high output 700lm/ft

COLOR TEMP	LUMINAIRE LENGTH ⁵	VOLTAGE	DRIVER	ELECTRICAL
			MIKDR	
27 ⁴ - 2700K 30 - 3000K 35 - 3500K 40 - 4000K ⁴ Not available with BIOS.	2FT ⁶ - 2 feet 3FT ⁶ - 3 feet 4FT - 4 feet ⁵ Lengths are for lit section. See page 3 for overall dimensions. ⁶ Not available for DI fixtures.	120 -120V 277 - 277V UNV - 120V-277V	MIKDR - 0-10V Mikro driver	1 - 1 circuit 2 ⁷ - 2 circuits EM ⁷ - emergency light circuit ⁷ Available for 4' fixtures only.

MOUNTING	FELT COLOR	OPTIONS																														
53WAC36W ⁸ - 36" aircraft cable, white canopies (5" power + 3" non-power), white power cord 53WAC36B ⁸ - 36" aircraft cable, white canopies (5" power + 3" non-power), black power cord ⁸ Power cord is 6" longer than suspension length. Consult factory for other lengths. For all other options, refer to our Pendant Mounting Guide	STANDARD COLORS <table border="0"> <tr> <td> FWN</td> <td> LVN</td> </tr> <tr> <td> FON</td> <td> LEN</td> </tr> <tr> <td> ION</td> <td> CYN</td> </tr> <tr> <td> TBN</td> <td> PMN</td> </tr> <tr> <td> MDN</td> <td> FGN</td> </tr> </table>	FWN	LVN	FON	LEN	ION	CYN	TBN	PMN	MDN	FGN	PREMIUM COLORS ^{9,10} <table border="0"> <tr> <td> PKN</td> <td> CDN</td> <td> IVN</td> <td> BHN</td> </tr> <tr> <td> OGN</td> <td> LCN</td> <td> SLN</td> <td> CFN</td> </tr> <tr> <td> LNN</td> <td> SYN</td> <td> CNN</td> <td> GRN</td> </tr> <tr> <td> LMN</td> <td> BLN</td> <td> GHN</td> <td> MON</td> </tr> <tr> <td> EGN</td> <td> NVN</td> <td> CLN</td> <td> ESN</td> </tr> </table> ⁹ Please consult factory for more color options. ¹⁰ Lead time may vary.	PKN	CDN	IVN	BHN	OGN	LCN	SLN	CFN	LNN	SYN	CNN	GRN	LMN	BLN	GHN	MON	EGN	NVN	CLN	ESN
FWN	LVN																															
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		TB# - T-bar caddy clip specify grid size TG# - T-bar caddy clip specify grid size ST - Screw slots caddy clip CU - Custom																														

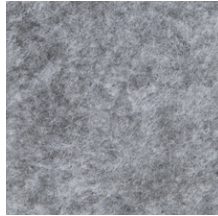
Project: _____

Type: _____

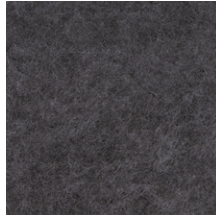
Standard Color Options



FWN - FROST WHITE



FON - FOG



ION - IRON



TBN - TRUE BLACK



MDN - MIDNIGHT BLUE



LVN - LAVENDER



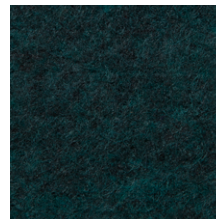
LEN - LATTE



CYN - CHERRY



PMN - PLUM



FGN - FOREST GREEN

Premium Color Options*



PKN - PAPRIKA



OGN - ORANGE



LNN - LEMON



LMN - LIME



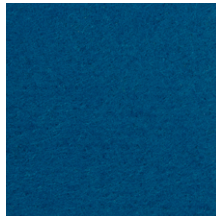
EGN - EVERGREEN



CDN - CLOUDY



LCN - LICHEN



SYN - SKY



BLN - BLUEBERRY



NVN - NAVY



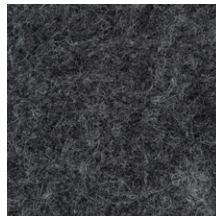
IVN - IVORY



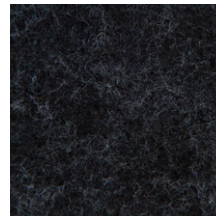
SLN - STEEL



CNN - CARBON



GHN - GRAPHITE



CLN - CHARCOAL



BHN - BLUSH



CFN - CAFÉ



GRN - GREIGE



MON - MOCHA



ESN - ESPRESSO

*Please consult factory for more color options.
*Lead time may vary.

MIKRO

WAFER - STATIC WHITE, BIOS ST

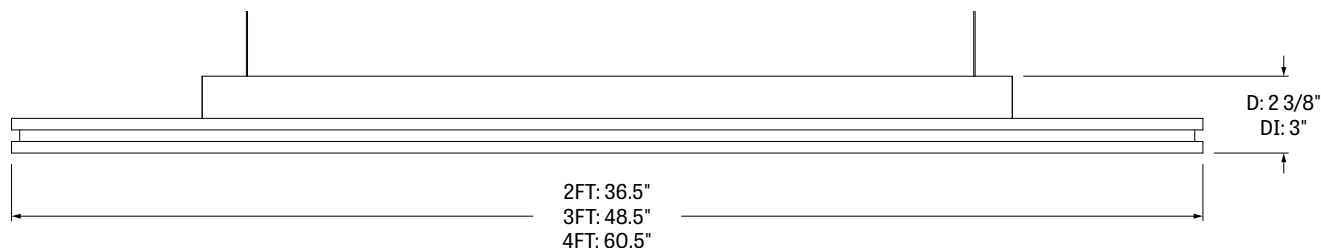
LUMENWERX

Project: _____

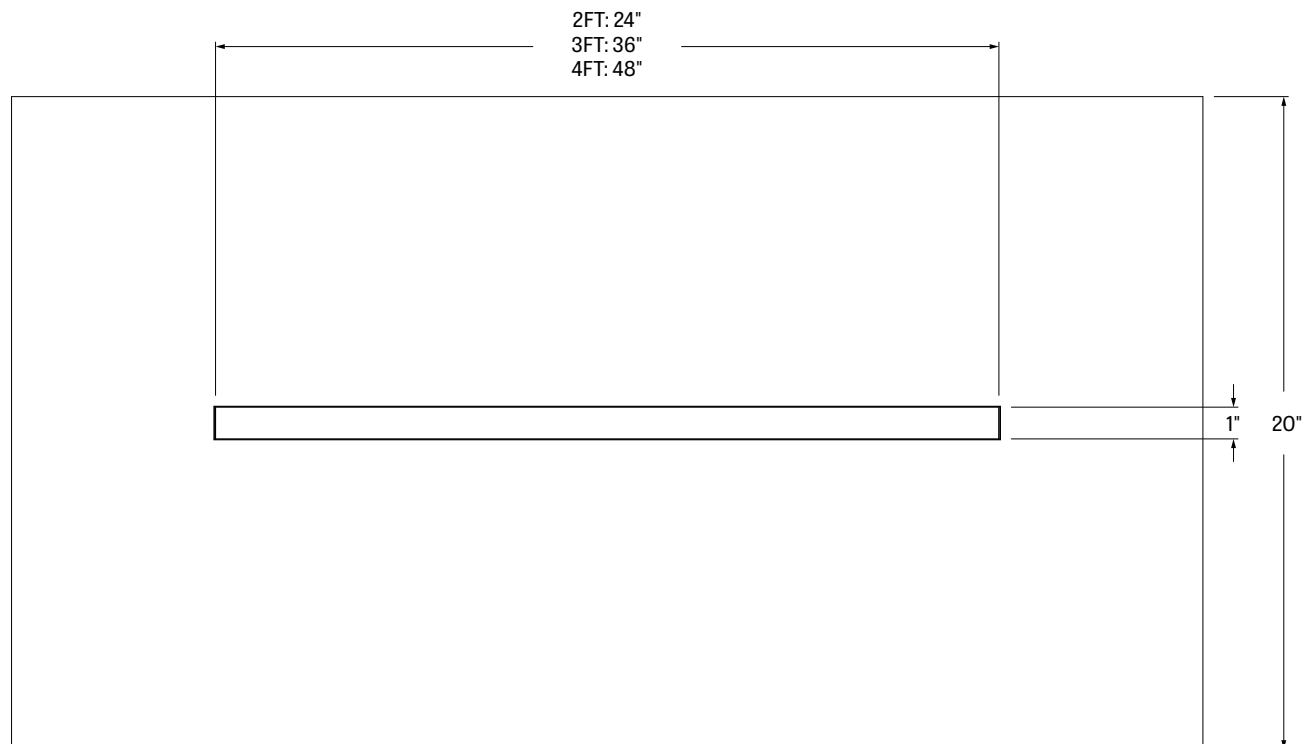
Type: _____

DIMENSIONS

Front view



Bottom view



ACOUSTIC CALCULATOR

Using the Lumenwerx Acoustix Value Calculator table, you can determine the number of acoustic luminaires required in a space by fixture type. We have three levels of recommended sound reduction: good, better, and best. Choosing one of these options will reduce the sound accordingly. The best option indicates the best acoustic improvement. Calculations are based on a standard ceiling height of 9 feet.



- 1 Calculate the square feet of your room (L x W).
- 2 Choose the level of acoustical improvement you are looking for, and find the corresponding value based on your room dimension and luminaire configuration.

% in reduction in reverberation time	Room dimensions under 300 sq ft			Room dimensions over 300 sq ft			
	LENGTH	GOOD 😊	BETTER 😊😊	BEST 😊😊😊	GOOD 😊	BETTER 😊😊	BEST 😊😊😊
😊 GOOD 25%							
😊😊 BETTER 40%	2 Feet	39	20	12.5	64	30	20
😊😊😊 BEST 50%	3 Feet	58.5	30	18.75	96	45	30
	4 Feet	78	40	25	128	60	40

- 3 Use the Lumenwerx Acoustix Value Formula to determine the number of luminaires needed in the room.

$$\text{Square feet} \div \text{Value} = \text{Number of luminaires}$$

Example:

Luminaires: Mikro Wafer, 4 ft long
Room square feet: L: 20 ft x W: 18 ft = 360 sq ft
Desired acoustical improvement: Better = 60
Number of luminaires needed in the room: 360 ÷ 60 = **6 luminaires**

NOTES:

- You can mix lit and blank fixtures.
- Lumenwerx acoustic calculators were developed to act as a guide. For precise acoustic performance in a space, please consult an acoustician.

Project: _____

Type: _____

Technical Specifications

OPTICS

High-Efficiency Lambertian Optic (HLO) shielding of diffusing 0.075" thick acrylic provides up to 88% transmission and good source obscuration. Matte white reflectors distribute LED output across the shielding. Luminaire brightness is controlled by the flux-to-shielding area ratio.

LIGHT SOURCE - LED

Custom linear array of mid-flux LEDs are cartridge-mounted with quick-connect wiring to facilitate service and thermal management. Available in 2700K, 3000K, 3500K and 4000K with a minimum 80 CRI and an option for 90 CRI with elevated R9 value. Color consistency maintained to within 3 SDCM. LEDs operated at reduced drive current to optimize efficacy and lumen maintenance. All LEDs have been tested in accordance with IESNA LM-80-08 and the results have shown L80 lumen maintenance greater than 60,000 hours. Absolute product photometry is measured and presented in accordance with IESNA LM-79, unless otherwise indicated.

LUMINAIRE LENGTH

Mikro Wafer is made up of standard 2, 3 and 4 foot sections.

ELECTRICAL - INTEGRATED DRIVER

Fully integrated, ultra-slim, Mikrodrive™ driver eliminates the need for the remote drivers typical of very small cross-section luminaires. Factory adjustable drive current and universal (120-277VAC) input. Long life: over 100,000 hours Mean Time Between Failures (MTBF). At maximum driver load: Efficiency>84%, PF>0.9, THD<20%. Due to space limitations, other driver, control and wiring options are not currently available.

MOUNTING OPTIONS

Fixtures can be pendant-mounted, using aircraft cables. Lumenwerx provides the following hardware: 5" white canopy for all power mounting point, 3" white canopy for non power mounting point, and a 36" cable.

Caddy clips, if required specify under OPTIONS

[For all other options, see our website for a detailed Pendant Mounting Guide](#)

WEIGHT

Direct -

Mikro Wafer 2ft - 5.51lbs - 2.5kg
Mikro Wafer 3ft - 8.27lbs - 3.75kg
Mikro Wafer 4ft - 11.02lbs - 5kg

Direct/Indirect -

Mikro Wafer 2ft - 7.14lbs - 3.24kg
Mikro Wafer 3ft - 10.71lbs - 4.9kg
Mikro Wafer 4ft - 14.28lbs - 6.48kg

CONSTRUCTION

Housing - Extruded aluminum (0.060" nominal) up to 90% recycled content

Interior brackets - Die formed cold rolled sheet steel 20 gauge thick

Reflectors - Flat rolled steel sheet 0.030" thick precisely die formed, 95% reflective matte white painted

End caps - Die cast aluminum (0.95" nominal)

Hanger - Chromed Griplock securely attached with spring steel hardware in end caps

Aircraft cable suspension - 7x7 braids aluminum aircraft cable 0.06" thick

FINISH

Powder-coat paint in standard white.

ACOUSTIC FINISH

Material is 100% polyester containing up to 50% of recycled plastic bottles (PET) with an ASTM E-84 Class A fire rating and is moisture resistant.

CARE

Remove dust and debris with a clean, dry, soft, lint-free cloth, or vacuum.

CERTIFICATIONS

ETL - Rated for Dry/Damp locations. Conforms to UL Standard 1598 and certified to CAN/CSA Standard C22.2 No. 250.0.

WARRANTY

Lumenwerx provides a five-year limited warranty of electrical and mechanical performance of the luminaires, including the LED boards, drivers, and auxiliary electronics. Lumenwerx will repair or replace defective luminaires or components at our discretion, provided they have been installed and operated in accordance with our specifications. Other limitations apply, please refer to the full warranty on our website.

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LUMENWERX

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WELL for Light - The WELL building standard focuses on light quality in several features. There are three categories that are fully attributed to the construction and features of a luminaire. In WELL V1, it's Feature 54 Circadian Lighting, Feature 55 Glare Control, and Feature 58 Color Quality. In WELL V2, it's Feature L03 Circadian Lighting, Feature L04 Glare Control, and Feature L07 Electric Light Quality.

This fixture meets Features:

- Feature 54 or L03 when BIOS LED is selected
- Feature 55 or L04 meets WELL glare category (c-d)
- Feature 58 or L07 when 90CRI is selected

All LED drivers used at Lumenwerx are deemed to have a low risk level of flicker, of 5 % or less below 90Hz operational as defined by IEEE standard 1789-2015 LED.



WELL for Sound - This luminaire is recommended for use as an acoustical absorption surface to limit reverberation times (RT) in a given space. This luminaire contributes to noise reduction and vibration dampening to promote focus and concentration. Reverberation needs to be calculated in each space based on the materials used.

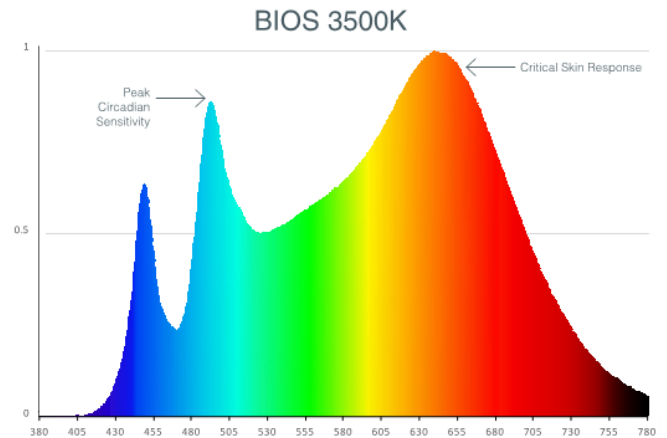


WELL for Mind -This luminaire meets WELL for mind as it is a human centric luminaire offering quality light, excellent color, smooth optics, and a sound diminishing element. If any of these features are incorporated in a luminaire, it can improve the ability to focus, concentrate, and persist longer on a given task. This fixture harmoniously operates in a space to assist the mind.

For more information please contact well@lumenwerx.com.

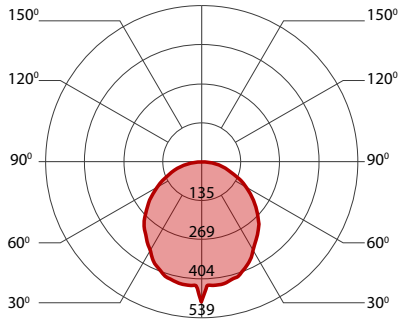


BIOS SkyBlue™ Technology is designed to provide the specific circadian stimulus to improve overall sleep quality, recovery during the night, and overall feelings of well-being. The non-visual light signals that stimulate our circadian system have peak intensity in the "sky blue" region. As the diagram below illustrates, BIOS SkyBlue technology shifts the peak LED spectral intensity (460 nm) to align better with the peak response of circadian stimulus. Also note the enhanced deep-red (near 660 nm) spectrum.



DIRECT DISTRIBUTION

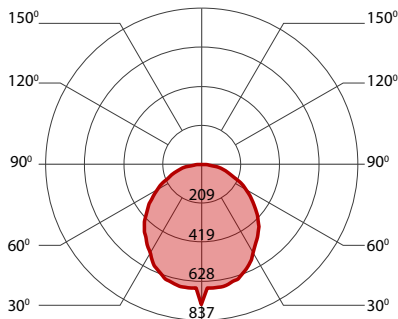
350 LUMEN AT 80CRI - LOW OUTPUT



PERFORMANCE PER 4'

LED output	Color Temp	Watts	Nominal Delivered Lumens	Efficacy LPW
low output	3000K	15.5	1400	91
low output	3500K	15	1400	92
low output	4000K	14.5	1400	95

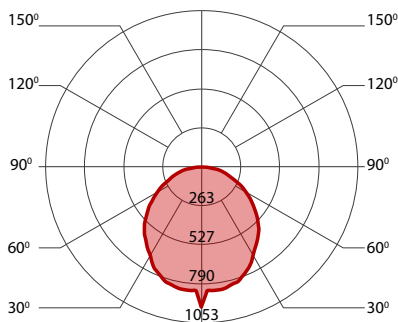
500 LUMEN AT 80CRI - MEDIUM OUTPUT



PERFORMANCE PER 4'

LED output	Color Temp	Watts	Nominal Delivered Lumens	Efficacy LPW
medium output	3000K	22	2000	90
medium output	3500K	22	2000	91
medium output	4000K	21.5	2000	94

700 LUMEN AT 80CRI - HIGH OUTPUT



PERFORMANCE PER 4'

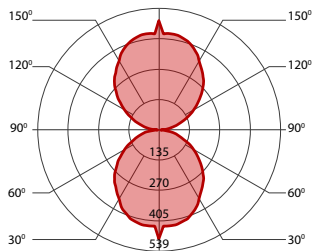
LED output	Color Temp	Watts	Nominal Delivered Lumens	Efficacy LPW
high output	3000K	31.5	2800	89
high output	3500K	31	2800	90
high output	4000K	30	2800	93

Project: _____

Type: _____

DIRECT/INDIRECT DISTRIBUTION PERFORMANCE AT INDIRECT 350 LUMEN PER FOOT

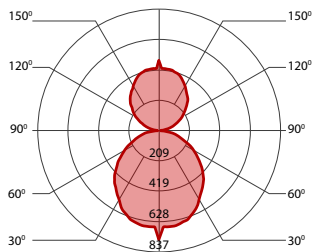
DIRECT AT 350 LUMEN PER FOOT AT 80CRI - LOW OUTPUT



PERFORMANCE PER 4'

LED output	Color Temp	Watts	Direct Lumens	Indirect Lumens	Total Nominal Delivered Lumens	Efficacy LPW
low output	3000K	31	1400	1400	2800	91
low output	3500K	30.5	1400	1400	2800	92
low output	4000K	29.5	1400	1400	2800	95

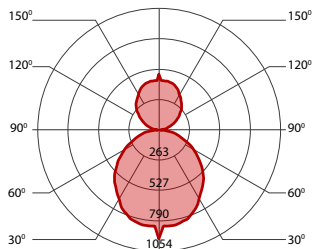
DIRECT AT 500 LUMEN PER FOOT AT 80CRI - MEDIUM OUTPUT



PERFORMANCE PER 4'

LED output	Color Temp	Watts	Direct Lumens	Indirect Lumens	Total Nominal Delivered Lumens	Efficacy LPW
medium output	3000K	38	2000	1400	3400	90
medium output	3500K	37	2000	1400	3400	92
medium output	4000K	36	2000	1400	3400	94

DIRECT AT 700 LUMEN PER FOOT AT 80CRI - HIGH OUTPUT

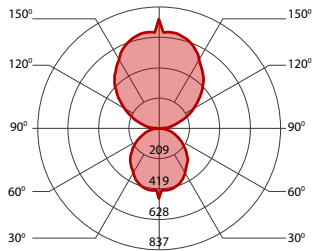


PERFORMANCE PER 4'

LED output	Color Temp	Watts	Direct Lumens	Indirect Lumens	Total Nominal Delivered Lumens	Efficacy LPW
high output	3000K	47	2800	1400	4200	89
high output	3500K	46	2800	1400	4200	91
high output	4000K	44.5	2800	1400	4200	94

DIRECT/INDIRECT DISTRIBUTION PERFORMANCE AT INDIRECT 500 LUMEN PER FOOT

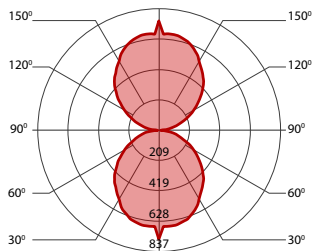
DIRECT AT 350 LUMEN PER FOOT AT 80CRI - LOW OUTPUT



PERFORMANCE PER 4'

LED output	Color Temp	Watts	Direct Lumens	Indirect Lumens	Total Nominal Delivered Lumens	Efficacy LPW
low output	3000K	38	1400	2000	3400	90
low output	3500K	37	1400	2000	3400	92
low output	4000K	36	1400	2000	3400	94

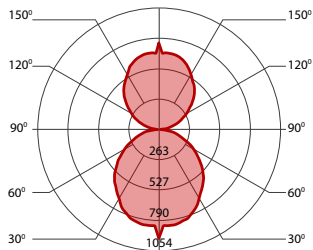
DIRECT AT 500 LUMEN PER FOOT AT 80CRI - MEDIUM OUTPUT



PERFORMANCE PER 4'

LED output	Color Temp	Watts	Direct Lumens	Indirect Lumens	Total Nominal Delivered Lumens	Efficacy LPW
medium output	3000K	44.5	2000	2000	4000	90
medium output	3500K	44	2000	2000	4000	91
medium output	4000K	42.5	2000	2000	4000	94

DIRECT AT 700 LUMEN PER FOOT AT 80CRI - HIGH OUTPUT



PERFORMANCE PER 4'

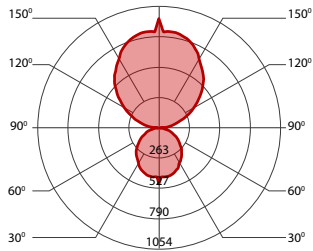
LED output	Color Temp	Watts	Direct Lumens	Indirect Lumens	Total Nominal Delivered Lumens	Efficacy LPW
high output	3000K	54	2800	2000	4800	89
high output	3500K	52.5	2800	2000	4800	91
high output	4000K	51.5	2800	2000	4800	93

Project: _____

Type: _____

DIRECT/INDIRECT DISTRIBUTION PERFORMANCE AT INDIRECT 700 LUMEN PER FOOT

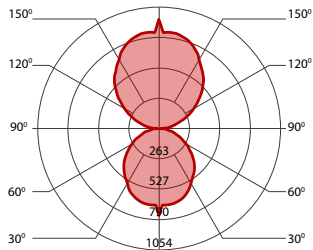
PER FOOT 350 LUMEN PER FOOT AT 80CRI - LOW OUTPUT



PERFORMANCE PER 4'

LED output	Color Temp	Watts	Direct Lumens	Indirect Lumens	Total Nominal Delivered Lumens	Efficacy LPW
low output	3000K	47	1400	2800	4200	89
low output	3500K	46	1400	2800	4200	91
low output	4000K	44.5	1400	2800	4200	94

PER FOOT 500 LUMEN PER FOOT AT 80CRI - MEDIUM OUTPUT



PERFORMANCE PER 4'

LED output	Color Temp	Watts	Direct Lumens	Indirect Lumens	Total Nominal Delivered Lumens	Efficacy LPW
medium output	3000K	54	2000	2800	4800	89
medium output	3500K	52.5	2000	2800	4800	91
medium output	4000K	51.5	2000	2800	4800	93