

DESIGNERS LIGHTING FORUM

THE LIGHTING DESIGN PROCESS

ANITA JORGENSEN

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material of construction or any method or manner of handling, using, distributing, or dealing in any material or product.

Questions related to specific materials, methods, and services will be addressed at the conclusion of this presentation.



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LEARNING OBJECTIVES:

AT THE END OF THIS COURSE, THE PARTICIPANTS WILL BE ALE TO UNDERSTAND:

1. THE PROCESS OF LIGHTING DESIGN FROM CONCEPT TO FINAL COMPLETION.
2. THE IMPORTANCE MOCKUPS IN DEVELOPING A CONCEPT.
3. SHADOW VS. ILLUMINANTION. ILLUMINENCE VS. LUMINENCE. CONTRAST RATIO.
4. THE IMPORTANCE OF UNDERSTANDING THE EXISTING ENVIRONMENT OF A PROJECT.





THE PROJECT LOCATION AND THE EXISTING LIGHTING CONDITIONS IN TIMES SQUARE. LEVELS RANGE FROM 20 TO 60 FC AT NIGHT.





THE INITIAL ARCHIECTUREAL CONCEPT RENDERING. REAR ILLUMINATION TRANSLUCENT GLASS WITH BRIGHTER IDENTITY.





REVISED CONCEPT: DIRECTLY ILLUMINATE THE IDENTIFY WALL IN CONJUNCTION WITH TOURO LETTERS ABSENT OF ILLUMINATION.





REVISED CONCEPT: CONCEPT RENDERING SHOWING "RIBBONS" OF LIGHT SET BACK FROM THE WALL WITH CUSTOM STAND OFFS.

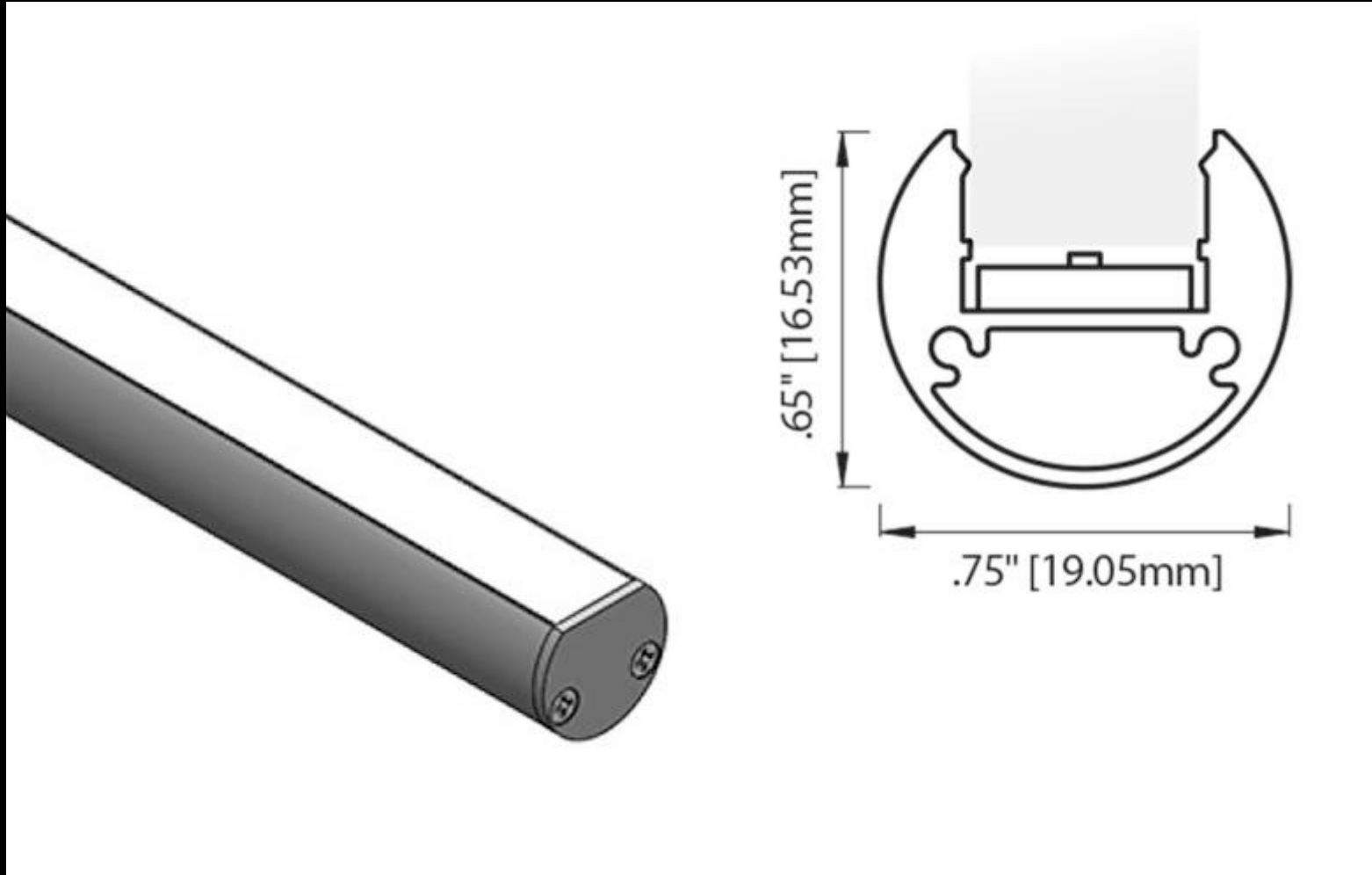


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REVISED CONCEPT: CLIENT PRESENTATION RENDERING SHOWING THE LETTERS "TOURO" IN SHADOW..





LINEAR HIGH ALUMINUM EXTRUSION WITH SOFT DISTRIBUTION LENS.

3RL LARGE ROUND EXTRUSION - LENSED

3RL: IP40 | Round extrusion for linear lighting applications. UL Listed dry/damp. Includes Nichia LEDs in choice of 21 LED Board options. See lumen outputs, CCTs, wattage and other variables on Linear Fundamentals.

Available in Silver, Black or Bronze Anodized, White Powder Coated, or Custom Finishes. Choice of Clear Acrylic lens (standard), 3 Opal diffusion lenses, or three focusing lenses L2 (18° - 31°), L3 (30° - 42°) or Lens 4 (78° - 82°). Photometrics vary based on CCT and lensing; see vltcorp.com for output conversion and other data specific to your fixture choices.



ELL-3RL-

	LED	CCT	Finish	Lens Options	Wire Exit	Listings & Options
STANDARD FITS	1726	240 lm/ft, 1.8 w/ft, 83+ CRI	29 2000°K	AL Silver Anodized	PS Clear Acrylic	UL UL Listed
	2736	397 lm/ft, 2.9 w/ft, 83+ CRI	22 2200°K	BE Black Anodized	L2 Lens 2 (26° - 32°)	CE CE Marked (RoHS)
	4746	528 lm/ft, 3.7 w/ft, 83+ CRI	25 2500°K	BZ Bronze Anodized	L3 Lens 3 (50° - 51°)	EMM Beam End Mount Leg ¹
	5760	665 lm/ft, 4.9 w/ft, 83+ CRI	27 2700°K	WM White Powder Coat	L4 Lens 4 (88° - 92°)	TML Beam 3-Mount Leg ¹
	6780	875 lm/ft, 6.5 w/ft, 83+ CRI	30 3000°K	C Custom	OP1 Opal 1, Frosted	
	3726	225 lm/ft, 1.8 w/ft, 95+ CRI	35 1500°K		OP2 Opal 2, Medium	
	3740	430 lm/ft, 3.5 w/ft, 95+ CRI	40 4000°K		OP3 Opal 3, Heavy	
	3760	409 lm/ft, 5.2 w/ft, 95+ CRI	45 4500°K			
	3790	621 lm/ft, 6.9 w/ft, 98 CRI ¹	50 5000°K			
	3796	621 lm/ft, 6.9 w/ft, 98 CRI ¹	20/30 2000°K/ 3000°K ²			
FITTED SIZES	5140	287 lm/ft, 2.2 w/ft, 83+ CRI	25/40 2500°K/ 4000°K ²			
	5160	571 lm/ft, 4.3 w/ft, 83+ CRI	30/40 3000°K/ 4000°K ²			
	5180	920 lm/ft, 6.9 w/ft, 83+ CRI	35/45 3500°K/ 4500°K ²			
	3140	237 lm/ft, 2.2 w/ft, 95+ CRI				
	3160	469 lm/ft, 4.3 w/ft, 95+ CRI				
	3180	773 lm/ft, 6.9 w/ft, 95+ CRI				
	3150	202 lm/ft, 2.2 w/ft, 98 CRI ¹				
	3170	404 lm/ft, 3.9 w/ft, 98 CRI ¹				
	3190	710 lm/ft, 6.9 w/ft, 98 CRI ¹				
	7180	750 lm/ft, 6.9 w/ft, 83+ / 95+ CRI ¹				
5131	315 lm/ft, 3.4 w/ft, 87 CRI ¹					
5163	548 lm/ft, 6.6 w/ft, 87 CRI ¹					

¹ Not Available in 20K, 22K or 25K CCT
² F100 Boards Only: CRI Rains Based on CCT Combination

Legend:
Standard 98 CRI Fitted/Standard
Fitted/98 CRI Fitted/Dual Color
Fitted/Narrow Focus Ultra 98 CRI

Wire Exit:
 WE1 Default
 C Custom

Fixture Length:
 See Fixture Length and Wattage Table. Choose the correct Code number for the LED board and fixture length of your choice or specify Custom Length in inches: C(12.25") or C(311mm).

Listings & Options:
 UL UL Listed
 CE CE Marked (RoHS)
 EMM Beam End Mount Leg¹
 TML Beam 3-Mount Leg¹

See Special Mounting Options for more information about specifying 3RL fixtures in Display Case

Basic and Free Standing Fixture Accessories - See Mounting Options for more information			
ELL-AC-3RL-PC	ELL-AC-3RL-LC	ELL-AC-3RL-SALC	ELL-AC-3RL-MRC
Plastic Mounting Clip: Fixture extrusion rotates into clip. Screws to mounting surface. Raises fixture 0.13" (3.30mm). Allows 30° rotation. Allow 1 per 12" (min. 2 per fixture). See Mounting Options.	Locking Adjustable Mounting Clip: Screws to mounting surface. Raises fixture 0.13" (3.30mm). Full rotation with locking screw. Finishes to match fixture. Allow 2 per fixture (48" max span). See Mounting Options.	Locking Adjustable Mounting Clip with Self-Adhesive: Raises fixture 0.13" (3.30mm). Full rotation with locking screw. Finishes to match fixture. Allow 2 per fixture (48" max span). See Mounting Options.	Metal Mounting Clip: Fixture extrusion rotates into clip. Countersink screw-hole so fixture sits flush to mounting surface. Allows 60° rotation. Allow 1 per 12" (min. 2 per fixture). Polished Nickel Finish. See Mounting Options.





REVISED CONCEPT: CONFIRM THE DISTRIBUTION OF THE SELECTED LINEAR LED LUMINAIRE AGAINST A PAPER PROTRACTOR.





IN-HOUSE MOCKUP TO TEST VARIOUS ORIENTATIONS OF THE SELECTED LUMINAIRE.





IN-HOUSE MOCKUP TO TEST VARIOUS ORIENTATIONS OF THE SELECTED LUMINAIRE.





IN-HOUSE MOCKUP: LINEAR LED LIGHTS WALL AT 6" AWAY FROM WALL AND 18" APART.





IN-HOUSE MOCKUP TO TEST VARIOUS ORIENTATIONS OF THE SELECTED LUMINAIRE.





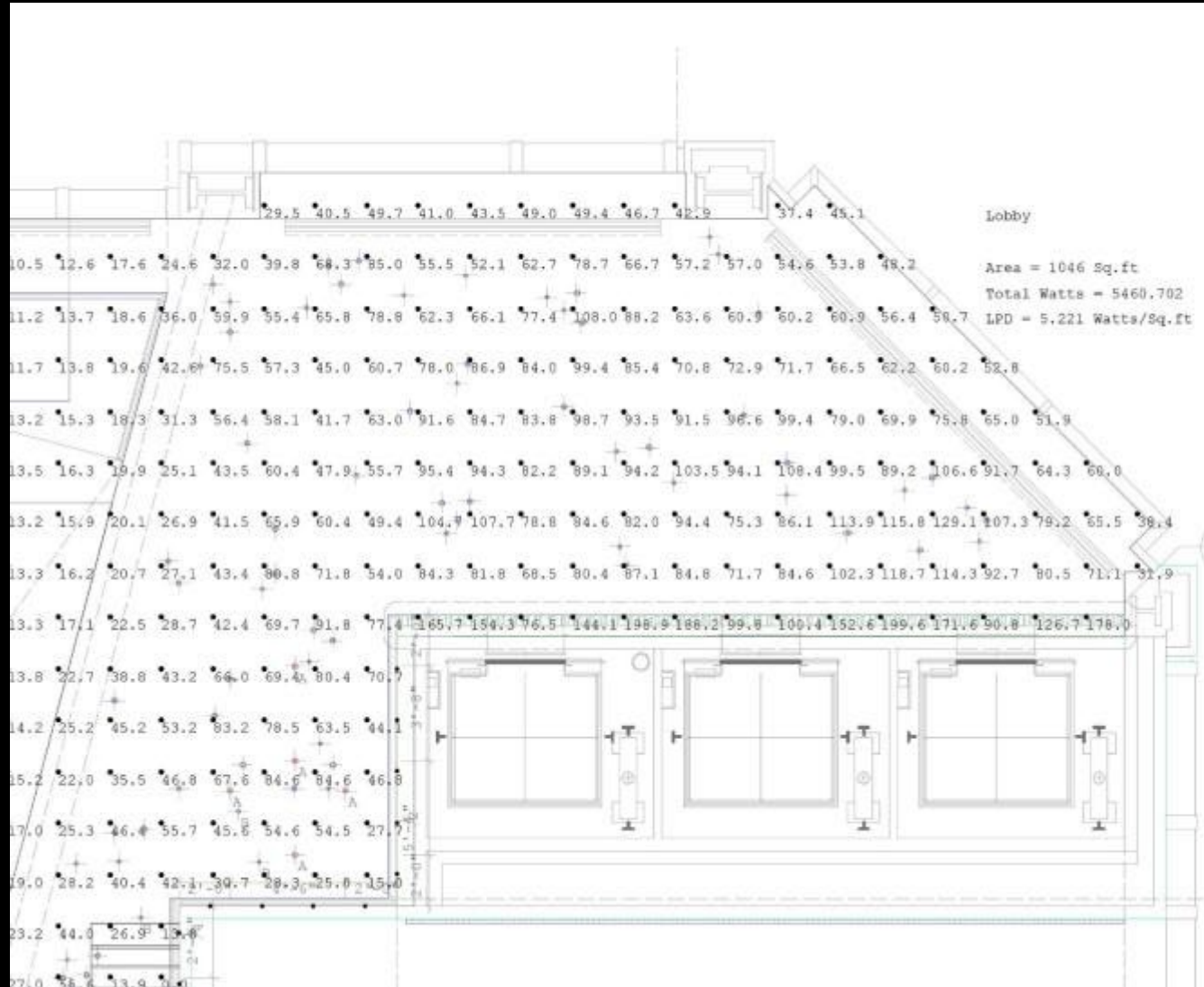
IN-HOUSE MOCKUP TO TEST LUMINAIRE AT 6" FROM WALL AND 6" BETWEEN.





IN-HOUSE MOCKUP TO TEST LUMINAIRE AT 4" FROM WALL AND 6" BETWEEN. THE WINNING SPACING.





Calculation Summary			
Label	Avg	Max	Min
Lobby_Floor	41.82	199.6	0.0
Lobby_Wall_1	10.94	31.2	0.0
Lobby_Wall_2	10.65	20.0	0.3
Lobby_Wall_22	9.44	30.9	0.0
Lobby_Wall_3	22.26	32.0	8.0
Lobby_Wall_4	15.66	27.9	6.9

Luminaire Schedule			
Symbol	Qty	Tag	Lum. Watts
○	31	F11(0.5)	4
○	99	F11(1)	6.5
○	318	F11(2)	13.2
○	37	F11(0.25)	2
○	34	F13	8.4
○	54	F13A	1.6
○	20	F13 Adj	8.4

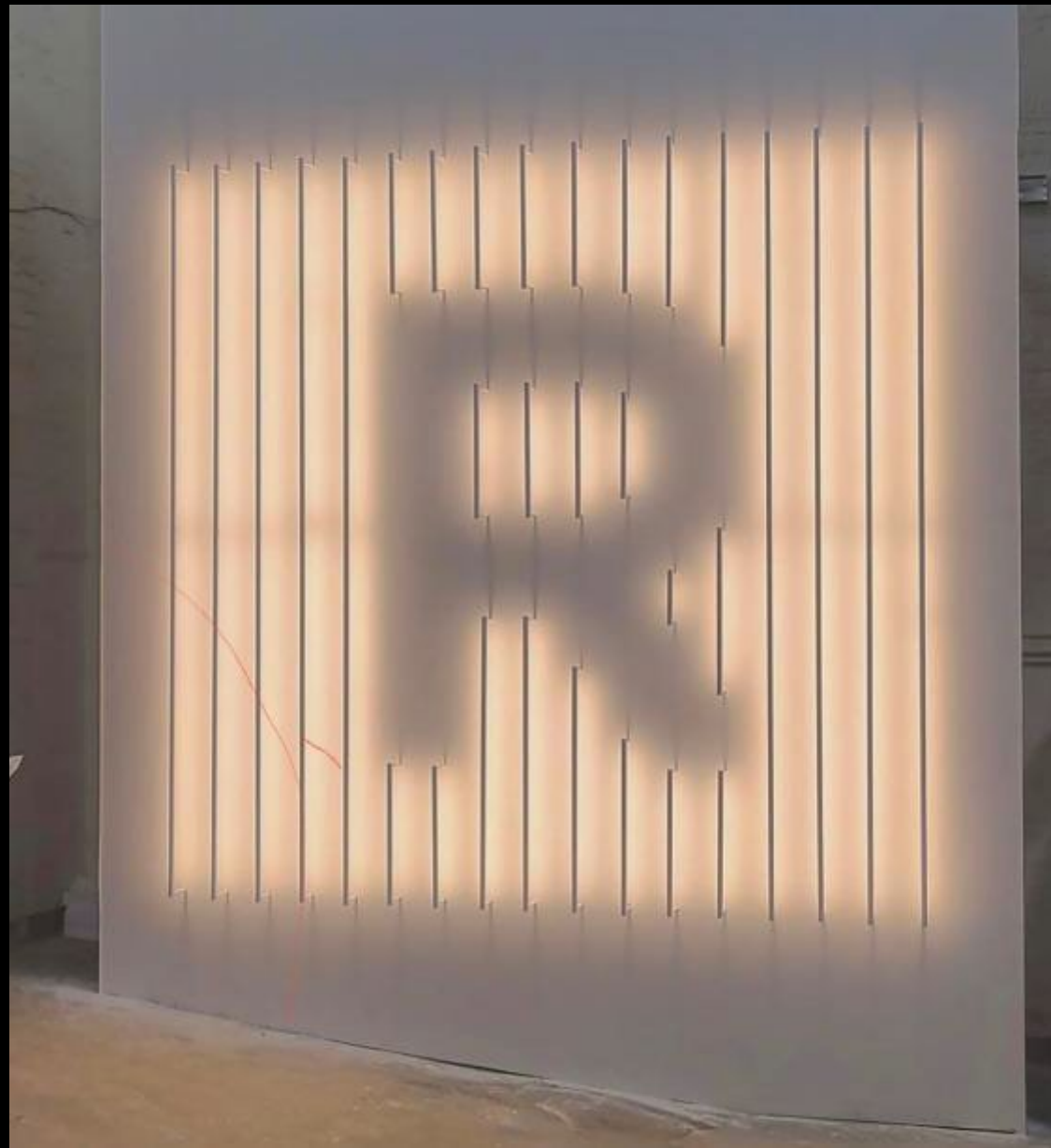
LPD Area Summary			
Label	Area	Total Watts	LPD
Lobby	1046	5460.702	5.221



A RENDERING SHOWING RAW ILLUMINANCE CALCULATIONS IN A RENDERED FORM CONFIRMING THE CONCEPT'S LIKELY SUCCESS.



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A CONTRACTOR CONSTRUCTED FULL SIZED LETTER MOCKUP ESTABLISHING THE INSTALLATION WILL BE SUCCESSFUL.





THE ACTUAL INSTALLATION BEGINS. THE FIRST TWO LETTERS SHOW THE LETTER SHADOWS ARE DISTINCT AND LEGIBLE.





THE INSTALLATION IS COMPLETE. NOW THE TROUBLE SHOOTING BEGINS.



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TROUBLE SHOOTING IS COMPLETE. THE INTERIOR LETTERS IN SHADOW ARE MIRRORED BY GLOWING LETTERS ON THE CANOPY.





THE INTERIOR LETTERS SEEN IN CONTERPOINT TO THE ICONIC NASDQ SIGN BEYOND.





A DETAIL SHOWING THE CUSTOM STANDOFFS THAT DOUBLE AS DISCREET WIREWAYS.





THE MAPLE SLATTED WALL AT THE MAIN STAIR ARE GRAZED WITH CONTINUOUS LIGHTING CONCEALED BENEATH THE STAIRS.





MINIATURE LIGHTS OF TWO DIFFERENT SIZES CREATE A STARLITE PATTERN ON THE CEILING IN CONTRAST TO THE LIGHTED WALL.





THE TOURO LOBBY JOINS ITS ANIMATED NEIGHBORS IN ELEGANT STILLNESS.





THE COMPLETED INSTALLATION IS A PLAY ON LIGHT AND SHADOW OR ILLUMINENCE VS. LUMINENCE.



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PLEASE COME UP TO THE TABLE TO SEE THE
ACTUAL “HARDWARE”
USED TO CREATE A LIGHTING CONCEPT.
THANK YOU.

This concludes The American Institute of Architects Continuing
Education Systems Course

