OCL ARCHITECTURAL LIGHTING

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Expanding the Boundaries of Light



EVERYONE CAN HEAR YOU, NOW

Lack of sound privacy is the biggest frustration we have with our cubicles.



The **WHY** of Acoustic Lighting

1. Open spaces and materials used:

- Increased noise levels
- Need for privacy
- Ability to concentrate

2. Decorative purposes:

- Human-centered designs
- Design flexibility
- "Palatable" option

3. Time/Cost:

- Remodeling cost vs "face lift"
- Easy to change/update
- Minimal time and effort for short-term occupancy
- Installed by one contractor

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Make changes in construction materials used or appearance

- 1. increase wall mass and thickness
- 2. cavity partitions
- 3. studs in staggered manner
- 4. isolation blankets...
- 5. smaller window size or thicker glass
- 6. solid doors
- 7. use acoustic products that are floor mounted, wall mounted, suspended or free standing, drapery



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Make changes in appearance:

- 1. Plants in space
- 2. Green walls



4. Lighting Fixtures

Top 5 wants in an office space to increase productivity and creativity of its occupants



Natural Lighting
Indoor Plants
Quiet Working Space
Sea or Landscape
Bright Colors





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ACOUSTIC LIGHTING SOLUTIONS

Photometric & Acoustic Testing

Available at ocl.com



ACOUSTIC LIGHTING SOLUTIONS

Photometric Data

Available at ocl.com

Photometric Performance





Calculation Results Illuminance 29 fc Power Density 0.52 W/ft² Quantity 6

Spacing Results

 Spacing
 10 x 6.6 ft

 Arrangement
 2 x 3

 Offset X
 4.02 ft

 Offset Y
 2.42 ft

Room Summary

Length 20 ft Width 20 ft Height 12 ft Workplane 2.5 ft Reflectances Ceiling 80 % Walls 50 % Floor 20 %



Calculation Results

Illuminance 31 fc Power Density 0.52 W/ft² Quantity 6

Spacing Results

Spacing	10 x 6.6 1	f
Arrangement	2 x 3	
Offset X	4.02 ft	
Offset Y	2.42 ft	

Room Summary

Length	20	ft
Width	20	ft
Height	12	ft
Workplane	2.5	ft
Reflectances		
Ceiling	80	%
Walls	50	%
Floor	20	%



ACOUSTIC LIGHTING SOLUTIONS

Acoustic Testing

Available at ocl.com



Acoustic Test Data

1/3 Octave Center Frequency	r Total Absorption		Absorption per Unit	
(Hz)	(m ²)	(Sabins)	(m ² /Unit)	(Sabins / Unit
100	0.27	2.96	0.07	0.74
** 125	-0.09	-0.96	-0.02	-0.24
160	0.53	5.67	0.13	1.42
200	0.99	10.61	0.25	2.65
** 250	1.15	12.38	0.29	3.09
315	1.76	18.92	0.44	4.73
400	2.14	23.07	0.54	5.77
** 500	2.97	31.99	0.74	8.00
630	3.44	37.01	0.86	9.25
800	3.86	41.52	0.96	10.38
** 1000	4.30	46.30	1.08	11.57
1250	4.40	47.38	1.10	11.85
1600	4.63	49.84	1.16	12.46
** 2000	4.87	52.43	1.22	13.11
2500	5.25	56.55	1.31	14.14
3150	5.40	58.15	1.35	14.54
** 4000	5.42	58.29	1.35	14.57
5000	5.56	59.86	1.39	14.97



Acoustic Test Data

			Method 1	Method 2
	Specimen Absor	ption	Apparent	Apparent
			Abs. Coefficient	Abs. Coefficient
Freq.			From Coverage	From Total
(Hz)	Sabins	Sabins / Unit	Area Per Unit	Exposed Surface
				Area
31.5	-3.92	-0.98	-0.03	-0.03
40	6.23	1.56	0.04	0.04
50	6.05	1.51	0.04	0.04
63	0.61	0.15	0.00	0.00
80	-1.00	-0.25	-0.01	-0.01
100	2.96	0.74	0.02	0.02
125	-0.96	-0.24	-0.01	-0.01
160	5.67	1.42	0.04	0.04
200	10.61	2.65	0.07	0.07
250	12.38	3.09	0.08	0.08
315	18.92	4.73	0.12	0.12
400	23.07	5.77	0.15	0.15
500	31.99	8.00	0.20	0.21
630	37.01	9.25	0.24	0.24
800	41.52	10.38	0.27	0.27
1,000	46.30	11.57	0.30	0.30
1,250	47.38	11.85	0.30	0.31
1,600	49.84	12.46	0.32	0.33

Acoustic Performance

KWYET ACOUSTIC PERFORMANCE (4 UNITS):



FREQUENCY (HZ)

Acoustic Simulation





ACOUSTIC SIMULATION

Room Type: Open Office	• Baseline RT ₆₀
Room Size: 35'w x 20'h x 60'd	 Target RT₆₀
Room Materials: Concrete, drywall, glass	• RT ₆₀ w/ Glowri
Mounting Height: 15' AFF	
3.00	
2.50	
2.00	
1.50	

1000 Hz

2000 Hz

Product: Glowring 72" (x19)

1.00

0.50

0.00

500 Hz

	500Hz	1000 Hz	2000 Hz	
Baseline RT ₆₀	2.39	2.56	2.03	
Target RT ₆₀	1.3	1.3	1.3	
RT ₆₀ w/ Glowring	1.90	1.91	1.55	



Architectural acoustical design is an endeavor that involves a lot of consideration. An educated, experienced, and qualified professional acoustician should lead the acoustical design of any critical listening space.

Acoustic Solutions



METALLIC POWDER COAT FINISHES:



SOLID POWDER COAT FINISHES:

SKY WHITE



MWP BKP MATTE BLACK WHITE

TEXTURED POWDER COAT FINISHES:



BTP WTP BLACK WHITE TEXTURED TEXTURED

PREMIUM METAL FINISHES:



BAL BRUSHED ALUMINUM

RAL^{*}, Pantone[°] or custom finishes are also available.

These colors are for reference only. Please be aware that colors may vary per monitor. Contact your local rep for finish samples or with any questions.

FINISH OPTION

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ACOUSTIC COLOR OPTIONS

ACOUSTIC COLORS: SDG - SHADOW **PBK** - PURE BLACK **CHG** - CHARCOAL **SLT** - SLATE GRAY CWH - CLASSIC PIC - PEARL ICE SLG - SILVER GRAY NTL - NATURAL WHITE LINEN HZW - HAZELWOOD CFB - CORNFLOWER DNB - DENIM BLUE BRD - BRICK RED BLUE CHR - CHERRY RED MNB - MIDNIGHT **DPP** - DEEP PURPLE **BRY** - BERRY BLUE CRT - CARROT **DWT** - DEEPWATER **PNA** - PINEAPPLE **LMG** - LIME GREEN LMS - LIMESTONE EMG - EMERALD CNM - CINNAMON BLS - BLUSH GREEN



These colors are for reference only. Please be aware that colors may vary per monitor. Contact your local rep with any questions.

Request a swatch sample at ocl.com/finishes

SFM - SEAFOAM



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Petals Acoustic

- Sound absorbing 9mm acoustic petals
- Available in Tunable White and RGBW standard
- 24", 36", 48", 60" & 72" diameters our LARGEST acoustic luminaire available
- Acoustic Petals easily field-installed
- 1.75" x 1.75" square profile with extruded silicone diffuser
- Available in 80+ or 90+ CRI
- RoHS Compliant / Declare Certified (pending)



Kwyet

- 1. Three standard shapes, 36" diameter
- 2. custom sizes & shapes available
- 3. acoustic panels field-installed
- 4. 3" diameter Tubie light engine
- 5. 12" tall light engine; optional downlight



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Stealth

- 1. 1.75" square cross section
- 2. silicone lens faces down, inside or outside
- 3. optional acoustic panel
- 4. standard RGBW and tunable white
- 5. standard squares up to 48"
- 6. custom sizes, clusters & shapes



Rev

- 1. 1.75" square cross section
- 2. lens faces inside or outside
- 3. optional acoustic panel
- 4. standard RGBW and tunable white
- 5. custom sizes & shapes available





Glowring Acoustic

- 1. Seamless one-piece molded diffuser
- 2. Fully enclosed top surface to minimize accumulation of dust and debris
- 3. Minimal luminaire cross section size
- 4. Available with metal trim on inner diameter or outer diameter



Open Office with Glowring Acoustic



New 2021 Acoustic Solutions Brochure

- o All of OCL's Acoustic luminaires
- Open office case study
- Acoustic testing reports
- New acoustic color palette
- o Glossary and terminology
- "Why No NRC?" by Riverbank Acoustical Laboratories

Thank You