

HHR4-LED 4" ARCHITECTURAL HIGH LUMEN LED REMODEL DOWNLIGHT

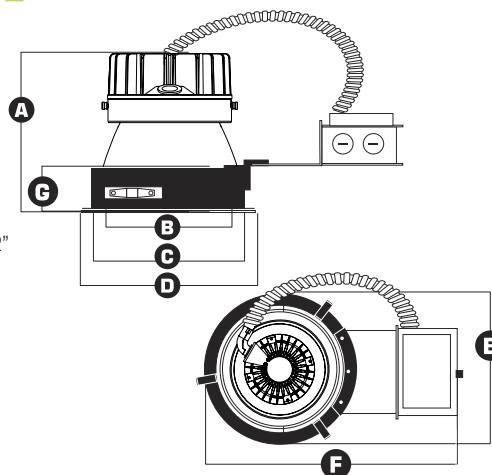
NEW



MAXILUME



- A** Height = 5-3/4"
- B** Trim Aperture = 4-1/8"
- C** Cut-out = 4-1/2"
- D** Trim Outside Dia. = 5-1/2"
- E** Width = 7-1/2"
- F** Length = 12-3/4"
- G** Flange = 1-1/2"



2000 LUMENS

INPUT VOLT.	INPUT FREQ.	INPUT CUR.	INPUT POWER	THD	POWER FACTOR	LUMENS
120/277	50/60Hz	266mA/115mA	32W(+/-5%)	<20%	>0.9	2000
120/277	50/60Hz	200mA/86mA	24W(+/-5%)	<20%	>0.9	1200
120/277	50/60Hz	150mA/65mA	16W(+/-5%)	<20%	>0.9	900

DESCRIPTION - 4" LED dedicated Architectural Remodel Downlight with integral LED heat management casting and driver (installed on junction box). Designed for remodel applications in existing plaster or mechanical ceilings. Available in 900 lumens (16W), 1200 lumens (24W) & 2000 lumens (32W). Lighting is smooth and comfortable while using 25% less energy than the common CFL downlight. Plus the eco-friendly Maxilume LED system features 70% lumen maintenance at 50,000 hours life, with Energy Star and California Title-24 (compliances pending).

FEATURES - Maxilume LED luminaires are ideally suited for use in hospitality, health care, commercial, institutions, retail and other architectural applications



OPTICS - MAXILUME LED Optilux technology combines unmatched performance with visual comfort. Spun 0.05" thick reflector has been designed to gather the light scattered by the LED & shape it into functional beams that minimize brightness and glare, while eliminating lamp image. Reflector offers a 55 degree cutoff and smooth frost acrylic diffuser distributes light even throughout the workplace.

PERFORMANCE - Operating system delivers 900 lumens (16W), 1200 lumens (24W) & 2000 lumens (32W) with a 4000K color temperature. All MAXILUME LED luminaires are rated at 85+ CRI. All LED luminaires are rated and tested to LM-79 and LM-80 standards by an independent laboratory.

THERMAL MANAGEMENT SYSTEM - Using a proprietary coolLED Advanced Thermodynamic Design, Die-cast aluminum housing and heat management system are engineered for extremely long life and service period. Heat sink is attached to top of reflector. The LED light engine is attached to the die-cast heat sink and is easily replaceable and upgradable. Without proper heat management, any LED luminaire will fail. Our die-cast system pulls the heat from the LED chip, allowing continued cool operation for years. Life tests have shown the MAXILUME light engine output will be maintained at 70% of initial at 50,000 hours of operation.

DIMMABLE - The MAXILUME LED system is fully dimmable down to 10% of initial light output with a 0-10 Volt dimmer when ordered with the following options (DIM10-120, DIM10-277). Fixtures can be shipped with a Lutron Hi-lume A series Driver which can be dimmed with Lutron Dimming Systems when ordered with the following options (LUTH-120, LUTH-277). Consult Factory for details.

MOUNTING FRAME - Die-formed all construction for maximum heat dissipation and rust protection. For fast and easy installation in existing plaster or mechanical ceiling thickness from 1/2" to 1-3/4". Four remodel clips are easily retractable for fixture removal if necessary.

LED DRIVER/JUNCTION BOX - The LED driver is rated for 50 to 60Hz at 120V /277V input, produces less than 20%THD, has a power factor between 90% and 100%, and is thermally protected for additional safety. MAXILUME's LED driver is installed on the junction box cover so it may be serviced from below the ceiling. UL Listed for through-branch circuit wiring, provided with four 1/2" knockouts, one 3/4" knockout and four Romex knockouts with true pryout slots and strain clamps. Designed for straight through conduit runs.

OUR WORD - The MAXILUME LED lighting system is warranted for 3 years. As a system, we stand behind the entire MAXILUME product.

LISTING

c-UL-us / c-ETL-us - listed for Damp location.
c-UL-us / c-ETL-us - listed for feed Through Wiring.
LM79 / LM80

DIMMING INFORMATION

DIM10 (0-10V Dimming)
LUTH (Lutron® Hi-lume® Dimming)

PATENT NO. D685,118 S

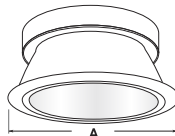
Example: HHR4-LED-900L-DIM10-120-FL-30K-HH4-4501-CL-WH

TYPE	16 WATT	24 WATT	32 WATT	OPTICS	COLOR	EMERGENCY	TRIM TYPE	REFLECTOR/ RING FINISH	DISC	
HHR4-LED	<input type="checkbox"/> 900L-LUTH-120 <input type="checkbox"/> 900L-LUTH-277 <input type="checkbox"/> 900L-DIM10-120 <input type="checkbox"/> 900L-DIM10-277	<input type="checkbox"/> 1200L-LUTH-120 <input type="checkbox"/> 1200L-LUTH-277 <input type="checkbox"/> 1200L-DIM10-120 <input type="checkbox"/> 1200L-DIM10-277	<input type="checkbox"/> 2000L-LUTH-120 <input type="checkbox"/> 2000L-LUTH-277 <input type="checkbox"/> 2000L-DIM10-120 <input type="checkbox"/> 2000L-DIM10-277	<input type="checkbox"/> FL	<input type="checkbox"/> 30K <input type="checkbox"/> 35K <input type="checkbox"/> 40K	<input type="checkbox"/> EMG-LED	<input type="checkbox"/> HH4-4501 <input type="checkbox"/> HH4-4507 <input type="checkbox"/> HH4-4509 <input type="checkbox"/> HH4-4510 <input type="checkbox"/> HH4-4511 <input type="checkbox"/> HH4-4521	<input type="checkbox"/> HH4-4522 <input type="checkbox"/> HH4-4523 <input type="checkbox"/> HH4-4525 <input type="checkbox"/> HH4-4528 <input type="checkbox"/> HH4-4577	<input type="checkbox"/> CL-WH <input type="checkbox"/> CL-SCH <input type="checkbox"/> SHZ-SHZ <input type="checkbox"/> SHZ-WH <input type="checkbox"/> W-WH <input type="checkbox"/> MB-WH <input type="checkbox"/> WT-WH	<input type="checkbox"/> BLUE <input type="checkbox"/> RED <input type="checkbox"/> GREEN <input type="checkbox"/> FROST <input type="checkbox"/> AL <input type="checkbox"/> BZ <input type="checkbox"/> WH

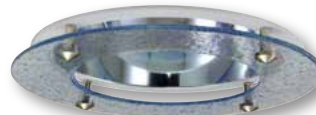


FOR WET LOCATION

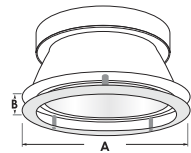
EXAMPLE: HH4-4501-CL-WH
HH4-4501 - REFLECTOR WITH DIFFUSE LENS
REFLECTOR/ RING FINISH:
 CL-WH CL-SCH WT-WH SHZ-WH W-WH SHZ-SHZ MB-WH
 PATENT NO. D685,118 S



A = 5-1/2"



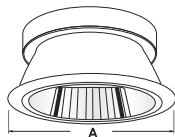
EXAMPLE: HH4-4521-CL-WH
HH4-4521 - STARDUST DECO RING GLASS WITH DIFFUSE LENS
REFLECTOR/ RING FINISH:
 CL-WH CL-SCH WT-WH SHZ-WH W-WH SHZ-SHZ MB-WH



A = 5-1/2"
 B = 1-1/4"



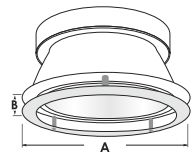
EXAMPLE: HH4-4507-CL-WH
HH4-4507 - WALL WASH REFLECTOR WITH DIFFUSE LENS
REFLECTOR/ RING FINISH:
 CL-WH CL-SCH WT-WH SHZ-WH W-WH SHZ-SHZ MB-WH



A = 5-1/2"



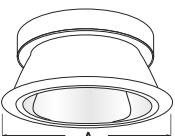
EXAMPLE: HH4-4523-CL-WH
HH4-4523 - PRISM DECO RING GLASS WITH DIFFUSE LENS
REFLECTOR/ RING FINISH:
 CL-WH CL-SCH WT-WH SHZ-WH W-WH SHZ-SHZ MB-WH



A = 5-1/2"
 B = 1-1/4"



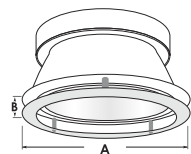
EXAMPLE: HH4-4577-CL-WH
HH4-4577 - DOUBLE WALL WASH REFLECTOR WITH DIFFUSE LENS
REFLECTOR/ RING FINISH:
 CL-WH CL-SCH WT-WH SHZ-WH W-WH SHZ-SHZ MB-WH



A = 5-1/2"



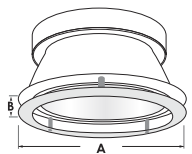
EXAMPLE: HH4-4522-CL-WH
HH4-4522 - EURO DECO RING GLASS WITH DIFFUSE LENS
REFLECTOR/ RING FINISH:
 CL-WH CL-SCH WT-WH SHZ-WH W-WH SHZ-SHZ MB-WH



A = 5-1/2"
 B = 1-1/4"



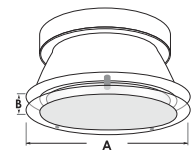
EXAMPLE: HH4-4509-CL-WH
HH4-4509 - DECO GLASS REFLECTOR WITH DIFFUSE LENS
REFLECTOR/ RING FINISH:
 CL-WH CL-SCH WT-WH SHZ-WH W-WH SHZ-SHZ MB-WH
GLASS FINISH:
 BLUE, RED, GREEN, FROST



A = 5-1/2"
 B = 1-1/4"



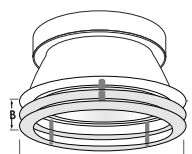
EXAMPLE: HH4-4525-CL-WH
HH4-4525 - CENTRAL ETCHED FLOAT GLASS WITH DIFFUSE LENS
REFLECTOR/ RING FINISH:
 CL-WH CL-SCH WT-WH SHZ-WH W-WH SHZ-SHZ MB-WH



A = 5-1/2"
 B = 1"



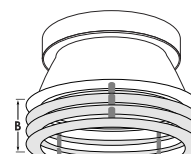
EXAMPLE: HH4-4510-CL-WH
HH4-4510 - DOUBLE RING GLASS WITH DIFFUSE LENS
REFLECTOR/ RING FINISH:
 CL-WH CL-SCH WT-WH SHZ-WH W-WH SHZ-SHZ MB-WH
GLASS FINISH:
 BLUE, RED, GREEN, FROST



A = 5-1/2"
 B = 1-1/2"



EXAMPLE: HH4-4511-CL-WH
HH4-4511 - TRIPLE RING GLASS WITH DIFFUSE LENS
REFLECTOR/ RING FINISH:
 CL-WH CL-SCH WT-WH SHZ-WH W-WH SHZ-SHZ MB-WH
GLASS FINISH:
 BLUE, RED, GREEN, FROST



A = 5-1/2"
 B = 2-1/4"



ALUMINIUM DISC

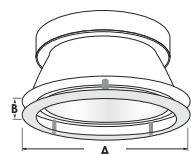
EXAMPLE: HH4-4528-CL-WH-AL
HH4-4528 - REFLECTOR WITH ALUMINIUM DISC AND DIFFUSE LENS
REFLECTOR FINISH:
 CL-WH CL-SCH WT-WH SHZ-WH W-WH SHZ-SHZ MB-WH
DISC FINISH:
 AL, WH, BZ



HH4-4528-CL-WH-AL



HH4-4528-CL-WH-BZ



A = 5-1/2"
 B = 1-1/4"

HH4-LED 16W

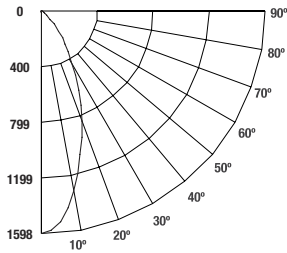
TOTAL LUMINAIRE EFFICACY = 57 LPW

HH4-LED-900L-120-DIM10-FL-40K-HH4-4501-CL-WH

TEST NO.: ELT-HH4-0007

INPUT WATTS: 16 LUMENS: 912 CRI: 85+ EFFICACY: 57 LPW CCT: 4000K SPACING CRITERIA: 0.7

Candle Power Distribution Curve (Candela)



Candela Distribution

Candela	0
0	1570
5	1453
15	1063
25	552
35	205
45	70
55	25
65	4
75	2
85	0
90	0

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixture
0-30	728.4	79.9%	80%
0-40	831.4	91.2%	91.3%
0-60	905.6	99.3%	99.4%
0-90	910.7	99.9%	0.6%

Lumens Per Zone

Zone	Lumens
0-10	143.3
10-20	322.7
20-30	262.5
30-40	103.1
40-50	55.9
50-60	18.3
60-70	3.6
70-80	1.2
80-90	0.2

Luminance (Average Candela/M²)

Angle In Degrees	Average 0°	Average 45°	Average 90°
45°	5442	5539	5774
55°	2384	2032	1221
65°	563	485	431
75°	328	267	214
85°	0	129	5

Coefficients of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance 0.20

RCC	80%				70%				50%				30%				10%				0%			
	RW	70%	50%	30%	10%	70%	50%	30%	10%	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	111	106	106	106	102	102	102	100	100	100	100		
1	114	111	109	107	111	109	107	105	105	103	102	102	101	100	99	98	97	96	94	94	94	94		
2	109	104	100	97	106	102	99	96	99	96	94	96	94	92	93	92	90	88	88	88	88	88		
3	104	98	93	89	102	96	92	89	94	90	87	91	88	86	89	87	85	83	83	83	83	83		
4	99	92	87	83	97	91	86	82	89	85	81	87	83	80	85	82	80	78	78	78	78	78		
5	94	87	81	77	93	86	81	77	84	80	76	82	79	76	81	78	75	74	74	74	74	74		
6	90	82	77	73	89	81	76	72	80	75	72	78	74	71	77	74	71	70	70	70	70	70		
7	86	78	72	68	85	77	72	68	76	71	68	75	71	68	74	70	67	66	66	66	66	66		
8	83	74	69	65	82	73	68	65	72	68	64	71	67	64	70	67	64	63	63	63	63	63		
9	79	70	65	61	78	70	65	61	69	64	61	68	64	61	67	64	61	59	59	59	59	59		
10	76	67	62	58	75	67	62	58	66	61	58	65	61	58	65	61	58	57	57	57	57	57		

RC - Ceiling Cavity Reflectance RW - Wall Reflectance

Cone of Light		
4.0'	98.1	3.1'
8.0'	24.5	6.1'
12.0'	10.9	9.2'
16.0'	6.1	12.3'
20.0'	3.9	15.4'
Distance to Plane	Initial Footcandles at Nadir	Beam Diameter

BEAM DIA. MEASURED AT 50% OF NADIR F.C.

*Note: Lumen output and input wattage vary depending on driver and reflector type. Listed values may vary +/-10%.

HH4-LED 24W

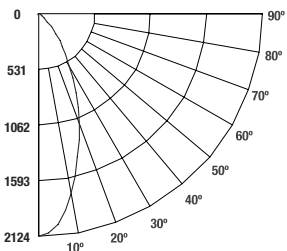
TOTAL LUMINAIRE EFFICACY = 50.5 LPW

HH4-LED-1200L-120-DIM10-FL-40K-HH4-4501-CL-WH

TEST NO.: ELT-HH4-0008

INPUT WATTS: 24 LUMENS: 1212 CRI: 85+ EFFICACY: 50.5 LPW CCT: 4000K SPACING CRITERIA: 0.7

Candle Power Distribution Curve (Candela)



Candela Distribution

Candela	0
0	2086
5	1931
15	1413
25	734
35	272
45	93
55	33
65	6
75	2
85	0
90	0

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixture
0-30	968.1	79.9%	80%
0-40	1,105.1	91.2%	91.3%
0-60	1,203.7	99.3%	99.4%
0-90	1,210.4	99.9%	100%

Lumens Per Zone

Zone	Lumens
0-10	190.4
10-20	428.8
20-30	348.8
30-40	137.0
40-50	74.3
50-60	24.4
60-70	4.8
70-80	1.6
80-90	0.3

Luminance (Average Candela/M²)

Angle In Degrees	Average 0°	Average 45°	Average 90°
45°	7233	7362	7674
55°	3169	2701	1623
65°	748	645	573
75°	435	356	284
85°	0	172	6

Coefficients of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance 0.20

RCC	80%				70%				50%				30%				10%				0%			
	RW	70%	50%	30%	10%	70%	50%	30%	10%	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	111	106	106	106	102	102	102	100	100	100	100		
1	114	111	109	107	111	109	107	105	105	103	102	102	101	100	99	98	97	96	94	94	94	94		
2	109	104	100	97	106	102	99	96	99	96	94	96	94	92	93	92	90	88	88	88	88	88		
3	104	98	93	89	102	96	92	89	94	90	87	91	88	86	89	87	85	83	83	83	83	83		
4	99	92	87	83	97	91	86	82	89	85	81	87	83	80	85	82	80	78	78	78	78	78		
5	94	87	81	77	93	86	81	77	84	80	76	82	79	76	81	78	75	74	74	74	74	74		
6	90	82	77	73	89	81	76	72	80	75	72	78	74	71	77	74	71	70	70	70	70	70		
7	86	78	72	68	85	77	72	68	76	71	68	75	71	68	74	70	67	66	66	66	66	66		
8	83	74	69	65	82	73	68	65	72	68	64	71	67	64	70	67	64	63	63	63	63	63		
9	79	71	65	61	78	70	65	61	69	64	61	68	64	61	67	64	61	59	59	59	59	59		
10	76	67	62	58	75	67	62	58	66	61	58	65	61	58	65	61	58	57	57	57	57	57		

RC - Ceiling Cavity Reflectance RW - Wall Reflectance

Cone of Light		
4.0'	130.4	3.1'
8.0'	32.6	6.1'
12.0'	14.5	9.2'
16.0'	8.1	12.3'
20.0'	5.2	15.4'
Distance to Plane	Initial Footcandles at Nadir	Beam Diameter

BEAM DIA. MEASURED AT 50% OF NADIR F.C.

*Note: Lumen output and input wattage vary depending on driver and reflector type. Listed values may vary +/-10%.

HH4-LED 32W

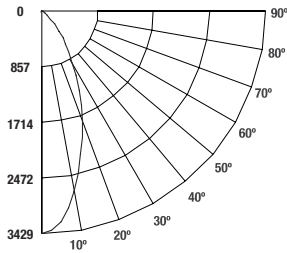
TOTAL LUMINAIRE EFFICACY = 61 LPW

HH4-LED-2000L-120-DIM10-FL-40K-HH4-4501-CL-WH

TEST NO.: **ELT-HH4-0009**

INPUT WATTS: **32** LUMENS: **1955** CRI: **85+** EFFICACY: **61 LPW** CCT: **4000K** SPACING CRITERIA: **0.7**

Candle Power Distribution Curve (Candela)



Candela Distribution

Q	Q
0	3368
5	3117
15	2282
25	1185
35	440
45	151
55	54
65	9
75	3
85	0
90	0

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixture
0-30	1,562.8	79.9%	80%
0-40	1,783.9	91.2%	91.3%
0-60	1,943.1	99.4%	99.4%
0-90	1,953.9	99.9%	100%

Lumens Per Zone

Zone	Lumens
0-10	307.4
10-20	692.3
20-30	563.1
30-40	221.1
40-50	119.9
50-60	39.3
60-70	7.8
70-80	2.6
80-90	0.4

Luminance (Average Candela/M²)

Angle In Degrees	Average 0°	Average 45°	Average 90°
45°	11677	11884	12388
55°	5116	4360	2620
65°	1208	1041	925
75°	703	574	459
85°	0	277	11

Coefficients of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance 0.20

RCC	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	111	106	106	106	102	102	102	100					
1	114	111	109	107	111	109	107	105	105	103	102	101	100	99	98	97	96	94	94					
2	109	104	100	97	106	102	99	96	99	96	94	96	94	92	93	92	90	88	88					
3	104	98	93	89	10	296	92	89	94	90	87	91	88	86	89	87	85	83	83					
4	99	92	87	83	97	91	86	82	89	85	81	87	83	81	85	82	80	78	78					
5	95	87	81	77	93	86	81	77	84	80	76	83	79	76	81	78	75	74	74					
6	90	82	77	73	89	81	76	72	80	75	72	79	75	71	77	74	71	70	70					
7	86	78	72	69	85	77	72	68	76	71	68	75	71	68	74	70	67	66	66					
8	83	74	69	65	82	74	68	65	72	68	64	71	67	64	71	67	64	63	63					
9	79	71	65	61	78	70	65	61	69	64	61	68	64	61	68	64	61	60	60					
10	76	67	62	58	75	67	62	58	66	61	58	65	61	58	65	61	58	57	57					

RC - Ceiling Cavity Reflectance RW - Wall Reflectance

Cone of Light		
4.0'	210.5	3.1'
8.0'	52.6	6.1'
12.0'	23.4	9.2'
16.0'	13.2	12.3'
20.0'	8.4	15.4'
Distance to Plane	Initial Footcandles at Nadir	Beam Diameter

BEAM DIA. MEASURED AT 50% OF NADIR F.C.

*Note: Lumen output and input wattage vary depending on driver and reflector type. Listed values may vary +/-10%.