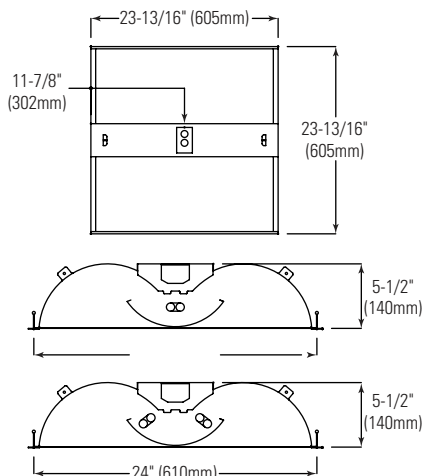


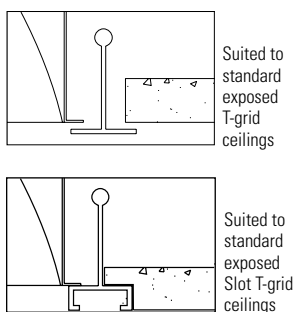
# LIGHTOLIER® Alter High Efficiency QHE 2 x 2

Page 1 of 2

2' x 2' recessed direct/indirect fluorescent



### Ceiling compatibility



## Ordering information

QHE	2	G	PF	OP					
Quality High Efficiency	Luminaire Width	Ceiling Type	Lamp Shield		Lamp Quantity	Lamp	Voltage	Ballast Type	Options
Recessed direct indirect soft light high efficiency optical system	2'	G = Standard exposed T-grid ceilings	PF = Micro-perforated		1 = 1 Lamp (FT only) 2 = 2 Lamp 3 = 3 Lamp (T5/T5HO or T8 only)	24 = 24WT5HO 17 = 17WT8 FT = TT5 Bi-Tube	UNV 120 277 347	<b>T5/T5HO</b> PG = Electronic Linear T5/T5HO Program Start (<10% THD) <b>T8</b> S0 = Electronic T8 Instant Start (<20% THD) RO = Electronic T8 Rapid Start (<10% THD) HI = Electronic T8 Instant Start (<10% THD) O3 = 3 Lamp Electronic T8 Instant Start (<20% THD) H3 = 3 Lamp Electronic T8 Instant Start (<10% THD) <b>TT5</b> SB = 40W Electronic TT5 Instant Start or Rapid Start (<20% THD) BE = 50W Electronic TT5 Rapid Start (<20% THD) <b>For Dimming Ballast Suffix, please consult your Lightolier Representative.</b>	F = Internal Fusing (Canada) GLR = Internal Fusing (USA) FK92X2 = Drywall Kit for plaster frames EM = T8/TT5/T5/T5HO Emergency Lighting System (USA) O = T8/TT5 Emergency Lighting System (Canada) E = T5/T5HO Emergency Lighting System (Canada) QVS-HD = Alter Hold Down Clips (Std 15/16" only) QVS22DG = 2'x2' Dust and Germ Guard
<b>Lamp Shield Details</b>					OP= One piece (no center slot) lamp shield				

## Features

- Efficiency 66.3%
- Seamless welded form: curved top and side reflectors are formed together without any gaps or visual barriers
- Swing down microperforated lamp shield for easy relamping and maintenance
- Alter soft white film on inside of mesh conceals lamp image providing balance between reflected and direct light
- Fully recessed luminaire and lamp compartment
- 95% Reflective Alter soft white paint finish
- One piece body for easy installation
- Easy access to ballast through lamp compartment
- Fits standard T-Grid or drywall ceilings

## Material

One piece chassis constructed from die formed 20 gauge cold rolled steel.  
**Reflectors** - 95% reflectance baked white acrylic matte paint finish. Soft white acrylic film on inside of lamp shield conceals lamp image.

## Finish

**Chassis exterior** - phosphate undercoating, baked white acrylic matte high reflectance paint finish.

## Electrical

Thermally protected class "P" ballast. If K.O.s are within 3" of ballast use wire suitable for at least 90C. Suitable for damp location.

## Labels

Listed by CSA, UL.

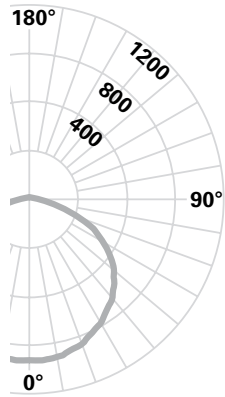
Job Information	Type:
<b>Job Name:</b>	
<b>Cat. No.:</b>	
<b>Lamp(s):</b>	
<b>Notes:</b>	

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**Performance**

**CANDLEPOWER CURVE 317**



**CANDLEPOWER**

ZONE DEG	CANDLEPOWER				
	ALONG	22.5	45	67.5	ACROSS
0	958	958	958	958	958
5	960	954	963	963	963
10	936	941	941	950	955
15	914	925	938	930	934
20	880	885	902	907	920
25	837	845	860	873	883
30	789	804	819	844	856
35	736	745	773	796	809
40	669	687	721	752	772
45	602	614	662	692	718
50	522	551	594	645	662
55	446	467	515	569	589
60	356	393	452	489	501
65	284	312	371	400	405
70	203	233	276	283	273
75	142	167	168	174	184
80	83	86	91	102	112
85	35	44	26	41	39
90	0	0	0	0	0

REPORT NO: LSCD055  
 CAT. NO: QHE2GPFOP31712003  
 3 F17T8/TL841 17W T8 Fluorescent Lamps at 1400 lumens.  
 Efficiency: 66.1%  
 Candela at Nadir: 958cd

**COEFFICIENTS OF UTILIZATION**

ZONAL CAVITY METHOD \* EFFECTIVE FLOOR CAVITY REFLECTANCE = .20

Room Cavity Ratio	Wall Reflectance											
	80				70				50			
	70	50	30	10	70	50	30	10	50	30	10	
0	.79	.79	.79	.79	.77	.77	.77	.77	.73	.73	.73	
1	.72	.70	.67	.65	.71	.68	.66	.63	.65	.63	.62	
2	.66	.61	.57	.53	.65	.60	.56	.53	.58	.54	.52	
3	.61	.54	.49	.45	.59	.53	.48	.45	.51	.47	.44	
4	.56	.48	.43	.38	.54	.47	.42	.38	.46	.41	.38	
5	.51	.43	.37	.32	.49	.42	.36	.32	.40	.35	.32	
6	.47	.38	.32	.28	.45	.37	.32	.28	.36	.31	.28	
7	.43	.34	.28	.24	.42	.34	.28	.24	.33	.27	.24	
8	.40	.30	.25	.21	.39	.30	.25	.21	.29	.24	.21	
9	.36	.28	.22	.18	.35	.27	.22	.18	.26	.21	.18	
10	.34	.25	.19	.16	.33	.25	.19	.16	.24	.19	.16	

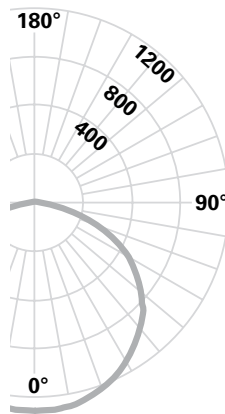
DETERMINED IN ACCORDANCE WITH CURRENT IES PUBLISHED PROCEDURES  
 LUMINAIRE INPUT WATTS = 45.7

**DISTRIBUTION**

ZONE	LUMENS	% LAMP	% LUMINAIRE
0-30	750	17.87	27.05
0-40	1233	29.37	44.46
0-60	2202	52.44	79.38
0-90	2774	66.06	100.00
40-90	1540	36.69	55.54
60-90	572	13.62	20.62
90-180	0	.00	.00
0-180	2774	66.06	100.00

**Performance**

**CANDLEPOWER CURVE 2FT**



**CANDLEPOWER**

ZONE DEG	CANDLEPOWER				
	ALONG	22.5	45	67.5	ACROSS
0	1444	1444	1444	1444	1444
5	1438	1438	1437	1436	1435
10	1424	1425	1422	1426	1433
15	1391	1388	1399	1408	1406
20	1345	1343	1351	1370	1367
25	1274	1283	1300	1321	1327
30	1205	1217	1235	1256	1271
35	1115	1129	1165	1192	1204
40	1030	1033	1079	1119	1132
45	919	928	983	1030	1064
50	793	819	877	934	960
55	673	700	777	840	858
60	550	587	665	725	741
65	431	469	535	584	607
70	325	359	411	443	423
75	217	243	278	276	278
80	142	139	149	169	166
85	54	75	69	68	63
90	0	0	0	0	0

REPORT NO: LSCA263  
 CAT. NO: QHE2GPFOP2FT120SB  
 2 40W TT5 Compact Fluorescent Lamps at 3150 lumens.  
 Efficiency: 66.3%  
 Candela at Nadir: 1444cd

**COEFFICIENTS OF UTILIZATION**

ZONAL CAVITY METHOD \* EFFECTIVE FLOOR CAVITY REFLECTANCE = .20

Room Cavity Ratio	Wall Reflectance											
	80				70				50			
	70	50	30	10	70	50	30	10	50	30	10	
0	.79	.79	.79	.79	.77	.77	.77	.77	.74	.74	.74	
1	.73	.70	.67	.65	.71	.68	.66	.64	.65	.63	.62	
2	.67	.62	.57	.54	.65	.60	.56	.53	.58	.55	.52	
3	.61	.54	.49	.45	.59	.53	.49	.45	.51	.47	.44	
4	.56	.49	.43	.39	.55	.48	.43	.39	.46	.42	.38	
5	.52	.44	.38	.33	.50	.43	.37	.33	.41	.37	.33	
6	.48	.39	.33	.29	.46	.38	.33	.29	.37	.32	.29	
7	.44	.35	.29	.25	.43	.34	.29	.25	.33	.28	.25	
8	.40	.32	.26	.22	.39	.31	.26	.22	.30	.25	.22	
9	.37	.29	.23	.19	.37	.28	.23	.19	.27	.23	.19	
10	.35	.26	.21	.17	.34	.26	.21	.17	.25	.20	.17	

DETERMINED IN ACCORDANCE WITH CURRENT IES PUBLISHED PROCEDURES  
 LUMINAIRE INPUT WATTS = 65.2

**DISTRIBUTION**

ZONE	LUMENS	% LAMP	% LUMINAIRE
0-30	1130	17.95	27.07
0-40	1855	29.45	44.42
0-60	3298	52.35	78.97
0-90	4176	66.30	100.00
40-90	2321	36.85	55.58
60-90	878	13.94	21.03
90-180	0	.00	.00
0-180	4176	66.30	100.00

**Job Information** **Type:**

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