

Code•Master 2™ Induction Lighting System Factory Sealed Fixtures: Explosionproof

Applications

- Ideal for where access to relamp is difficult, reliability is essential, and environment is costly to maintain.
- Cold environment applications.
- Code•Master Induction fixtures are ideal for: use in chemical and petrochemical plants, such as manufacturers of plastics, paints and thinners, in refineries, and in other process areas where ignitable vapors, moisture and corrosive elements may be present.
- Suitable for use in wet locations.

Features

- Instant start and restrike.
- High lumen output and efficacy (up to 73 lumens per watt).
- Fixtures operate safely in a 40°C ambient.
- Good lumen maintenance provides less than 30% depreciation after 60K hours of operation.
- Virtually maintenance free.
- Ultra long 100,000 hours of life keeps maintenance costs to a minimum.
- Starts in temperatures as low as -25°C.
- Arrangement of heat-producing components results in more efficient heat dissipation for cooler fixture operation.
- Patented “wireless” design. Threading of fixture unit onto mounting hood makes electrical connection. Only wiring required is attaching two wires to connection block in mounting hood.
- Connection block is easily wired: (a) loosen two screws, (b) make wire connections, (c) re-position connection block and tighten screws.
- Low total harmonic distortion (<10%).
- No cycling at end of life.
- Acme double lead threads speed installation and fixture removal from mounting hood — only half as many turns are required as for single lead threads. The threads do not stick, or gall, eliminating the troublesome problems often encountered with single lead threads during fixture unit removal.
- All threaded joints are flame-tight.



- Factory sealed. External seals not required.
- Strategic location of lamp socket in combination with the interior prism design of the glass globe, provides optimum light distribution and control.
- Superior corrosion-resistance, with epoxy powder coat finish.
- Choice of mountings: pendant, ceiling, bracket and stanchion.
- Fiberglass reinforced polyester reflectors, in standard dome, deep dome or 30° angle, are ideal in installations where luminaire is subject to exceptionally severe corrosive atmospheres. The high bay aluminum reflector is indicated in installations where mounting height work plane range from 20 to 30 feet.
- Optional guards protect globes from damage. Secured to fixture with three screws.

Standard Materials

- *Fixture bodies and guards:* copper-free aluminum (4/10 of 1% max.).
- *Pendant mounting hoods:* die-cast copper-free aluminum (4/10 of 1% max.).
- *Ceiling, bracket and stanchion mounting hoods:* sand cast copper-free aluminum (4/10 of 1% max.).
- *Reflectors:* Alzak* aluminum or fiberglass reinforced polyester.

Standard Finishes

- *Fixture bodies, guards and mounting hoods:* epoxy powder coat finish, electrostatically applied for complete, uniform corrosion protection.

Options

- *Fuses:* Order fuses for field installation by catalog number on page G3-25.

Compliances

- UL Standard 1598A (supersedes UL 1572), 844 and Marine Type Electric Fixtures Outside Type (Saltwater).
- Suitable for use in wet locations.
- Appleton Aluminum products are produced from a high strength copper-free (4/10 of 1% max.) alloy.

*Alzak is a proprietary term of Aluminum Corp. of America.

Technical Data: Classified Area and Ambient Suitability of Code•Master 2™ Induction Lighting Fixtures

Classified Area Suitability of Code•Master 2™ Series Induction Fixtures (Suitability includes use of reflector.)

Lamp Type	Lamps Watts	Supply Wire °C	Ambient Temp °C	Class I, Div. 1 & 2 With Globe or with Globe & Reflector UL/NEC Temp. Ident. No.	
				Nameplate Marking	Groups
Induction	55	60	40	T6	C,D
	85	75	40	T6	C,D

NOTE: The maximum operating temperature of the fixture must not exceed the ignition temperature of the gas, vapor or dust to be encountered per NEC 500-2(c). For ignition temperatures, see Cat. Sec. F1.





"T" Numbers Represent the Maximum Surface Temperature for Class I, Div. 1 Locations

"T" Number	T1	350	325	T2	T2A	T2B	T2C	T2D	T3	T3A	T3B	T3C	T4	T4A	T5	T6
Temp. Range (°C)	351-450	326-350	301-325	281-300	261-280	231-260	216-230	201-215	181-200	166-180	161-165	136-160	121-135	101-120	86-100	85

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Complies with:
 Ⓞ Class I, Div. 1 and 2
 Groups C, D
 Marine Type Electric Fixtures
 Outside Type (Salt Water)
 Ⓞ UL 1598A, 844
 Suitable for use in Wet Locations

Code•Master 2™ Induction Factory Sealed Fixtures: Explosionproof; 55W- 85W

U.S. Pat. 3,170,750 Pat. Can. 1968		Type Mounting	Lamp Watts	Hub Size (Inches)	Catalog Number
	One Hub, Rigid or Flexible Mounting	Pendant	55W	3/4	CQP5575*
			55W	1	CQP5510*
			85W	3/4	CQP8575*
			85W	1	CQP8510*
	Four Hubs, Three Close-Up Plugs	Ceiling	55W	3/4	CQC5575*
			55W	1	CQC5510*
			85W	3/4	CQC8575*
			85W	1	CQC8510*
	Four Hubs, Three Close-Up Plugs	Bracket	55W	3/4	CQB5575*
			55W	1	CQB5510*
			85W	3/4	CQB8575*
			85W	1	CQB8510*
	One Hub	25° Stanchion	55W	1-1/4 or 1-1/2†	CQS55150*
			85W	1-1/4 or 1-1/2†	CQS85150*

① For specific hazardous area suitability of each fixture listed, see page G3-21. ② UL Standard 1598A supersedes UL Standard 1572. ③ To order fixture with guard, add suffix G (before adding voltage suffix). ④ Refer to lamp manufacturer's data regarding lamp burning position restrictions. *Add voltage suffix -120 for 90-140VAC; or -277 for 180-305VAC. † 1-1/2" Tapped hub furnished with 1-1/2" to 1-1/4" reducer. For reflectors, See page G1-18.

Shaded items are suitable for Class I, Group C in addition to other applicable area suitabilities.

Code•Master 2™ Induction Lighting Fixtures: Mounting Hoods, Fixture Units and Accessories

Complies with:
 Ⓞ Class I, Div. 1 and 2
 Groups C,D
 Marine Type Electric Fixtures
 Outside Type (Salt Water)
 Ⓞ UL 1598A, 844
 Suitable for use in Wet Locations

	Type Mounting	Hub Size (Inches)	Catalog Number
	Mounting Hoods		
	Pendant One Hub	3/4 1	CAP-75 CAP-100
	Ceiling Four Hubs, Three Close-Up Plugs	3/4 1	CAC-75 CAC-100
	Bracket Four Hubs, Three Close-Up Plugs	3/4 1	CALB-75 CALB-100
	25° Stanchion One Hub	1-1/4 or 1-1/2Ⓞ	CAS-150Ⓞ

	Mounting Adapter with Connection Block Permits use of existing A-51 mounting hoods (AAC Ceiling or AALB Bracket) with the new Code•Master 2 Fixture Unit. After removing existing Fixture Unit and adapter, screw in the new CMAD-1 Adapter. Then thread new Fixture Unit into the CMAD-1.	CMAD-1
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Fixture Units Fixture body with globe. Indicate voltage desired by adding voltage suffix to Fixture Unit catalog number listed below.

	Type	Frequency	Lamp Watts	Fixture Unit Number	Add Voltage Suffixes	
					120V	277V
	Induction	50/60Hz	55	CMBQ55	-12	-27
			85	CMBQ85	-12	-27







Ⓞ For specific hazardous area suitability of each fixture listed, see page G3-21.
 Ⓞ 1-1/2" Tapped hub furnished with 1-1/2" to 1-1/4" reducer.
 Shaded items are suitable for Class I, Group C in addition to other applicable area suitabilities.

Fixture and Accessory Weights

Fixture Size	Fixture Weight, Lbs.	Reflector Weight, Lbs.	Guard Weight, Lbs.
55W and 85W	28	3	1

MOUNTING HOOD WEIGHTS: Pendant, 2 lbs.; Ceiling, 4 lbs.; Bracket, 6 lbs.; Stanchion, 2 lbs.

Reflectors, Globes, Guards and Parts for Code•Master 2™ Induction Lighting Fixtures

	Description	Catalog Number
 <p>Standard and Deep Dome</p>  <p>30° Angle</p>	<p>Polyester Reflectors — 55W and 85W</p> <p>Standard Dome Deep Dome 30° Angle</p>	<p>CMR-4ST CMR-4DD CMR-4AN</p>
	<p>Alzak Aluminum High Bay Reflectors — 55W and 85W</p>	<p>CMR-4HB</p>
	<p>Prismatic Glass Globes — 55W and 85W</p>	<p>CGL-400</p>
	<p>Aluminum Guards</p>	<p>CGU4</p>
 <p>VPT-7</p>	<p>Connection Block — 55W and 85W</p> <p>For all Code•Master 2 Induction fixtures</p>	<p>VPT-7</p>

Lamp and Electrical Operating Data; Fuse Kits for Code•Master 2™ Induction Fixtures

Lamp – Watts Volts	Fuse Qty. Req.	Fuse Catalog Number
55W 120-277V	See note below	CF2
85W 120-277V	See note below	CF2

Fuse Kit includes fuse, fuse holder and necessary hardware for field installation. Mounts easily in ballast body with one screw. Order one fuse for 120 and 277V, and 2 fuses for 208 and 240V.

Electromagnetic Compatibility

- A.) Complies with European norms EN55015, EN6100-3-2 and EN61547
 B.) RFI

a.) Meets standard EN55022 and is valid for frequencies up to 1000 MHz.

Electrical Characteristics

		55W 100-120V	55W 200-277V	85W 100-120V	85W 200-277V
System power* nom.	W	55	55	85	85
System power* min.	W	53.1	53.1	82.0	82.0
System power* max.	W	56.9	56.9	88.0	88.0
AC supply voltage nom.	V	120	230	120	230
AC supply voltage min.	V	90	180	90	180
AC supply voltage max.	V	140	305	140	305
DC supply voltage nom.	V	120	230	120	230
DC supply voltage min.	V	90	180	90	180
DC supply voltage max.	V	180	350	180	350
Supply frequency nom.	Hz	60	50	60	50
Supply frequency min.	Hz	47	47	47	47
Supply frequency max.	Hz	63	63	63	63
Supply current nom.	mA	460	260	730	400
Inrush current max.	A	16	12	16	12
Duration inrush current max.	usec	170	170	170	170
Power factor nom.		>0.92	>0.92	>0.92	>0.92
HF output frequency nom.	MHz	2.65	2.65	2.65	2.65
HF output frequency min.	MHz	2.30	2.30	2.30	2.30
HF output frequency max.	MHz	3.00	3.00	3.00	3.00
HF output voltage max.	kV	1.5	1.5	1.5	1.5
Leakage current	mA	<0.5	<0.5	<0.5	<0.5
Overvoltage		200Vac	400Vac	200Vac	400Vac

* At design voltage

Lamp Characteristics

Values at 100 Hrs.		QL 55W HV & LV 827/830/840	QL85W HV & LV 827/830/840
		Luminous flux nom.	lm
Luminous flux min.	lm	3200	5500
Luminous flux max.	lm	3800	6500
System efficacy nom.	lm/W	65	70

Lamp Operation

- A.) Ignition and Lifetime Performance

- a.) Ignition time <0.5S
 Hot Restrike time <0.5s
 b.) Induction lighting offers a direct, flicker-free ignition after switch-on, in both cold and hot conditions

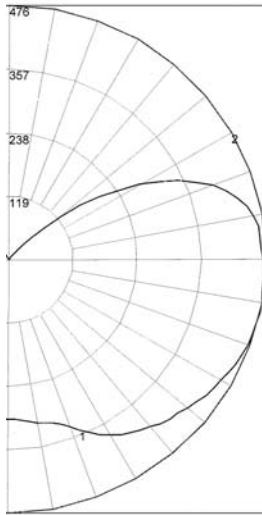
- B.) Lumen Maintenance

a.) The lumens of an induction lamp are expected to have depreciated after 60,000 Hrs to no less than 75% of the initial lumens

Photometric Data: Code•Master 2™ Induction Explosionproof Lighting Fixtures

Fixture without Reflector (CMBQL85)

**Coefficients of Utilization:
Zonal Cavity Method**
Data based on 85 Watt lamp. For candlepower values of fixtures with other lamps, use the following multiplier:
55 Watt-- .59 (3500 lumens).



Deg.	Candela	Lumens
0	301	
5	304	29
15	318	91
25	359	166
35	398	250
45	424	328
55	447	400
65	465	462
75	475	502
85	474	517
90	472	
95	468	510
105	440	464
115	348	344
125	205	185
135	58	49
145	2	2
155	1	0
165	1	0
175	0	0
180	0	0

ZONAL LUMEN SUMMARY

TOTAL LUMINAIRE EFFICIENCY = 71.6%
CIE Type- Semi-Direct

ZONE	LUMENS	%LAMP	%FIXT
0- 30	287	4.8	6.7
0- 40	537	8.9	12.5
0- 60	1265	21.1	29.4
0- 90	2745	45.7	63.9
90-120	1318	22.0	30.6
90-130	1503	25	35.0
90-150	1553	25.9	36.1
90-180	1553	25.9	36.1
0-180	4298	71.6	100

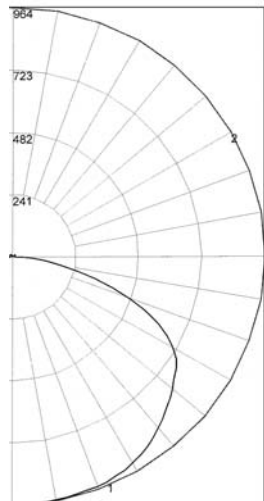
Angle in Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	3224	3224	3224
55	4190	4190	4190
65	5916	5916	5916
75	9868	9868	9868
85	29243	29243	29243

Coefficients of Utilization: Zonal Cavity Method
Effective Floor Cavity Reflectance (Rfc) is 20%

Rc	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	79	79	79	79	74	74	74	74	65	65	65	57	57	57	49	49	49	46			
1	68	63	58	54	63	59	55	51	51	48	45	44	41	39	37	35	33	30			
2	60	53	46	41	56	49	43	39	42	38	34	36	32	29	30	27	25	22			
3	54	45	38	32	50	42	36	30	36	31	27	30	26	23	25	22	19	16			
4	49	39	32	26	45	36	30	25	31	26	22	26	22	19	22	18	16	13			
5	45	34	27	22	41	32	25	21	27	22	18	23	19	15	19	16	13	11			
6	41	30	23	19	38	28	22	17	24	19	15	21	16	13	17	14	11	9			
7	38	27	21	16	35	25	19	15	22	17	13	19	14	11	16	12	9	7			
8	35	25	18	14	32	23	17	13	20	15	11	17	13	10	14	11	8	6			
9	32	22	16	12	30	21	15	11	18	13	10	15	11	9	13	10	7	6			
10	30	20	15	11	28	19	14	10	17	12	9	14	10	8	12	9	6	5			

Fixture with Standard Dome Reflector (CMBQL85ST)

**Coefficients of Utilization:
Zonal Cavity Method**
Data based on 85 Watt lamp. For candlepower values of fixtures with other lamps, use the following multiplier:
55 Watt-- .59 (3500 lumens).



Deg.	Candela	Lumens
0	960	
5	962	92
15	955	271
25	942	436
35	903	566
45	834	647
55	764	683
65	611	600
75	325	346
85	76	89
90	14	
95	10	11
105	8	10
115	11	10
125	11	9
135	6	5
145	1	1
155	1	0
165	0	0
175	1	0
180	0	0

ZONAL LUMEN SUMMARY

TOTAL LUMINAIRE EFFICIENCY = 62.9%
CIE Type- Direct

ZONE	LUMENS	%LAMP	%FIXT
0-30	798	13.3	21.1
0-40	1364	22.7	36.1
0-60	2694	44.9	71.4
0-90	3729	62.2	98.8
90-120	31	.5	.8
90-130	40	.7	1.1
90-150	46	.8	1.2
90-180	46	.8	1.2
0-180	3775	62.9	100

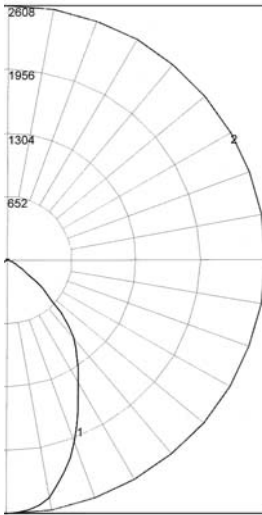
Angle in Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	6342	6342	6342
55	7162	7162	7162
65	7774	7774	7774
75	6752	6752	6752
85	4689	4689	4689

Coefficients of Utilization: Zonal Cavity Method
Effective Floor Cavity Reflectance (Rfc) is 20%

Rc	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	75	75	75	75	73	73	73	73	69	69	69	66	66	66	63	63	63	62			
1	67	64	61	58	66	63	60	57	60	58	55	57	55	54	55	53	52	50			
2	61	55	50	46	59	54	49	46	51	48	44	49	46	43	47	44	42	41			
3	55	48	42	38	53	46	41	37	44	40	36	43	39	36	41	38	35	33			
4	50	42	36	31	48	41	35	31	39	34	30	37	33	30	36	32	29	28			
5	45	37	31	26	44	36	30	26	35	30	26	33	29	25	32	28	25	24			
6	42	33	27	23	40	32	27	22	31	26	22	30	25	22	29	25	22	20			
7	39	30	24	20	37	29	23	20	28	23	19	27	22	19	26	22	19	18			
8	36	27	21	17	35	26	21	17	25	21	17	25	20	17	24	20	17	15			
9	33	25	19	15	32	24	19	15	23	19	15	23	18	15	22	18	15	14			
10	31	23	17	14	30	22	17	14	21	17	14	21	17	14	20	16	13	12			

Photometric Data: Code•Master 2™ Induction Explosionproof Lighting Fixtures

Fixture with High Bay Aluminum Reflector (CMBQL85HB)



**Coefficients of Utilization:
Zonal Cavity Method**

Data based on 85 Watt lamp. For candlepower values of fixtures with other lamps, use the following multiplier:
55 Watt-- .59 (3500 lumens).

Deg.	Candela	Lumens
0	2608	244
5	2578	634
15	2261	784
25	1705	774
35	1237	588
45	770	228
55	241	69
65	66	17
75	15	4
85	3	2
90	2	5
95	5	10
105	10	13
115	13	11
125	12	5
135	7	0
145	1	0
155	0	0
165	0	0
175	1	0
180	1	0

Coefficients of Utilization: Zonal Cavity Method

Effective Floor Cavity Reflectance (Rfc) is 20%

Rc	80				70				50				30				10				0
	70	50	30	10	70	50	30	10	70	50	30	10	70	50	30	10	70	50	30	10	0
0	67	67	67	67	65	65	65	65	62	62	62	62	59	59	59	57	57	57	56	56	
1	63	61	60	58	62	60	59	57	58	56	55	55	54	54	53	53	52	51	51	51	
2	59	56	53	51	58	55	52	50	53	51	49	51	49	48	49	48	47	46	46	46	
3	55	51	48	45	54	50	47	45	49	46	44	47	45	43	46	44	42	41	41	41	
4	52	47	43	40	51	46	43	40	45	42	39	43	41	39	42	40	38	37	37	37	
5	49	43	39	36	48	42	39	36	41	38	36	40	37	35	39	37	35	34	34	34	
6	46	40	36	33	45	39	35	33	38	35	32	37	34	32	36	34	32	31	31	31	
7	43	37	33	30	42	36	32	30	35	32	30	35	32	29	34	31	29	28	28	28	
8	40	34	30	27	40	34	30	27	33	30	27	32	29	27	32	29	27	26	26	26	
9	38	32	28	25	37	31	28	25	31	27	25	30	27	25	30	27	25	24	24	24	
10	36	30	26	23	35	29	26	23	29	25	23	28	25	23	28	25	23	22	22	22	

ZONAL LUMEN SUMMARY

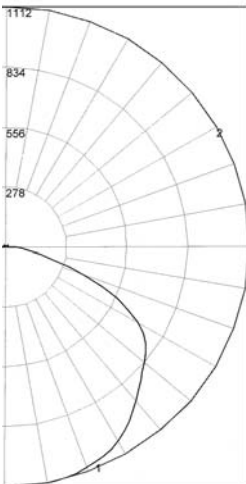
TOTAL LUMINAIRE EFFICIENCY = 56.4%

CIE Type- Direct

Angle in Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	4963	4963	4963
55	1915	1915	1915
65	712	712	712
75	264	264	264
85	157	157	157

ZONE	LUMENS	%LAMP	%FIXT
0- 30	1662	27.7	49.1
0- 40	2435	40.6	71.9
0- 60	3251	54.2	96
0- 90	3340	55.7	98.6
90-120	29	.5	.9
90-130	40	.7	1.2
90-150	46	.8	1.3
90-180	46	.8	1.4
0-180	3386	56.4	100

Fixture with Deep Dome Plyes-ter Reflector (CMBQL85DD)



**Coefficients of Utilization:
Zonal Cavity Method**

Data based on 85 Watt lamp. For candlepower values of fixtures with other lamps, use the following multiplier:
55 Watt-- .59 (3500 lumens).

Deg.	Candela	Lumens
0	1110	106
5	1109	313
15	1108	495
25	1073	620
35	990	679
45	877	700
55	788	552
65	562	245
75	226	55
85	48	8
90	12	8
95	7	10
105	7	9
115	10	5
125	11	1
135	6	0
145	1	0
155	1	0
165	0	0
175	1	0
180	0	0

Coefficients of Utilization: Zonal Cavity Method

Effective Floor Cavity Reflectance (Rfc) is 20%

Rc	80				70				50				30				10				0
	70	50	30	10	70	50	30	10	70	50	30	10	70	50	30	10	70	50	30	10	0
0	75	75	75	75	74	74	74	74	70	70	70	67	67	67	64	64	64	63	63	63	
1	69	66	63	60	67	64	62	59	61	59	57	59	57	55	56	55	54	52	52	52	
2	62	57	52	49	60	56	52	48	53	50	47	51	48	46	49	47	45	43	43	43	
3	56	50	44	40	55	48	44	40	46	42	39	45	41	38	43	40	37	36	36	36	
4	51	44	38	33	50	43	37	33	41	36	33	39	35	32	38	34	32	30	30	30	
5	47	39	33	28	46	38	32	28	36	32	28	35	31	28	34	30	27	26	26	26	
6	43	35	29	25	42	34	28	24	33	28	24	32	27	24	31	27	24	22	22	22	
7	40	31	26	22	39	31	25	21	30	25	21	29	24	21	28	24	21	19	19	19	
8	37	28	23	19	36	28	23	19	27	22	19	26	22	19	25	21	18	17	17	17	
9	35	26	21	17	34	26	20	17	25	20	17	24	20	17	23	19	17	15	15	15	
10	32	24	19	15	32	24	19	15	23	18	15	22	18	15	22	18	15	14	14	14	

TOTAL LUMINAIRE EFFICIENCY = 63.4%

CIE Type- Direct

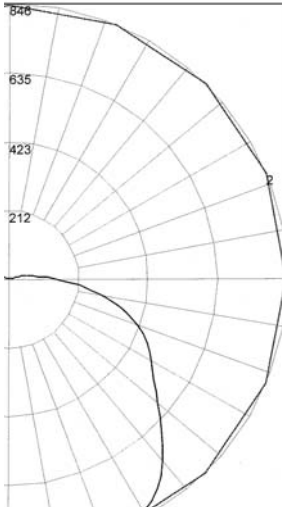
Angle in Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	6669	6669	6669
55	7387	7387	7387
65	7150	7150	7150
75	4695	4695	4695
85	2961	2961	2961

ZONAL LUMEN SUMMARY

ZONE	LUMENS	%LAMP	%FIXT
0-30	915	15.2	24
0-40	1535	25.6	40.3
0-60	2914	48.6	76.5
0-90	3766	62.8	98.9
90-120	27	.4	.7
90-130	35	.6	.9
90-150	40	.7	1.1
90-180	41	.7	1.1
0-180	3806	63.4	100

Photometric Data: Code•Master 2™ Induction Explosionproof Lighting Fixtures

Fixture with 30°
Angled Reflector
(CMBQL85AN)



ZONAL LUMEN SUMMARY

TOTAL LUMINAIRE EFFICIENCY = 56.7%

CIE Type- Direct

Angle in Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	3904	3311	4128
55	3386	2826	3629
65	2806	2606	3056
75	2315	2235	2575
85	1853	1570	2125

ZONE	LUMENS	%LAMP	%FIXT
0- 30	707	11.8	20.8
0- 40	1201	20	35.3
0- 60	2221	37	65.3
0- 90	3233	53.9	95
90-120	160	2.7	4.7
90-130	165	2.8	4.9
90-150	168	2.8	4.9
90-180	169	2.8	5
0-180	3403	56.7	100

Coefficients of Utilization: Zonal Cavity Method

Effective Floor Cavity Reflectance (Rfc) is 20%

Rc	80				70				50			30			10			0
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	67	67	67	67	65	65	65	65	61	61	61	58	58	58	55	55	55	54
1	60	56	53	51	58	55	52	49	52	49	47	49	47	45	46	45	43	42
2	54	48	44	40	52	47	43	39	44	41	38	42	39	37	40	37	35	34
3	48	42	37	33	47	41	36	32	38	34	31	36	33	30	35	32	29	28
4	44	37	31	27	43	36	31	27	34	30	26	32	28	25	31	27	25	23
5	40	33	27	23	39	32	27	23	30	26	22	29	25	22	27	24	21	20
6	37	29	24	20	36	29	23	20	27	23	19	26	22	19	25	21	19	17
7	34	26	21	17	33	26	21	17	25	20	17	24	20	17	23	19	16	15
8	32	24	19	15	31	23	19	15	22	18	15	22	18	15	21	17	15	13
9	30	22	17	14	29	21	17	14	21	16	13	20	16	13	19	16	13	12
10	28	20	16	12	27	20	15	12	19	15	12	18	15	12	18	14	12	11

Candela Distribution

	0.0	45.0	90.0	135.0	180.0	Flux
0	842	842	842	842	842	
5	881	869	843	814	802	81
15	956	920	835	764	738	239
25	1015	956	833	728	676	388
35	1044	969	822	612	473	494
45	1046	960	772	358	198	522
55	1030	945	595	137	52	498
65	1004	898	349	30	3	441
75	932	711	142	2	0	349
85	705	425	43	1	1	223
90	551	289	11	2	2	
95	393	177	4	4	4	108
105	147	61	1	9	6	40
115	46	4	3	13	9	13
125	2	1	4	12	9	5
135	0	1	2	4	3	2
145	0	1	1	1	1	1
155	0	1	2	2	1	1
165	0	1	1	1	0	0
175	1	1	1	1	0	0
180	1	1	1	1	1	

Coefficients of Utilization:

Zonal Cavity Method

Data based on 85 Watt lamp.
For candlepower values of
fixtures with other lamps,
use the following multiplier:
55 Watt-- .59 (3500 lumens).