

**2 Lamp T8 U1-5/8" or U6"
3 Lamp T8 U1-5/8"
2, 3, or 4 Lamp, T8, T5 or T5HO**

CONSTRUCTION/FINISH

- For surface or pendant mounting. 2 and 4 lamp 31U1 or straight lamp models require 2 stems for pendant mounting, 231U6 and 3 lamp models require 4 stems.
- 4" deep metal sided unit allows a wide choice of lens and shallow metal or plastic louvers.
- Housing is multi-stage phosphate treated for maximum corrosion resistance and painted after fabrication with white polyester powder coating.
- K.O.'s provided in ends allow individual or continuous row mounting.

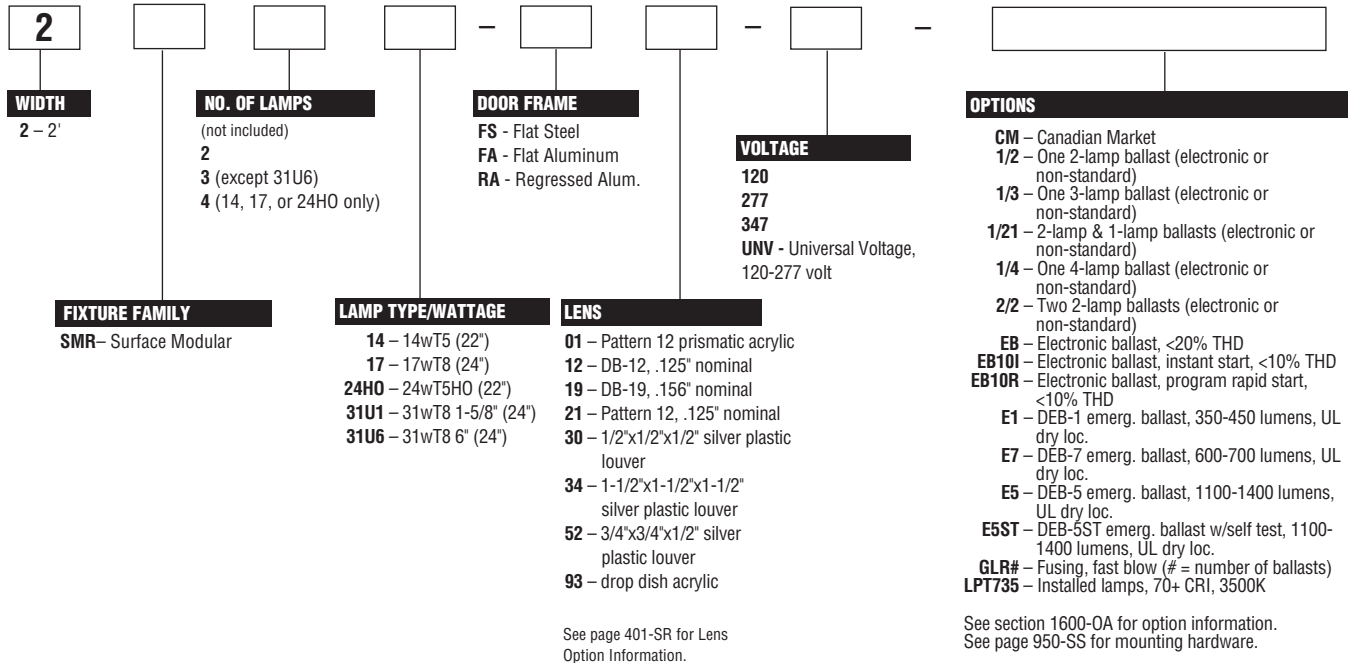
ELECTRICAL

- Class P, HPF ballasts comply with ©Federal Ballast Law (Public Law 100-357,1988).
- UL listed for direct mounting on low density ceilings and damp locations.
- Canadian certified optional.
- Self-contained fluorescent emergency power packs can be incorporated, UL listed for dry locations.

ENCLOSURES

- Mitered corner door frames painted after fabrication with a choice of: Flat Steel, Flat Aluminum, or Regressed Aluminum.
- Door frames standard with guide post spring loaded latches.
- Prismatic acrylic pattern 12 lens standard (01). Other lenses or louvers optional.
- Can be hinged and latched from either side.

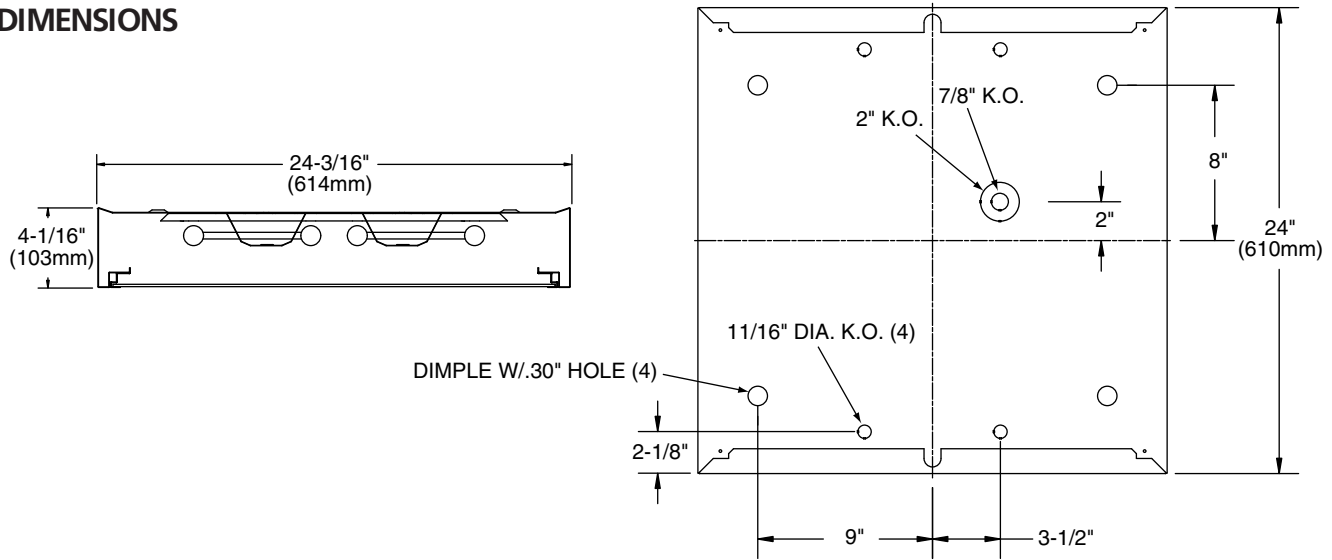
CATALOG NUMBER



2' x 2' 2 LAMP U6



DIMENSIONS



PHOTOMETRIC DATA

CATALOG # 2SMR231U6-FS01-1/2-EB LAMPS = FB031U6 INPUT WATTS = 56
 TEST #25054 S/MH=1.3 BALLAST = ELECTRONIC BALLAST FACTOR = .88

LER = FL-62

COMPARATIVE YEARLY LIGHTING ENERGY COST PER 1000 LUMENS = \$3.87 BASED ON 3000 HRS. AND \$.08 PER KWH.

FIXTURE EFFICIENCY = 70.0%

CANDLEPOWER				
Angle	End	45	Cross	
0	1505	1505	1505	
5	1494	1499	1500	
10	1472	1484	1495	
15	1435	1462	1485	
20	1385	1429	1466	
25	1323	1383	1430	
30	1241	1315	1379	
35	1144	1232	1306	
40	1023	1121	1209	
45	886	985	1085	
50	729	819	914	
55	581	655	727	
60	449	491	536	
65	333	338	377	
70	242	225	265	
75	169	158	199	
80	113	116	147	
85	59	65	83	

MAINTAINED ILLUMINATION TABLE- Square Feet/Fixture*

- 80-50-20 Reflectances (Ceiling-Wall-Floor)
- LLF = 0.76 2800 Lumens/Lamp very clean
- Room width divided by room height = 5 or more, 2 or 1

Fixture Size & # of Lamps	Room Width Room Height =	Approx. Area (sq. ft.) per Fixture				
		10 ft-c	30 ft-c	50 ft-c	100 ft-c	
2' X 2'	5	-	104	63	45	31
2-Lamp	2	-	73	44	31	-
31U6	1	-	54	32	-	-

*Observe Fixture S/MH Requirements for Specific Applications

AVERAGE LUMINANCE CD/SQ.M WITH 2800 LUMEN LAMPS

ANGLE	END	45°	CROSS
45	4352	4838	5330
55	3518	3966	4402
65	2737	2778	3098
75	2268	2120	2671
85	2351	2590	3308

TYPICAL V.C.P.'s

Room Size	Mounting Height			
	8.5	10	8.5	10
30x30	50	54	47	52
40x40	47	50	44	47
60x30	52	56	51	55
60x60	44	46	40	43
100x100	42	43	38	39

COEFFICIENT OF UTILIZATION

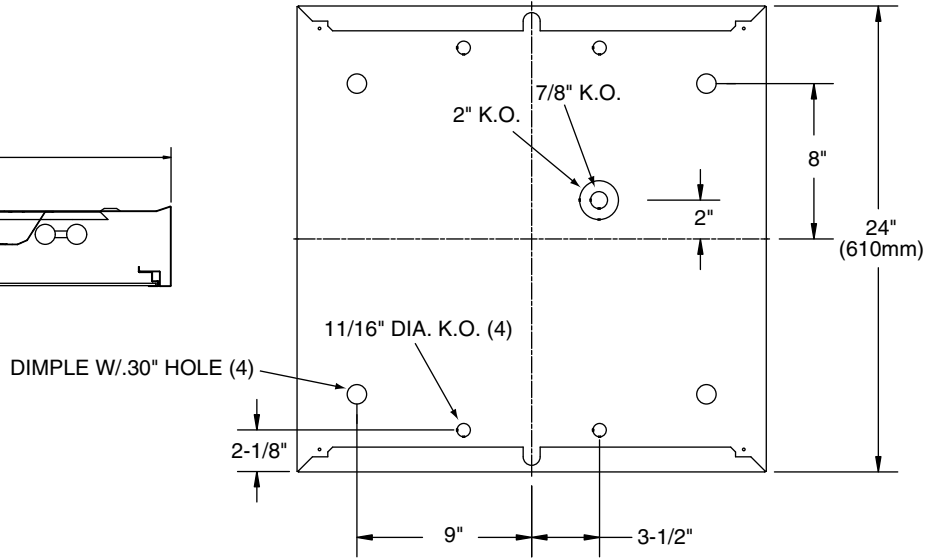
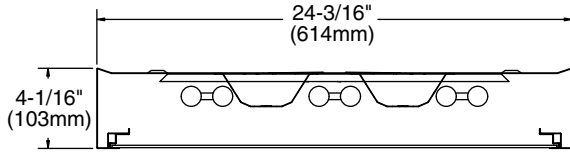
pfc pcc pw RCR	20				80				70				50			
	70	50	30		70	50	30		70	50	30		70	50	30	
0	82	82	82		81	81	81		78	78	78		78	78	78	
1	77	73	70		75	71	68		68	68	67		68	67	67	
2	69	65	59		68	63	58		60	57	57		60	57	57	
3	64	56	52		63	56	51		54	50	50		54	50	50	
4	58	51	45		57	50	45		47	44	44		47	44	44	
5	55	46	40		53	45	39		44	39	39		44	39	39	
6	50	40	34		48	40	34		40	34	34		40	34	34	
7	46	38	32		46	36	30		35	30	30		35	30	30	
8	44	34	28		42	34	28		33	28	28		33	28	28	
9	40	32	26		40	30	26		29	26	26		29	26	26	
10	38	28	23		36	28	23		28	23	23		28	23	23	

LIGHT DISTRIBUTION

DEGREES	LUMENS	% LAMP	% FIXTURE
0-30	1193	21.3	30.4
0-40	1963	35.0	50.0
0-60	3307	59.0	84.3
0-90	3922	70.0	100.0

LLF = .76 LLF = LIGHT LOSS FACTOR LLF = LDD X LLD X BF LDD = VERY CLEAN 0.94 CLEAN 0.90
 LLD = 0.92 @ 40% RATED LAMP LIFE BF = .88 ELECTRONIC BALLAST & 31U6 LAMP (RELAMP AT 70% LAMP LIFE)

DIMENSIONS



PHOTOMETRIC DATA

CATALOG # 2SMR231U1-FS01-1/2-EB LAMPS = FB031U1 INPUT WATTS = 54
 TEST #25049 S/MH=1.3 BALLAST = ELECTRONIC BALLAST FACTOR = .88

LER = FL-69

COMPARATIVE YEARLY LIGHTING ENERGY COST PER 1000 LUMENS = \$3.48 BASED ON 3000 HRS. AND \$.08 PER KWH.

FIXTURE EFFICIENCY= 75.5%

CANDLEPOWER			
Angle	End	45	Cross
0	1633	1633	1633
5	1626	1626	1628
10	1603	1612	1622
15	1561	1586	1607
20	1505	1547	1583
25	1431	1491	1543
30	1344	1423	1488
35	1235	1332	1416
40	1097	1226	1320
45	944	1075	1175
50	771	898	974
55	617	719	756
60	481	530	548
65	356	364	382
70	262	245	276
75	181	172	208
80	123	127	160
85	69	73	93

MAINTAINED ILLUMINATION TABLE- Square Feet/Fixture*

- 80-50-20 Reflectances (Ceiling-Wall-Floor)
- LLF = 0.76 2800 Lumens/Lamp very clean
- Room width divided by room height = 5 or more, 2 or 1

Fixture Size & # of Lamps	Room Width Room Height =	Approx. Area (sq. ft.) per Fixture			
		10 ft-c	30 ft-c	50 ft-c	70 ft-c
2' X 2'	5	-	113	68	48
2-Lamp	2	-	78	47	34
31U1	1	-	58	35	-

*Observe Fixture S/MH Requirements for Specific Applications

AVERAGE LUMINANCE CD/SQ.M WITH 2800 LUMEN LAMPS			
ANGLE	END	45°	CROSS
45	4637	5281	5772
55	3736	4354	4578
65	2926	2992	3140
75	2429	2308	2791
85	2750	2909	3706

Room Size	TYPICAL V.C.P.'s Mounting Height			
	Lengthwise	Crosswise	Lengthwise	Crosswise
30x30	8.5	10	8.5	10
40x40	48	52	46	50
40x30	45	48	42	46
60x30	50	54	49	53
60x60	41	44	38	41
100x100	39	41	36	37

COEFFICIENT OF UTILIZATION

pfc pcc pw	20				80				70				50			
	70	50	30	10	70	50	30	10	70	50	30	10	70	50	30	10
RCR	0	90	90	90	88	88	88	83	83	83	83	83	83	83	83	83
	1	82	79	76	81	78	75	73	71	71	71	71	71	71	71	71
	2	76	69	65	73	68	64	66	61	61	61	61	61	61	61	61
RCR	3	68	61	56	68	60	55	57	54	54	54	54	54	54	54	54
	4	64	55	48	61	54	47	52	46	46	46	46	46	46	46	46
	5	58	50	42	56	48	42	46	41	41	41	41	41	41	41	41
RCR	6	54	45	38	53	44	38	42	36	36	36	36	36	36	36	36
	7	51	40	34	48	40	34	39	33	33	33	33	33	33	33	33
	8	46	36	30	46	36	30	35	29	29	29	29	29	29	29	29
RCR	9	44	34	28	42	34	28	33	28	28	28	28	28	28	28	28
	10	40	32	26	40	30	26	29	25	25	25	25	25	25	25	25

LIGHT DISTRIBUTION

DEGREES	LUMENS	% LAMP	% FIXTURE
0-30	1291	23.1	30.6
0-40	2123	37.9	50.2
0-60	3570	63.7	84.5
0-90	4226	75.5	100.0

LLF = .76 LLF = LIGHT LOSS FACTOR LLD = LDD X LLD X BF LDD = VERY CLEAN 0.94 CLEAN 0.90
 LLD = 0.92 @ 40% RATED LAMP LIFE BF = .88 ELECTRONIC BALLAST & 31U1 LAMP (RELAMP AT 70% LAMP LIFE)

PHOTOMETRIC DATA

CATALOG # 2SMR331U1-FS01-1/3-EB LAMPS = FB031U1 INPUT WATTS = 95
 TEST #25056 S/MH=1.3 BALLAST = ELECTRONIC BALLAST FACTOR = .88

LER = FL-52

COMPARATIVE YEARLY LIGHTING ENERGY COST PER 1000 LUMENS = \$4.62 BASED ON 3000 HRS. AND \$.08 PER KWH.

FIXTURE EFFICIENCY= 66.7%

CANDLEPOWER			
Angle	End	45	Cross
0	2207	2207	2207
5	2196	2196	2206
10	2163	2175	2199
15	2111	2142	2173
20	2035	2087	2137
25	1939	2014	2079
30	1816	1916	1994
35	1668	1787	1885
40	1480	1621	1736
45	1276	1409	1531
50	1038	1167	1269
55	820	929	986
60	632	680	724
65	471	469	507
70	342	312	361
75	240	222	275
80	162	163	204
85	85	91	113

MAINTAINED ILLUMINATION TABLE- Square Feet/Fixture*

- 80-50-20 Reflectances (Ceiling-Wall-Floor)
- LLF = 0.76 2800 Lumens/Lamp very clean
- Room width divided by room height = 5 or more, 2 or 1

Fixture Size & # of Lamps	Room Width Room Height =	Approx. Area (sq. ft.) per Fixture				
		10 ft-c	30 ft-c	50 ft-c	70 ft-c	100 ft-c
2' X 2'	5	-	149	90	64	45
3-Lamp	2	-	104	63	45	31
31U1	1	-	77	46	33	-

*Observe Fixture S/MH Requirements for Specific Applications

AVERAGE LUMINANCE CD/SQ.M WITH 2800 LUMEN LAMPS			
ANGLE	END	45°	CROSS
45	6268	6921	7520
55	4966	5626	5971
65	3871	3855	4167
75	3221	2979	3691
85	3387	3627	4503

Room Size	TYPICAL V.C.P.'s Mounting Height			
	Lengthwise	Crosswise	Lengthwise	Crosswise
30x30	8.5	10	8.5	10
40x40	41	45	39	44
40x30	39	42	36	39
60x30	44	48	43	47
60x60	36	38	33	35
100x100	34	35	31	32

COEFFICIENT OF UTILIZATION

pfc pcc pw	20				80				70				50			
	70	50	30	10	70	50	30	10	70	50	30	10	70	50	30	10
RCR	0	79	79	79	78	78	78	73	73	73	73	73	73	73	73	73
	1	72	69	67	70	68	66	66	64	64	64	64	64	64	64	64
	2	67	61	57	65	60	56	57	55	55	55	55	55	55	55	55
RCR	3	60	55	50	59	54	48	52	47	47	47	47	47	47	47	47
	4	56	48	42	55	47	42	46	41	41	41	41	41	41	41	41
	5	52	44	38	51	42	38	41	36	36	36	36	36	36	36	36
RCR	6	47	40	34	46	39	34	38	33	33	33	33	33	33	33	33
	7	45	35	30	44	35	29	34	29	29	29	29	29	29	29	29
	8	41	33	28	40	33	27	32	27	27	27	27	27	27	27	27
RCR	9	39	29	25	38	29	25	28	25	25	25	25	25	25	25	25
	10	36	28	23	35	28	23	27	23	23	23	23	23	23	23	23

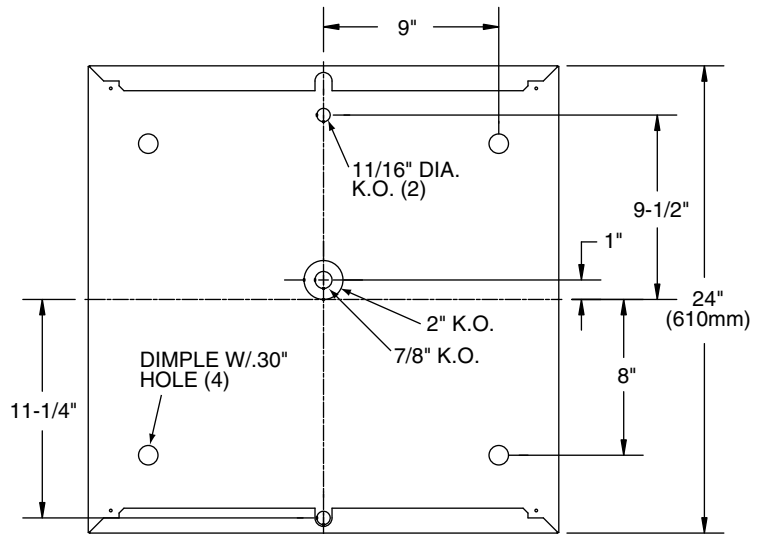
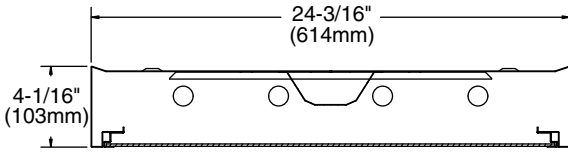
LIGHT DISTRIBUTION

DEGREES	LUMENS	% LAMP	% FIXTURE
0-30	1740	20.7	31.0
0-40	2854	34.0	50.9
0-60	4752	56.6	84.8
0-90	5605	66.7	100.0

LLF = .76 LLF = LIGHT LOSS FACTOR LLD = LDD X LLD X BF LDD = VERY CLEAN 0.94 CLEAN 0.90
 LLD = 0.92 @ 40% RATED LAMP LIFE BF = .88 ELECTRONIC BALLAST & 31U1 LAMP (RELAMP AT 70% LAMP LIFE)

2' x 2' 2, 3, AND 4 LAMP T8

DIMENSIONS



PHOTOMETRIC DATA

CATALOG # 2SMR217-FS01-1/2-EB
TEST #25191 S/MH=1.4

LAMPS = F17T8
BALLAST = ELECTRONIC

INPUT WATTS = 34
BALLAST FACTOR = .88

LER = FL-51

COMPARATIVE YEARLY LIGHTING ENERGY COST PER 1000 LUMENS = \$4.71 BASED ON 3000 HRS. AND \$.08 PER KWH.

FIXTURE EFFICIENCY = 73.7%

CANDLEPOWER				
Angle	End	45	Cross	
0	721	721	721	
5	720	718	717	
10	710	713	717	
15	692	705	715	
20	669	692	711	
25	639	673	700	
30	600	648	687	
35	550	613	659	
40	491	566	620	
45	424	500	560	
50	346	421	474	
55	276	339	369	
60	216	251	272	
65	162	173	191	
70	119	114	136	
75	83	79	100	
80	57	59	75	
85	32	35	43	

MAINTAINED ILLUMINATION TABLE- Square Feet/Fixture*

- 80-50-20 Reflectances (Ceiling-Wall-Floor)
- LLF = 0.75 1325 Lumens/Lamp very clean
- Room width divided by room height = 5 or more, 2 or 1

Fixture Size & # of Lamps	Room Width Room Height =	Approx. Area (sq. ft.) per Fixture				
		10 ft-c	30 ft-c	50 ft-c	70 ft-c	100 ft-c
2' X 2' 2-Lamp T8	5 2 1	- 107 78	51 35 26	30 - -	- - -	- - -

*Observe Fixture S/MH Requirements for Specific Applications

AVERAGE LUMINANCE CD/SQ.M WITH 1325 LUMEN LAMPS

ANGLE	END	45°	CROSS
45	1899	2239	2508
55	1524	1871	2037
65	1214	1296	1431
75	1015	967	1223
85	1163	1272	1562

TYPICAL V.C.P.'s

Room Size	Mounting Height			
	Lengthwise		Crosswise	
	8.5	10	8.5	10
30x30	68	72	65	69
40x40	65	68	62	66
60x30	70	73	68	72
60x60	62	65	58	61
100x100	59	60	55	57

COEFFICIENT OF UTILIZATION

pfc pcc pw RCR	20				70				50			
	70	50	30	70	50	30	50	30	70	50	30	
0	88	88	88	85	85	85	81	81	81	81	81	
1	81	77	73	79	76	72	71	69	71	69	69	
2	73	68	63	71	67	61	64	59	64	59	59	
3	68	59	54	66	58	54	56	52	56	52	52	
4	61	54	46	59	53	46	51	46	51	46	46	
5	56	47	41	56	46	40	46	40	46	40	40	
6	53	42	36	51	42	36	40	35	40	35	35	
7	48	39	33	47	39	33	38	32	38	32	32	
8	46	35	29	45	34	29	34	28	34	28	28	
9	42	33	27	41	33	27	32	27	32	27	27	
10	40	29	25	39	29	25	28	23	28	23	23	

LIGHT DISTRIBUTION

DEGREES	LUMENS	% LAMP	% FIXTURE
0-30	579	21.8	29.6
0-40	961	36.3	49.2
0-60	1642	62.0	84.1
0-90	1952	73.7	100.0

LLF = .75 LLF = LIGHT LOSS FACTOR LLD = LDD X LLD X BF LDD = VERY CLEAN 0.94 CLEAN 0.90
LLD = 0.91 @ 40% RATED LAMP LIFE BF = .88 ELECTRONIC BALLAST & T8 LAMP (RELAMP AT 70% LAMP LIFE)

PHOTOMETRIC DATA

CATALOG # 2SMR417-FS01-1/4-EB
TEST #25200 S/MH=1.3

LAMPS = F17T8
BALLAST = ELECTRONIC

INPUT WATTS = 59
BALLAST FACTOR = .88

LER = FL-53

COMPARATIVE YEARLY LIGHTING ENERGY COST PER 1000 LUMENS = \$4.53 BASED ON 3000 HRS. AND \$.08 PER KWH.

FIXTURE EFFICIENCY = 66.4%

CANDLEPOWER				
Angle	End	45	Cross	
0	1369	1369	1369	
5	1405	1354	1355	
10	1384	1344	1350	
15	1349	1324	1340	
20	1300	1295	1324	
25	1241	1253	1292	
30	1164	1193	1243	
35	1066	1118	1180	
40	949	1018	1091	
45	815	887	971	
50	666	743	815	
55	527	586	640	
60	404	437	472	
65	302	298	326	
70	219	196	230	
75	152	136	173	
80	102	101	128	
85	55	57	69	

MAINTAINED ILLUMINATION TABLE- Square Feet/Fixture*

- 80-50-20 Reflectances (Ceiling-Wall-Floor)
- LLF = 0.75 1325 Lumens/Lamp very clean
- Room width divided by room height = 5 or more, 2 or 1

Fixture Size & # of Lamps	Room Width Room Height =	Approx. Area (sq. ft.) per Fixture				
		10 ft-c	30 ft-c	50 ft-c	70 ft-c	100 ft-c
2' X 2' 4-Lamp T8	5 2 1	- 93 48	93 65 48	56 39 29	40 28 -	28 - -

*Observe Fixture S/MH Requirements for Specific Applications

AVERAGE LUMINANCE CD/SQ.M WITH 1325 LUMEN LAMPS

ANGLE	END	45°	CROSS
45	3650	3972	4348
55	2909	3235	3533
65	2263	2233	2443
75	1860	1664	2117
85	1998	2071	2507

TYPICAL V.C.P.'s

Room Size	Mounting Height			
	Lengthwise		Crosswise	
	8.5	10	8.5	10
30x30	56	60	53	58
40x40	53	52	50	53
60x30	58	62	57	61
60x60	49	52	44	46
100x100	47	49	44	46

COEFFICIENT OF UTILIZATION

pfc pcc pw RCR	20				70				50			
	70	50	30	70	50	30	50	30	70	50	30	
0	79	79	79	77	77	77	73	73	73	73	73	
1	72	69	67	70	68	66	66	64	66	64	64	
2	67	61	56	65	59	56	57	55	57	55	55	
3	60	55	48	59	54	48	52	47	52	47	47	
4	56	48	42	55	47	42	46	41	46	41	41	
5	52	44	38	51	42	38	41	36	41	36	36	
6	47	40	34	46	39	34	38	33	38	33	33	
7	45	35	29	42	34	29	34	29	34	29	29	
8	41	33	27	40	32	27	32	27	32	27	27	
9	39	29	25	38	29	25	28	23	28	23	23	
10	35	28	23	35	28	23	27	22	27	22	22	

LIGHT DISTRIBUTION

DEGREES	LUMENS	% LAMP	% FIXTURE
0-30	1084	20.5	30.8
0-40	1781	33.6	50.6
0-60	2988	56.4	84.8
0-90	3522	66.4	100.0

LLF = .75 LLF = LIGHT LOSS FACTOR LLD = LDD X LLD X BF LDD = VERY CLEAN 0.94 CLEAN 0.90
LLD = 0.91 @ 40% RATED LAMP LIFE BF = .88 ELECTRONIC BALLAST & T8 LAMP (RELAMP AT 70% LAMP LIFE)