



IES INDOOR REPORT
PHOTOMETRIC FILENAME : SQRG-44-L113-835-FFG125-(L85)-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] GEN from BALLABS TEST NO. 20105.0
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
[ISSUEDATE] 15 NOV 2024
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 12-28 LED 22"ARRAYS 4X4' RECESSED LED LUMINAIRE
[MORE] WHITE FLAT REFLECTOR w/FROSTED ACRYLIC LENS
[LUMCAT] SQRG-44-L113-835-FFG125-(L85)-DIM-UNV
[LAMPCAT] HLM 80 CRI 3500K CCT

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	8590
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	98
Total Luminaire Watts	88
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.16
Spacing Criterion (90-270)	1.16
Spacing Criterion (Diagonal)	1.34
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	3.77 ft
Luminous Width (90-270)	3.77 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	2127	2138	2146
55	2047	2054	2068
65	1909	1906	1938
75	1628	1596	1648
85	1362	1302	1408

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CANDELA TABULATION

	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>
0	3218.688	3218.688	3218.688	3218.688	3218.688
5	3150.870	3148.584	3147.060	3148.584	3148.584
10	3118.866	3118.866	3118.866	3118.866	3122.676
15	3037.332	3033.522	3038.856	3038.856	3038.856
20	2860.548	2862.072	2862.072	2867.406	2867.406
25	2676.906	2676.906	2680.716	2684.526	2684.526
30	2467.356	2469.642	2472.690	2476.500	2478.024
35	2310.384	2311.908	2315.718	2321.052	2322.576
40	2169.414	2173.986	2176.272	2177.796	2181.606
45	1988.820	1996.440	1999.488	2006.346	2006.346
50	1772.412	1777.746	1779.270	1786.890	1793.748
55	1552.956	1552.956	1557.528	1566.672	1568.196
60	1276.350	1276.350	1281.684	1287.018	1293.876
65	1066.800	1063.752	1065.276	1072.134	1082.802
70	812.292	806.958	805.434	813.816	824.484
75	557.022	548.640	546.354	555.498	563.880
80	352.806	342.138	342.138	348.996	361.188
85	156.972	151.638	150.114	155.448	162.306
90	17.526	21.336	21.336	21.336	21.336

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Zone	Lumens	%Lamp	%Fixt
0-20	1151.89	N.A.	13.40
0-30	2385.61	N.A.	27.80
0-40	3840.33	N.A.	44.70
0-60	6761.08	N.A.	78.70
0-80	8406.19	N.A.	97.90
0-90	8590.47	N.A.	100.00
10-90	8290.14	N.A.	96.50
20-40	2688.44	N.A.	31.30
20-50	4225.79	N.A.	49.20
40-70	3968.47	N.A.	46.20
60-80	1645.12	N.A.	19.20
70-80	597.39	N.A.	7.00
80-90	184.28	N.A.	2.10
90-110	0.00	N.A.	0.00
90-120	0.00	N.A.	0.00
90-130	0.00	N.A.	0.00
90-150	0.00	N.A.	0.00
90-180	0.00	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	8590.47	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	300.34
10-20	851.55
20-30	1233.72
30-40	1454.73
40-50	1537.34
50-60	1383.4
60-70	1047.73
70-80	597.39
80-90	184.28
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

Effective Floor Cavity Reflectance 0.20

RC RW	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	91	91	91	91	89	89	89	89	85	85	85	81	81	81	78	78	78	76
1	83	79	76	73	81	77	74	72	74	72	69	71	69	67	68	67	65	64
2	75	69	64	59	73	67	63	59	65	61	57	62	59	56	60	57	55	53
3	69	60	54	49	67	59	53	49	57	52	48	55	51	47	53	49	46	45
4	63	54	47	42	61	53	46	41	51	45	41	49	44	40	47	43	40	38
5	58	48	41	36	56	47	41	36	45	40	35	44	39	35	42	38	35	33
6	53	43	36	31	52	42	36	31	41	35	31	40	35	31	39	34	30	29
7	49	39	32	28	48	39	32	28	37	32	27	36	31	27	35	31	27	25
8	46	36	29	25	45	35	29	25	34	29	25	33	28	24	32	28	24	23
9	43	33	27	22	42	32	26	22	31	26	22	31	26	22	30	25	22	20
10	40	30	24	20	39	30	24	20	29	24	20	28	23	20	28	23	20	19

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UGR TABLE - CORRECTED

Reflectances

Ceiling Cavity	70	70	50	50	30	70	70	50	50	30
Walls	50	30	50	30	30	50	30	50	30	30
Floor Cavity	20	20	20	20	20	20	20	20	20	20

Room Size UGR Viewed Crosswise

X=2H	Y=2H	15.5	17.1	15.8	17.4	17.7	UGR Viewed Endwise	15.5	17.2	15.9	17.5	17.8
	3H	17.3	18.8	17.7	19.1	19.5		17.4	18.9	17.7	19.2	19.5
	4H	17.9	19.4	18.3	19.7	20.1		18.0	19.4	18.4	19.8	20.1
	6H	18.5	19.8	18.9	20.1	20.5		18.6	19.8	19.0	20.2	20.6
	8H	18.6	19.9	19.1	20.3	20.7		18.7	20.0	19.1	20.4	20.8
	12H	18.8	20.0	19.2	20.3	20.8		18.9	20.0	19.3	20.4	20.9

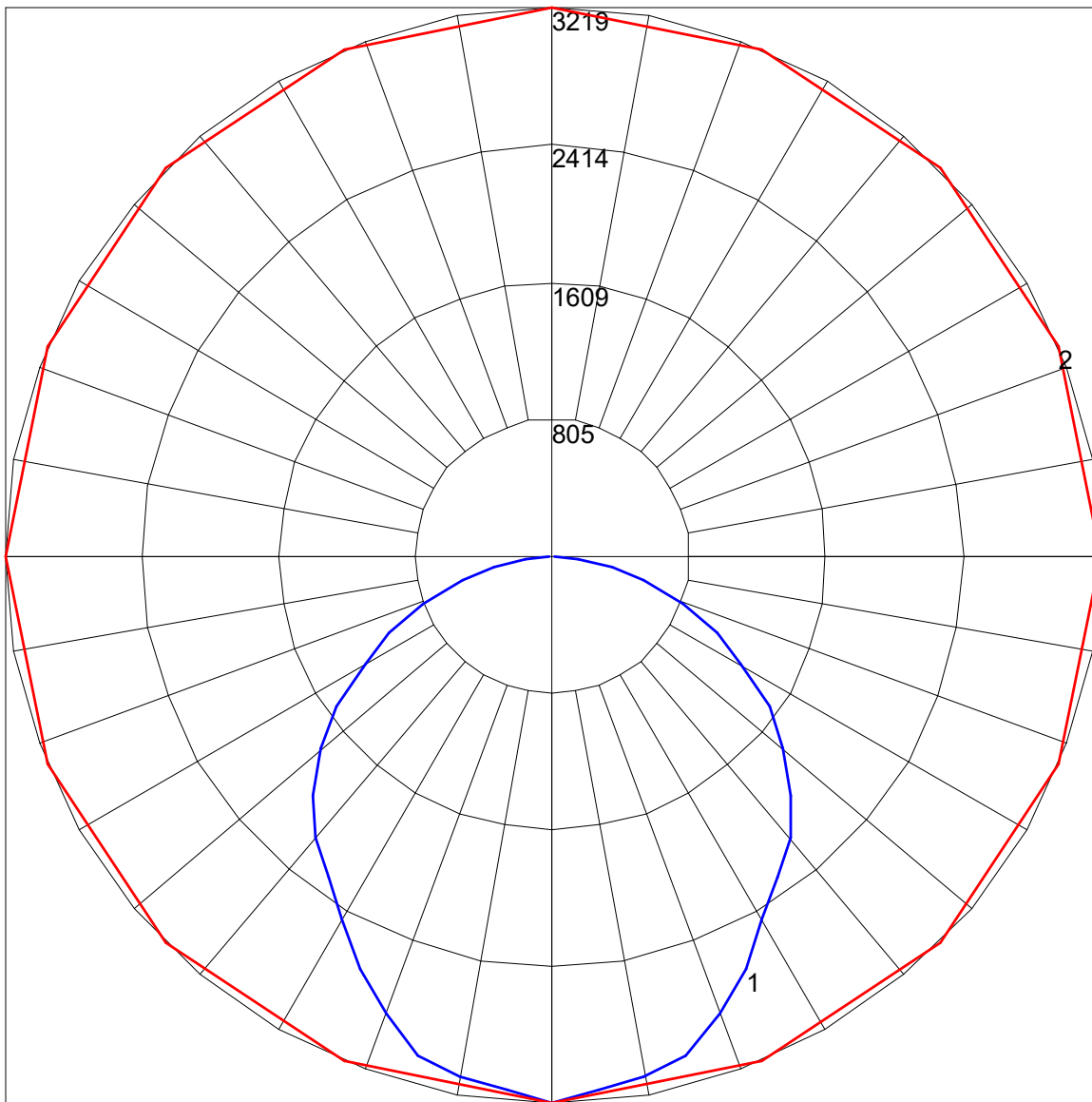
4H	2H	16.1	17.5	16.5	17.9	18.2	16.2	17.6	16.6	17.9	18.3
	3H	18.2	19.3	18.6	19.7	20.1	18.2	19.4	18.6	19.8	20.2
	4H	18.9	20.0	19.4	20.4	20.8	19.0	20.1	19.4	20.5	20.9
	6H	19.6	20.5	20.0	20.9	21.4	19.6	20.6	20.1	21.0	21.5
	8H	19.8	20.7	20.3	21.1	21.6	19.9	20.8	20.3	21.2	21.7
	12H	20.0	20.8	20.4	21.2	21.7	20.1	20.8	20.5	21.3	21.8

8H	4H	19.2	20.1	19.7	20.5	21.0	19.3	20.2	19.7	20.6	21.1
	6H	20.0	20.7	20.5	21.2	21.7	20.1	20.8	20.6	21.3	21.8
	8H	20.3	21.0	20.8	21.5	21.9	20.4	21.0	20.9	21.5	22.0
	12H	20.6	21.1	21.1	21.6	22.2	20.6	21.2	21.1	21.7	22.3

12H	4H	19.3	20.1	19.7	20.5	21.0	19.3	20.1	19.8	20.6	21.1
	6H	20.1	20.7	20.6	21.2	21.7	20.1	20.8	20.6	21.3	21.8
	8H	20.4	21.0	20.9	21.5	22.1	20.5	21.1	21.0	21.6	22.1

Maximum UGR = 22.3

POLAR GRAPH



Maximum Candela = 3218.688 Located At Horizontal Angle = 0, Vertical Angle = 0
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)