



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : SQRG-22-L65-840-FFG125-(L50)-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] 08-MAR-2024  
[MANUFAC] WILLIAMS INDOOR  
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO  
[LUMINAIRE] 2 x 2 RECESSED LED LUMINAIRE  
[MORE] WHITE FLAT REFLECTOR w/FROSTED ACRYLIC LENS  
[LUMCAT] SQRG-22-L65-840-FFG125-(L50)-DIM-UNV  
[LAMPCAT] HLM 80 CRI 4000K CCT

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	5168
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	107
Total Luminaire Watts	48.4
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)	1.92 ft
Luminous Width (90-270)	1.92 ft
Luminous Height	0.00 ft

### LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	4936	4962	4979
55	4751	4765	4798
65	4430	4423	4496
75	3777	3704	3823
85	3161	3023	3268

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	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>
<b>0</b>	1936.277	1936.277	1936.277	1936.277	1936.277
<b>5</b>	1895.480	1894.105	1893.188	1894.105	1894.105
<b>10</b>	1876.227	1876.227	1876.227	1876.227	1878.519
<b>15</b>	1827.178	1824.886	1828.095	1828.095	1828.095
<b>20</b>	1720.830	1721.747	1721.747	1724.955	1724.955
<b>25</b>	1610.356	1610.356	1612.648	1614.940	1614.940
<b>30</b>	1484.296	1485.671	1487.505	1489.797	1490.714
<b>35</b>	1389.866	1390.783	1393.075	1396.283	1397.200
<b>40</b>	1305.062	1307.812	1309.188	1310.104	1312.396
<b>45</b>	1196.421	1201.005	1202.839	1206.965	1206.965
<b>50</b>	1066.236	1069.445	1070.362	1074.946	1079.071
<b>55</b>	934.217	934.217	936.968	942.468	943.385
<b>60</b>	767.818	767.818	771.027	774.236	778.361
<b>65</b>	641.759	639.925	640.842	644.967	651.385
<b>70</b>	488.653	485.445	484.528	489.570	495.988
<b>75</b>	335.090	330.047	328.672	334.173	339.215
<b>80</b>	212.239	205.821	205.821	209.947	217.281
<b>85</b>	94.430	91.221	90.305	93.513	97.639
<b>90</b>	10.543	12.835	12.835	12.835	12.835

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	692.95	N.A.	13.40
0-30	1435.12	N.A.	27.80
0-40	2310.24	N.A.	44.70
0-60	4067.28	N.A.	78.70
0-80	5056.94	N.A.	97.90
0-90	5167.8	N.A.	100.00
10-90	4987.13	N.A.	96.50
20-40	1617.3	N.A.	31.30
20-50	2542.12	N.A.	49.20
40-70	2387.32	N.A.	46.20
60-80	989.66	N.A.	19.20
70-80	359.38	N.A.	7.00
80-90	110.86	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	5167.8	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	180.68
10-20	512.27
20-30	742.17
30-40	875.12
40-50	924.83
50-60	832.22
60-70	630.28
70-80	359.38
80-90	110.86
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	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	106	106	106	102	102	102	100
1	109	104	99	96	106	102	98	94	97	94	91	93	91	88	90	88	86	83
2	99	90	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	69
3	90	79	71	65	88	78	70	64	75	68	63	72	66	62	69	65	61	59
4	82	70	62	55	80	69	61	54	66	59	54	64	58	53	62	57	52	50
5	76	63	54	47	74	62	53	47	60	52	46	58	51	46	56	50	45	43
6	70	57	48	41	68	56	47	41	54	46	41	52	45	40	51	45	40	38
7	65	51	43	36	63	51	42	36	49	41	36	48	41	36	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	44	37	32	42	36	32	30
9	57	43	35	29	55	42	35	29	41	34	29	40	34	29	39	33	29	27
10	53	40	32	27	52	39	32	27	38	31	26	37	31	26	36	30	26	24

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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	17.4	19.1	17.8	19.4	19.7	17.5	19.2	17.9	19.5	19.8
	3H	19.3	20.8	19.7	21.1	21.5	19.4	20.8	19.7	21.2	21.5
	4H	19.9	21.3	20.3	21.7	22.1	20.0	21.4	20.4	21.8	22.1
	6H	20.5	21.8	20.9	22.1	22.5	20.5	21.8	21.0	22.2	22.6
	8H	20.6	21.9	21.1	22.3	22.7	20.7	22.0	21.1	22.3	22.7
	12H	20.8	21.9	21.2	22.3	22.8	20.9	22.0	21.3	22.4	22.8

### UGR Viewed Endwise

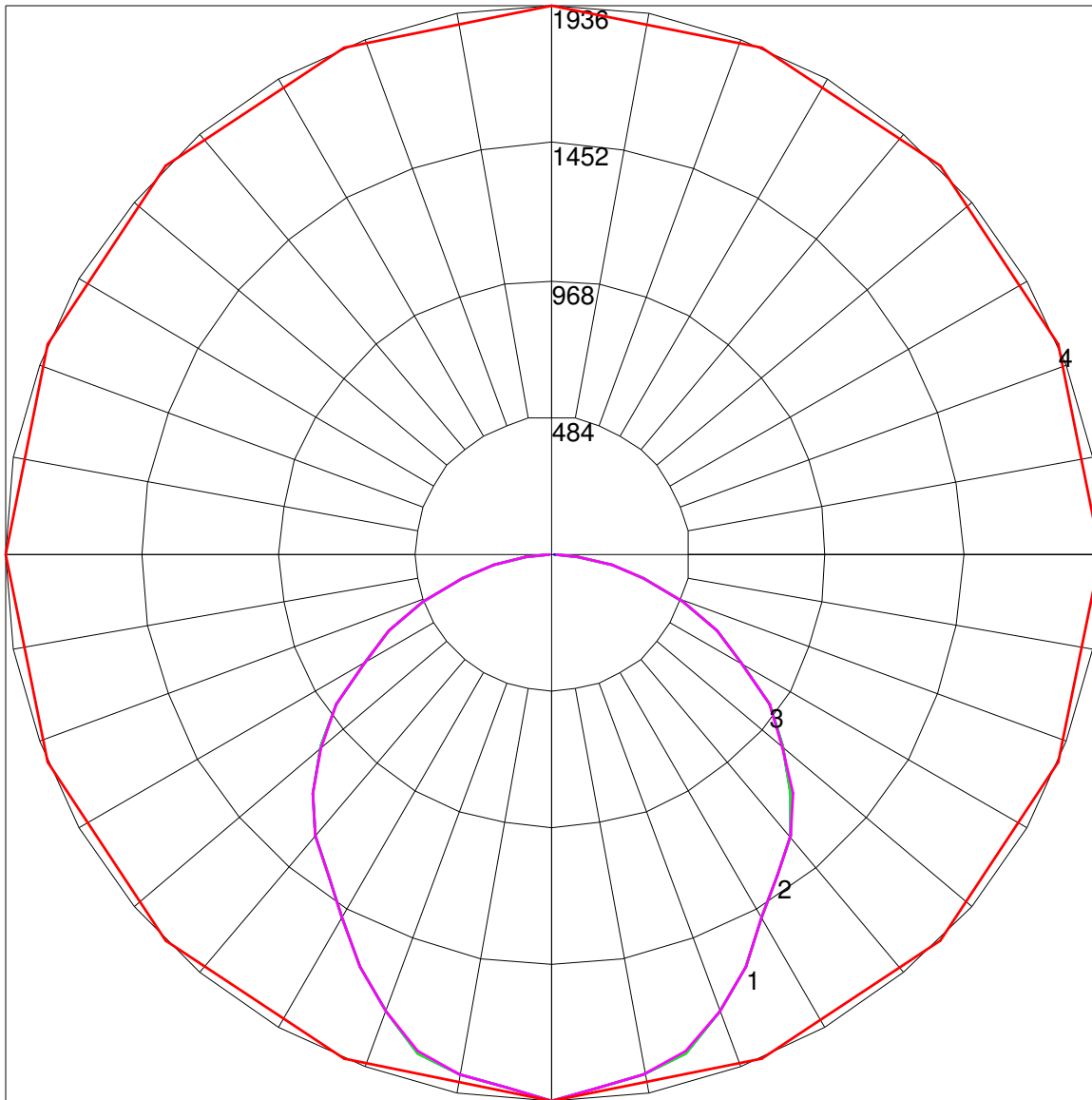
4H	2H	18.1	19.5	18.5	19.9	20.2	18.2	19.6	18.5	19.9	20.3
	3H	20.2	21.3	20.6	21.7	22.1	20.2	21.4	20.6	21.8	22.2
	4H	20.9	22.0	21.4	22.4	22.8	21.0	22.0	21.4	22.5	22.9
	6H	21.6	22.5	22.0	22.9	23.4	21.6	22.6	22.1	23.0	23.5
	8H	21.8	22.7	22.2	23.1	23.6	21.9	22.7	22.3	23.2	23.6
	12H	22.0	22.7	22.4	23.2	23.7	22.0	22.8	22.5	23.3	23.8

8H	4H	21.2	22.1	21.7	22.5	23.0	21.3	22.2	21.7	22.6	23.1
	6H	22.0	22.7	22.5	23.2	23.7	22.1	22.8	22.6	23.3	23.7
	8H	22.3	22.9	22.8	23.5	23.9	22.4	23.0	22.9	23.5	24.0
	12H	22.5	23.1	23.0	23.6	24.2	22.6	23.2	23.1	23.7	24.3

12H	4H	21.3	22.0	21.7	22.5	23.0	21.3	22.1	21.8	22.6	23.0
	6H	22.1	22.7	22.6	23.2	23.7	22.1	22.8	22.6	23.2	23.8
	8H	22.4	23.0	22.9	23.5	24.0	22.5	23.1	23.0	23.6	24.1

Maximum UGR = 24.3

POLAR GRAPH



Maximum Candela = 1936.277 Located At Horizontal Angle = 0, Vertical Angle = 0

# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)

# 2 - Vertical Plane Through Horizontal Angles (5 - 185)

# 3 - Vertical Plane Through Horizontal Angles (10 - 190)

# 4 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)