

IES INDOOR REPORT

PHOTOMETRIC FILENAME : SQRG-44-L200-935-FFG125-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

[ISSUE DATE] 31-JULY-2024

[MANUFAC] WILLIAMS INDOOR

[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO

[LUMINAIRE] 4X4' RECESSED LED LUMINAIRE

[MORE] WHITE FLAT REFLECTOR w/FROSTED ACRYLIC LENS

[LUMCAT] SQRG-44-L200-935-FFG125-DIM-UNV

[LAMPCAT] HLM 90 CRI 3500K CCT

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	16686
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	82
Total Luminaire Watts	204
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	4131	4154	4168
55	3977	3989	4016
65	3708	3703	3764
75	3161	3101	3200
85	2646	2530	2735

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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	6252.073	6252.073	6252.073	6252.073	6252.073
5	6120.342	6115.901	6112.941	6115.901	6115.901
10	6058.176	6058.176	6058.176	6058.176	6065.577
15	5899.802	5892.402	5902.763	5902.763	5902.763
20	5556.412	5559.372	5559.372	5569.733	5569.733
25	5199.700	5199.700	5207.101	5214.502	5214.502
30	4792.664	4797.105	4803.025	4810.426	4813.386
35	4487.757	4490.718	4498.118	4508.479	4511.439
40	4213.933	4222.814	4227.254	4230.214	4237.615
45	3863.142	3877.943	3883.864	3897.185	3897.185
50	3442.785	3453.146	3456.106	3470.907	3484.228
55	3016.507	3016.507	3025.388	3043.149	3046.110
60	2479.219	2479.219	2489.580	2499.941	2513.262
65	2072.183	2066.263	2069.223	2082.544	2103.266
70	1577.820	1567.459	1564.498	1580.780	1601.502
75	1081.976	1065.694	1061.254	1079.016	1095.297
80	685.301	664.579	664.579	677.900	701.582
85	304.907	294.546	291.586	301.947	315.268
90	34.043	41.444	41.444	41.444	41.444

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	2237.47	N.A.	13.40
0-30	4633.88	N.A.	27.80
0-40	7459.58	N.A.	44.70
0-60	13132.91	N.A.	78.70
0-80	16328.44	N.A.	97.90
0-90	16686.39	N.A.	100.00
10-90	16103.00	N.A.	96.50
20-40	5222.11	N.A.	31.30
20-50	8208.29	N.A.	49.20
40-70	7708.47	N.A.	46.20
60-80	3195.53	N.A.	19.20
70-80	1160.39	N.A.	7.00
80-90	357.95	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	16686.39	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	583.38
10-20	1654.08
20-30	2396.41
30-40	2825.7
40-50	2986.18
50-60	2687.15
60-70	2035.13
70-80	1160.39
80-90	357.95
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	16.9	18.5	17.2	18.8	19.1	UGR Viewed Endwise	16.9	18.6	17.3	18.9	19.2
	3H	18.7	20.2	19.1	20.5	20.9	18.8	20.3	19.1	20.6	20.9	
	4H	19.3	20.8	19.7	21.1	21.5	19.4	20.8	19.8	21.2	21.5	
	6H	19.9	21.2	20.3	21.5	21.9	20.0	21.2	20.4	21.6	22.0	
	8H	20.0	21.3	20.5	21.7	22.1	20.1	21.4	20.5	21.8	22.2	
	12H	20.2	21.4	20.6	21.7	22.2	20.3	21.4	20.7	21.8	22.3	

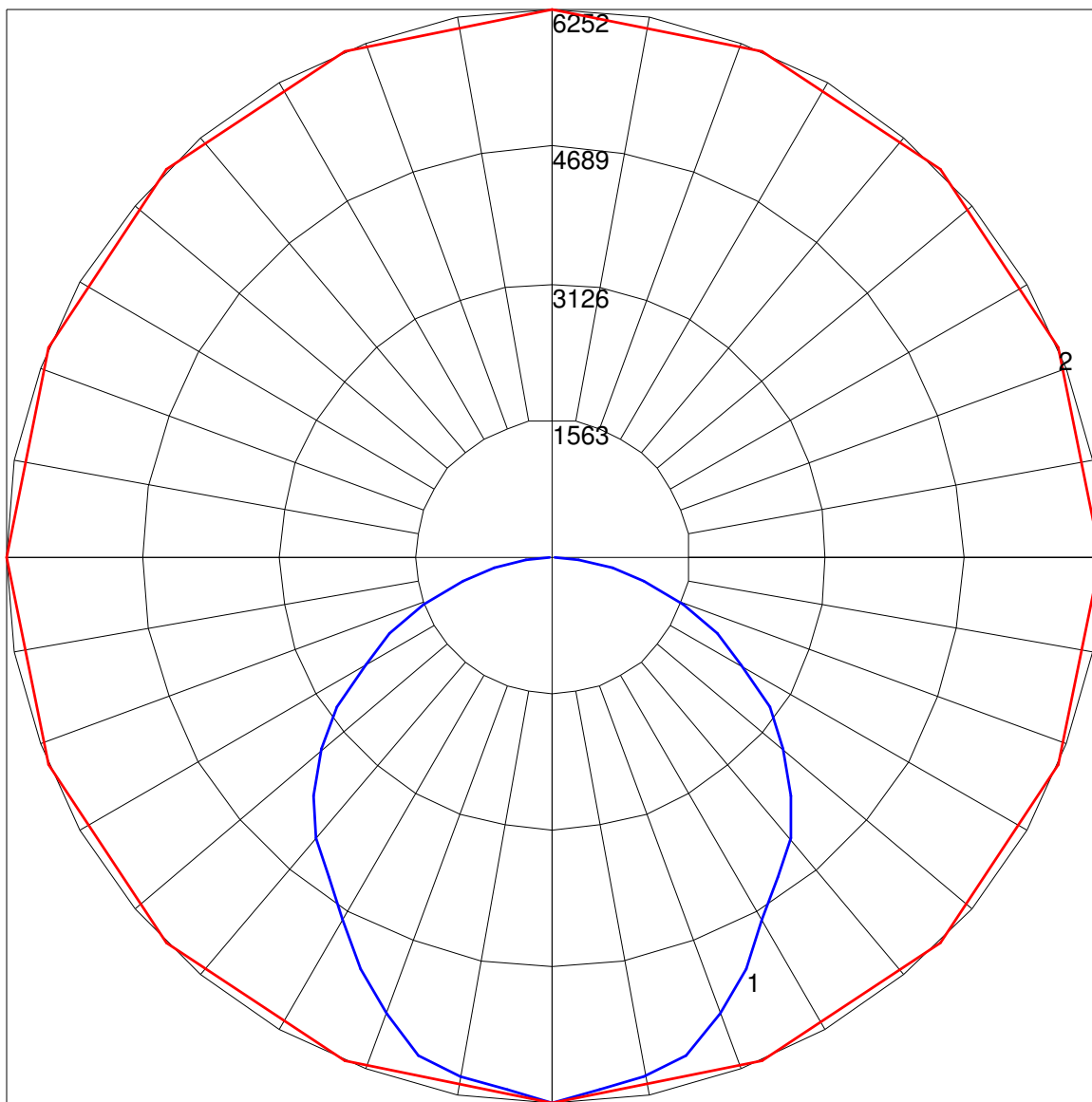
4H	2H	17.5	18.9	17.9	19.3	19.6	17.6	19.0	18.0	19.3	19.7	
	3H	19.6	20.7	20.0	21.1	21.5	19.6	20.8	20.0	21.2	21.6	
	4H	20.3	21.4	20.8	21.8	22.2	20.4	21.5	20.8	21.9	22.3	
	6H	21.0	21.9	21.4	22.3	22.8	21.0	22.0	21.5	22.4	22.9	
	8H	21.2	22.1	21.7	22.5	23.0	21.3	22.2	21.7	22.6	23.1	
	12H	21.4	22.2	21.8	22.6	23.1	21.5	22.2	21.9	22.7	23.2	

8H	4H	20.6	21.5	21.1	21.9	22.4	20.7	21.6	21.1	22.0	22.5	
	6H	21.4	22.1	21.9	22.6	23.1	21.5	22.2	22.0	22.7	23.2	
	8H	21.7	22.4	22.2	22.9	23.3	21.8	22.4	22.3	22.9	23.4	
	12H	22.0	22.5	22.5	23.0	23.6	22.0	22.6	22.5	23.1	23.7	

12H	4H	20.7	21.5	21.1	21.9	22.4	20.7	21.5	21.2	22.0	22.5	
	6H	21.5	22.1	22.0	22.6	23.1	21.5	22.2	22.0	22.7	23.2	
	8H	21.8	22.4	22.3	22.9	23.5	21.9	22.5	22.4	23.0	23.5	

Maximum UGR = 23.7

POLAR GRAPH



Maximum Candela = 6252.073 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.)