



IES INDOOR REPORT

PHOTOMETRIC FILENAME : SQRG-44-L200-840-FFG125-(L133)-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] 01/26/2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] 12-28 LED 22"ARRAYS 4X4'RECESSED LUMINAIRE

[MORE] WHITE FLAT REFLECTOR w/FROSTED ACRYLIC LENS IN DOOR

[LUMCAT] SQRG-S44-L200-840-FFG125-(L133)-DIM-UNV

[LAMPCAT] HLM 80 CRI 4000K CCT

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	13869
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	94
Total Luminaire Watts	148
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	3434	3452	3464
55	3306	3315	3338
65	3082	3078	3128
75	2628	2577	2660
85	2199	2103	2274

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	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>
0	5196.635	5196.635	5196.635	5196.635	5196.635
5	5087.141	5083.451	5080.990	5083.451	5083.451
10	5035.470	5035.470	5035.470	5035.470	5041.622
15	4903.832	4897.681	4906.293	4906.293	4906.293
20	4618.411	4620.871	4620.871	4629.483	4629.483
25	4321.917	4321.917	4328.069	4334.220	4334.220
30	3983.595	3987.285	3992.207	3998.358	4000.818
35	3730.160	3732.621	3738.772	3747.384	3749.845
40	3502.561	3509.943	3513.634	3516.094	3522.246
45	3210.989	3223.292	3228.213	3239.285	3239.285
50	2861.594	2870.206	2872.666	2884.969	2896.041
55	2507.278	2507.278	2514.660	2529.423	2531.883
60	2060.692	2060.692	2069.304	2077.916	2088.988
65	1722.370	1717.448	1719.909	1730.981	1748.205
70	1311.461	1302.850	1300.389	1313.922	1331.146
75	899.323	885.790	882.099	896.862	910.395
80	569.612	552.389	552.389	563.461	583.145
85	253.434	244.823	242.362	250.974	262.046
90	28.296	34.447	34.447	34.447	34.447

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Zone	Lumens	%Lamp	%Fixt
0-20	1859.75	N.A.	13.40
0-30	3851.61	N.A.	27.80
0-40	6200.29	N.A.	44.70
0-60	10915.89	N.A.	78.70
0-80	13571.97	N.A.	97.90
0-90	13869.49	N.A.	100.00
10-90	13384.59	N.A.	96.50
20-40	4340.54	N.A.	31.30
20-50	6822.62	N.A.	49.20
40-70	6407.17	N.A.	46.20
60-80	2656.08	N.A.	19.20
70-80	964.50	N.A.	7.00
80-90	297.52	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	13869.49	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	484.90
10-20	1374.85
20-30	1991.86
30-40	2348.68
40-50	2482.07
50-60	2233.52
60-70	1691.57
70-80	964.50
80-90	297.52
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	16.2	17.8	16.5	18.1	18.4	16.2	17.9	16.6	18.2	18.5
	3H	18.0	19.5	18.4	19.8	20.2	18.1	19.6	18.4	19.9	20.2
	4H	18.6	20.1	19.0	20.4	20.8	18.7	20.1	19.1	20.5	20.8
	6H	19.2	20.5	19.6	20.8	21.2	19.3	20.5	19.7	20.9	21.3
	8H	19.3	20.6	19.8	21.0	21.4	19.4	20.7	19.8	21.1	21.5
	12H	19.5	20.7	19.9	21.0	21.5	19.6	20.7	20.0	21.1	21.6

UGR Viewed Endwise

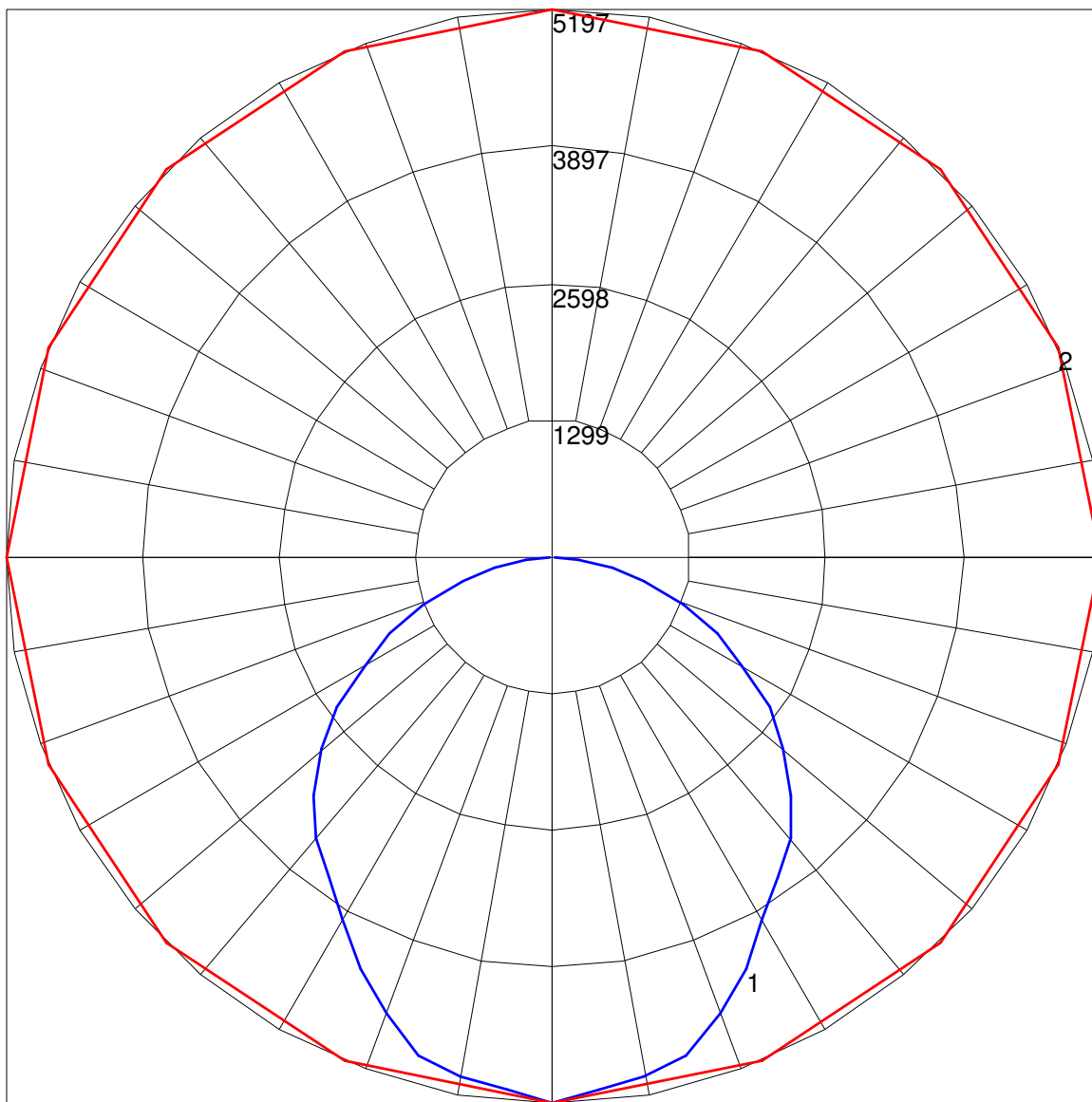
4H	2H	16.8	18.2	17.2	18.6	18.9	16.9	18.3	17.3	18.6	19.0
	3H	18.9	20.0	19.3	20.4	20.8	18.9	20.1	19.3	20.5	20.9
	4H	19.6	20.7	20.1	21.1	21.5	19.7	20.8	20.1	21.2	21.6
	6H	20.3	21.2	20.7	21.6	22.1	20.3	21.3	20.8	21.7	22.2
	8H	20.5	21.4	21.0	21.8	22.3	20.6	21.5	21.0	21.9	22.4
	12H	20.7	21.5	21.1	21.9	22.4	20.8	21.5	21.2	22.0	22.5

8H	4H	19.9	20.8	20.4	21.2	21.7	20.0	20.9	20.4	21.3	21.8
	6H	20.7	21.4	21.2	21.9	22.4	20.8	21.5	21.3	22.0	22.5
	8H	21.0	21.7	21.5	22.2	22.6	21.1	21.7	21.6	22.2	22.7
	12H	21.3	21.8	21.8	22.3	22.9	21.3	21.9	21.8	22.4	23.0

12H	4H	20.0	20.8	20.4	21.2	21.7	20.0	20.8	20.5	21.3	21.8
	6H	20.8	21.4	21.3	21.9	22.4	20.8	21.5	21.3	22.0	22.5
	8H	21.1	21.7	21.6	22.2	22.8	21.2	21.8	21.7	22.3	22.8

Maximum UGR = 23.0

POLAR GRAPH



Maximum Candela = 5196.635 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.)