



IES INDOOR REPORT

PHOTOMETRIC FILENAME : SQRG-33-L150-835-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

[ISSUEDATE] 25-MAR-2020

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] 12-28 LED 22"ARRAYS 3x3' RECESSED LUMINAIRE

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

[LUMCAT] SQRG-33-L150-835-FFG125-DIM-UNV

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	15157
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	88
Total Luminaire Watts	172.1
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)	2.77 ft
Luminous Width (90-270)	2.77 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	6950	6988	7012
55	6691	6710	6756
65	6238	6229	6331
75	5318	5216	5384
85	4451	4256	4602

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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	5679.206	5679.206	5679.206	5679.206	5679.206
5	5559.545	5555.511	5552.822	5555.511	5555.511
10	5503.075	5503.075	5503.075	5503.075	5509.798
15	5359.213	5352.490	5361.902	5361.902	5361.902
20	5047.287	5049.976	5049.976	5059.387	5059.387
25	4723.260	4723.260	4729.983	4736.705	4736.705
30	4353.520	4357.554	4362.932	4369.654	4372.343
35	4076.551	4079.240	4085.963	4095.374	4098.063
40	3827.817	3835.884	3839.918	3842.607	3849.329
45	3509.169	3522.614	3527.992	3540.092	3540.092
50	3127.328	3136.740	3139.429	3152.874	3164.974
55	2740.109	2740.109	2748.176	2764.311	2767.000
60	2252.053	2252.053	2261.464	2270.876	2282.976
65	1882.313	1876.935	1879.624	1891.724	1910.547
70	1433.247	1423.835	1421.146	1435.936	1454.759
75	982.836	968.046	964.013	980.147	994.937
80	622.508	603.685	603.685	615.785	637.297
85	276.969	267.557	264.868	274.280	286.380
90	30.924	37.646	37.646	37.646	37.646

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	2032.45	N.A.	13.40
0-30	4209.28	N.A.	27.80
0-40	6776.07	N.A.	44.70
0-60	11929.56	N.A.	78.70
0-80	14832.29	N.A.	97.90
0-90	15157.44	N.A.	100.00
10-90	14627.51	N.A.	96.50
20-40	4743.62	N.A.	31.30
20-50	7456.18	N.A.	49.20
40-70	7002.15	N.A.	46.20
60-80	2902.73	N.A.	19.20
70-80	1054.07	N.A.	7.00
80-90	325.15	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	15157.44	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	529.93
10-20	1502.52
20-30	2176.83
30-40	2566.79
40-50	2712.56
50-60	2440.93
60-70	1848.66
70-80	1054.07
80-90	325.15
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	268	268	268	268	261	261	261	261	250	250	250	239	239	239	229	229	229	225
1	244	233	224	215	238	228	219	211	219	211	205	210	204	198	202	197	192	188
2	222	203	188	175	216	199	185	173	191	179	169	184	174	165	177	168	161	156
3	202	178	160	145	197	175	158	144	168	153	141	162	149	139	156	146	136	132
4	185	158	138	123	180	155	137	122	149	133	120	144	130	119	139	127	117	112
5	170	141	121	106	166	139	120	105	134	117	104	129	115	103	125	112	102	97
6	157	127	107	93	153	125	106	92	121	104	91	117	102	90	114	100	90	85
7	146	115	96	82	142	114	95	82	110	93	81	107	92	80	104	90	80	75
8	136	105	86	73	132	104	86	73	101	84	72	98	83	72	95	82	71	67
9	127	97	78	66	124	95	78	66	93	77	65	90	76	65	88	75	65	60
10	119	89	72	60	116	88	71	60	86	70	59	84	69	59	82	68	59	55

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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	15.8	17.4	16.2	17.8	18.1	UGR Viewed Endwise	15.9	17.5	16.2	17.8	18.1
	3H	17.6	19.1	18.0	19.5	19.8		17.7	19.2	18.1	19.5	19.9
	4H	18.3	19.7	18.7	20.0	20.4		18.4	19.8	18.8	20.1	20.5
	6H	18.8	20.1	19.2	20.5	20.9		18.9	20.2	19.3	20.6	20.9
	8H	19.0	20.2	19.4	20.6	21.0		19.1	20.3	19.5	20.7	21.1
	12H	19.1	20.3	19.5	20.7	21.1		19.2	20.4	19.6	20.8	21.2

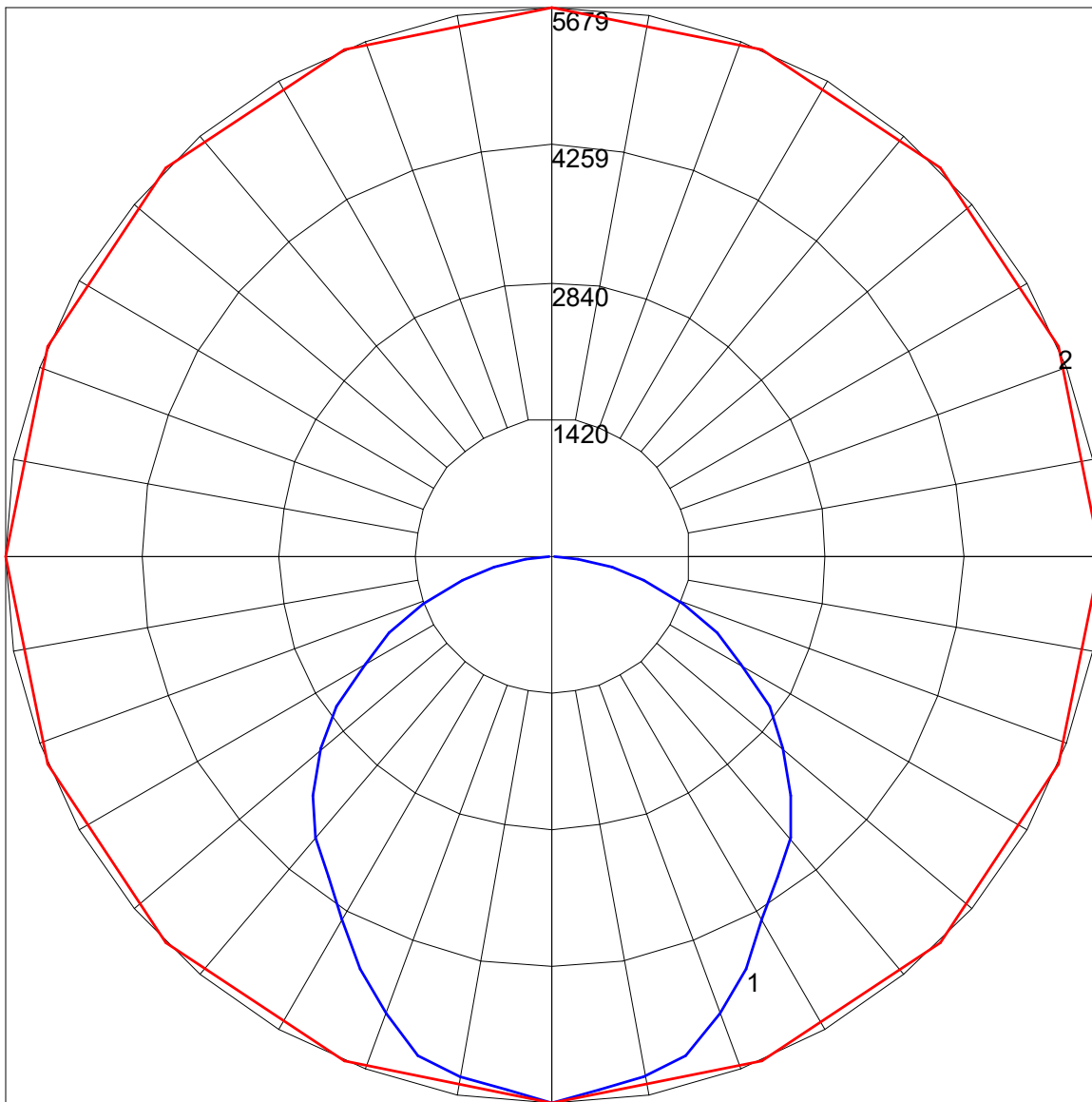
4H	2H	16.5	17.9	16.9	18.2	18.6	16.5	17.9	16.9	18.3	18.6
	3H	18.5	19.7	18.9	20.1	20.5	18.6	19.7	19.0	20.1	20.5
	4H	19.3	20.3	19.7	20.7	21.2	19.3	20.4	19.8	20.8	21.2
	6H	19.9	20.8	20.4	21.3	21.7	20.0	20.9	20.4	21.4	21.8
	8H	20.1	21.0	20.6	21.5	21.9	20.2	21.1	20.7	21.5	22.0
	12H	20.3	21.1	20.8	21.6	22.0	20.4	21.2	20.9	21.7	22.1

8H	4H	19.6	20.4	20.0	20.9	21.4	19.6	20.5	20.1	20.9	21.4
	6H	20.3	21.1	20.8	21.6	22.0	20.4	21.1	20.9	21.6	22.1
	8H	20.6	21.3	21.1	21.8	22.3	20.7	21.4	21.2	21.9	22.4
	12H	20.9	21.5	21.4	22.0	22.5	21.0	21.6	21.5	22.1	22.6

12H	4H	19.6	20.4	20.1	20.9	21.3	19.7	20.5	20.1	20.9	21.4
	6H	20.4	21.1	20.9	21.5	22.1	20.5	21.1	21.0	21.6	22.1
	8H	20.8	21.3	21.3	21.8	22.4	20.8	21.4	21.3	21.9	22.5

Maximum UGR = 22.6

POLAR GRAPH



Maximum Candela = 5679.206 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.)