



IES INDOOR REPORT

PHOTOMETRIC FILENAME : SQRG-44-L200-835-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 4X4'RECESSED LUMINAIRE

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

[LUMCAT] 50G-S44-L200-835-FKSH-FROSTGLAZE-187-DIM-UNV

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	20157
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	89
Total Luminaire Watts	226.9
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	4991	5018	5035
55	4804	4818	4851
65	4479	4473	4546
75	3819	3746	3866
85	3196	3056	3304

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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	7552.546	7552.546	7552.546	7552.546	7552.546
5	7393.413	7388.049	7384.473	7388.049	7388.049
10	7318.317	7318.317	7318.317	7318.317	7327.257
15	7127.000	7118.060	7130.576	7130.576	7130.576
20	6712.182	6715.758	6715.758	6728.274	6728.274
25	6281.272	6281.272	6290.212	6299.152	6299.152
30	5789.570	5794.934	5802.086	5811.026	5814.602
35	5421.240	5424.816	5433.756	5446.272	5449.848
40	5090.459	5101.187	5106.551	5110.127	5119.067
45	4666.701	4684.581	4691.733	4707.825	4707.825
50	4158.907	4171.423	4174.999	4192.879	4208.971
55	3643.960	3643.960	3654.688	3676.144	3679.720
60	2994.913	2994.913	3007.429	3019.945	3036.038
65	2503.211	2496.059	2499.635	2515.727	2540.759
70	1906.017	1893.500	1889.924	1909.593	1934.625
75	1307.034	1287.366	1282.002	1303.458	1323.126
80	827.848	802.816	802.816	818.908	847.516
85	368.330	355.814	352.238	364.754	380.846
90	41.124	50.064	50.064	50.064	50.064

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Zone	Lumens	%Lamp	%Fixt
0-20	2702.87	N.A.	13.40
0-30	5597.75	N.A.	27.80
0-40	9011.22	N.A.	44.70
0-60	15864.64	N.A.	78.70
0-80	19724.86	N.A.	97.90
0-90	20157.27	N.A.	100.00
10-90	19452.53	N.A.	96.50
20-40	6308.34	N.A.	31.30
20-50	9915.67	N.A.	49.20
40-70	9311.88	N.A.	46.20
60-80	3860.22	N.A.	19.20
70-80	1401.76	N.A.	7.00
80-90	432.41	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	20157.27	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	704.73
10-20	1998.14
20-30	2894.88
30-40	3413.47
40-50	3607.33
50-60	3246.1
60-70	2458.45
70-80	1401.76
80-90	432.41
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	213	213	213	213	208	208	208	208	199	199	199	190	190	190	182	182	182	179
1	194	186	178	171	189	182	174	168	174	168	163	167	162	158	160	157	153	149
2	177	162	149	139	172	158	147	137	152	142	134	146	138	131	141	134	128	124
3	161	142	127	116	156	139	125	114	134	122	112	129	119	110	124	116	109	105
4	147	126	110	98	143	123	109	97	119	106	96	115	104	95	111	101	93	89
5	135	112	96	84	132	110	95	84	107	93	83	103	91	82	100	89	81	77
6	125	101	85	74	122	100	84	73	96	83	73	93	81	72	90	80	71	68
7	116	92	76	65	113	90	75	65	88	74	64	85	73	64	83	72	63	60
8	108	84	69	58	105	83	68	58	80	67	58	78	66	57	76	65	57	53
9	101	77	62	52	98	76	62	52	74	61	52	72	60	52	70	59	51	48
10	95	71	57	47	92	70	57	47	68	56	47	67	55	47	65	54	47	44

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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

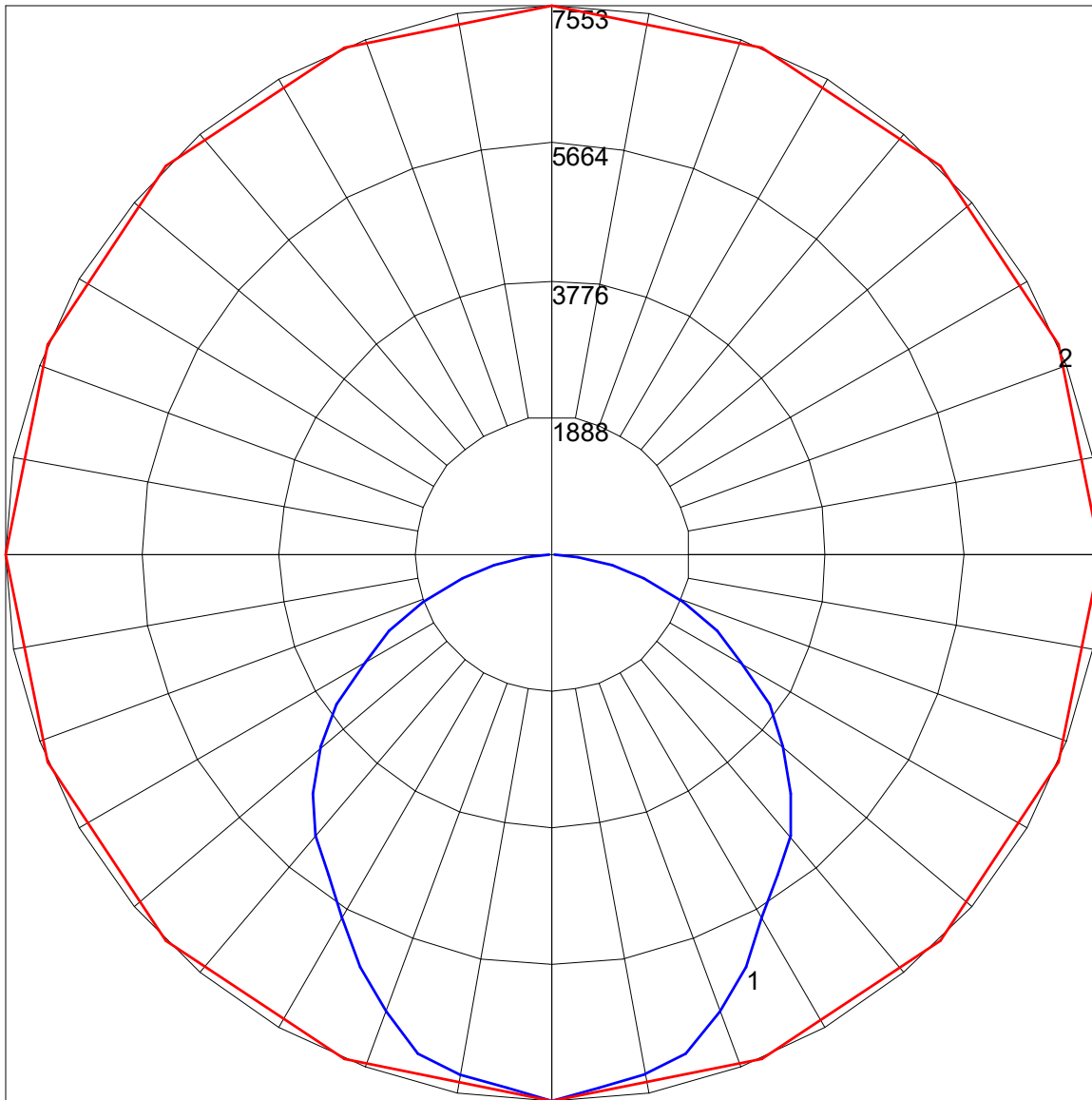
X=2H	Y=2H	15.5	17.1	15.8	17.4	17.7	15.5	17.2	15.9	17.5	17.8
	3H	17.3	18.8	17.7	19.1	19.5	17.4	18.9	17.7	19.2	19.5
	4H	17.9	19.4	18.3	19.7	20.1	18.0	19.4	18.4	19.8	20.1
	6H	18.5	19.8	18.9	20.1	20.5	18.6	19.8	19.0	20.2	20.6
	8H	18.6	19.9	19.1	20.3	20.7	18.7	20.0	19.1	20.4	20.8
	12H	18.8	20.0	19.2	20.3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

UGR Viewed Endwise

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 = 7552.546 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.)