



IES INDOOR REPORT

PHOTOMETRIC FILENAME : SQRG-22-L42-835-FFG125-(L20)-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] 05-APR-2023

[MANUFAC] WILLIAMS INDOOR

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

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

[MORE] WHITE FLAT REFLECTOR w/FROSTED ACRYLIC LENS

[LUMCAT] SQRG-22-L42-835-FFG125-(L20)-DIM-UNV

[LAMPCAT] HLM 80 CRI 3500K CCT

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2012
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	102
Total Luminaire Watts	19.8
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	1922	1932	1939
55	1850	1855	1868
65	1725	1722	1750
75	1470	1442	1488
85	1231	1177	1272

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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	753.831	753.831	753.831	753.831	753.831
5	737.947	737.412	737.055	737.412	737.412
10	730.452	730.452	730.452	730.452	731.344
15	711.356	710.464	711.713	711.713	711.713
20	669.953	670.310	670.310	671.559	671.559
25	626.943	626.943	627.835	628.728	628.728
30	577.865	578.401	579.115	580.007	580.364
35	541.102	541.459	542.351	543.600	543.957
40	508.086	509.157	509.692	510.049	510.942
45	465.790	467.575	468.289	469.895	469.895
50	415.107	416.356	416.713	418.497	420.104
55	363.709	363.709	364.780	366.921	367.278
60	298.927	298.927	300.176	301.425	303.031
65	249.849	249.135	249.492	251.098	253.597
70	190.242	188.993	188.636	190.599	193.098
75	130.457	128.494	127.958	130.100	132.063
80	82.629	80.130	80.130	81.736	84.592
85	36.764	35.514	35.157	36.407	38.013
90	4.105	4.997	4.997	4.997	4.997

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	269.78	N.A.	13.40
0-30	558.72	N.A.	27.80
0-40	899.42	N.A.	44.70
0-60	1583.47	N.A.	78.70
0-80	1968.77	N.A.	97.90
0-90	2011.93	N.A.	100.00
10-90	1941.59	N.A.	96.50
20-40	629.65	N.A.	31.30
20-50	989.70	N.A.	49.20
40-70	929.43	N.A.	46.20
60-80	385.29	N.A.	19.20
70-80	139.91	N.A.	7.00
80-90	43.16	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	2011.93	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	70.34
10-20	199.44
20-30	288.94
30-40	340.70
40-50	360.05
50-60	324.00
60-70	245.38
70-80	139.91
80-90	43.16
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

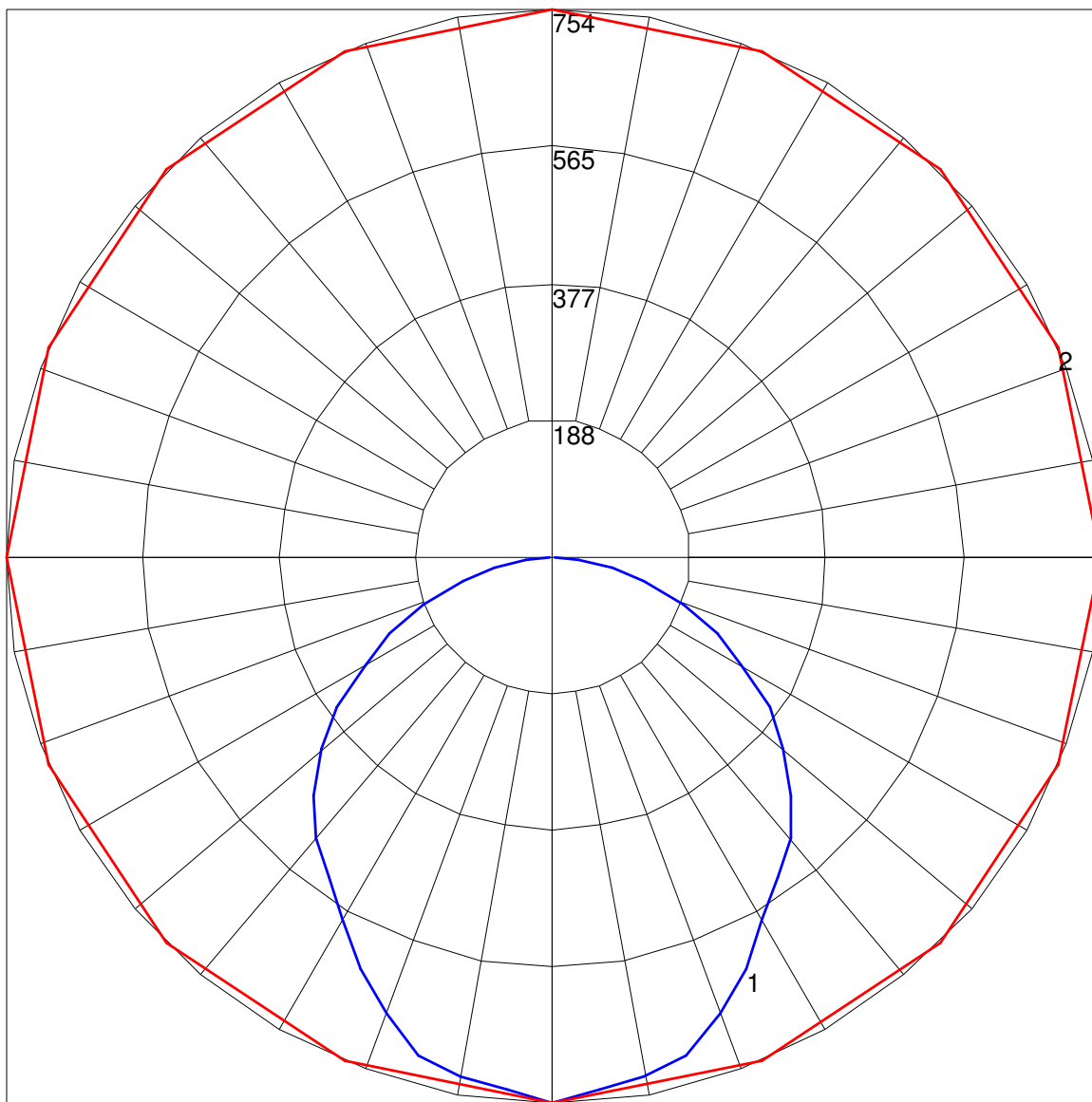
X=2H	Y=2H	14.1	15.8	14.5	16.1	16.4	14.2	15.9	14.6	16.2	16.5
	3H	16.0	17.5	16.4	17.8	18.2	16.1	17.5	16.4	17.9	18.2
	4H	16.6	18.0	17.0	18.4	18.8	16.7	18.1	17.1	18.5	18.8
	6H	17.2	18.5	17.6	18.8	19.2	17.2	18.5	17.7	18.9	19.3
	8H	17.3	18.6	17.8	19.0	19.4	17.4	18.7	17.8	19.0	19.4
	12H	17.5	18.6	17.9	19.0	19.5	17.6	18.7	18.0	19.1	19.5

UGR Viewed Endwise

4H	2H	14.8	16.2	15.2	16.6	16.9	14.9	16.3	15.3	16.6	17.0
	3H	16.9	18.0	17.3	18.4	18.8	16.9	18.1	17.3	18.5	18.9
	4H	17.6	18.7	18.1	19.1	19.5	17.7	18.7	18.1	19.2	19.6
	6H	18.3	19.2	18.7	19.6	20.1	18.3	19.3	18.8	19.7	20.2
	8H	18.5	19.4	18.9	19.8	20.3	18.6	19.4	19.0	19.9	20.3
	12H	18.7	19.4	19.1	19.9	20.4	18.7	19.5	19.2	20.0	20.5
8H	4H	17.9	18.8	18.4	19.2	19.7	18.0	18.9	18.4	19.3	19.8
	6H	18.7	19.4	19.2	19.9	20.4	18.8	19.5	19.3	20.0	20.4
	8H	19.0	19.6	19.5	20.2	20.6	19.1	19.7	19.6	20.2	20.7
	12H	19.2	19.8	19.7	20.3	20.9	19.3	19.9	19.8	20.4	21.0
12H	4H	18.0	18.7	18.4	19.2	19.7	18.0	18.8	18.5	19.3	19.7
	6H	18.8	19.4	19.3	19.9	20.4	18.8	19.5	19.3	19.9	20.5
	8H	19.1	19.7	19.6	20.2	20.7	19.2	19.8	19.7	20.3	20.8

Maximum UGR = 21.0

POLAR GRAPH



Maximum Candela = 753.831 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.)