



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 50G-S22-L43-835-FAF12125-DIM-UNV\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM BALLABS TEST NO. 18124.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUEDATE] 05-19-2020

[MANUFAC] WILLIAMS INDOOR

[OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO. 64836

[LUMINAIRE] 2x2' RECESSED TROFFER

[MORE] WITH FROSTED ACRYLIC LENS

[LUMCAT] 50G-S22-L43-835-FAF12125-DIM-UNV

[LAMPCAT] HLM 80 CRI, 3500K CCT

[\_SEARCH\_SOURCETYPE]LED

[\_SEARCH\_APPLICATION]INDOOR,CLASSROOM, COMMERCIAL, EDUCATIONAL,OFFICE, DIRECT

[\_SEARCH\_MOUNTING]RECESSED

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4363
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	129
Total Luminaire Watts	33.7
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.18
Spacing Criterion (90-270)	1.22
Spacing Criterion (Diagonal)	1.26
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	1.77 ft
Luminous Width (90-270)	1.77 ft
Luminous Height	0.00 ft

### LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	4840	4940	5144
55	3987	4020	4140
65	3173	3106	3240
75	2778	2677	2668
85	2741	2524	2578

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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>
<b>0</b>	1903.854	1903.854	1903.854	1903.854	1903.854
<b>5</b>	1901.095	1899.716	1895.577	1891.438	1890.058
<b>10</b>	1862.466	1863.846	1863.846	1860.397	1866.605
<b>15</b>	1828.666	1831.425	1841.082	1839.703	1849.360
<b>20</b>	1687.256	1703.812	1710.020	1717.608	1733.473
<b>25</b>	1607.239	1627.933	1637.591	1649.317	1671.391
<b>30</b>	1481.695	1495.491	1516.875	1527.912	1558.953
<b>35</b>	1326.490	1335.457	1362.360	1387.192	1416.164
<b>40</b>	1164.386	1169.215	1193.358	1218.191	1249.232
<b>45</b>	998.144	997.454	1018.838	1030.565	1060.916
<b>50</b>	829.832	830.522	846.387	842.938	874.669
<b>55</b>	667.039	668.418	672.557	669.798	692.561
<b>60</b>	515.282	513.903	513.903	507.005	528.389
<b>65</b>	391.118	384.910	382.840	380.771	399.396
<b>70</b>	291.786	285.578	281.439	282.129	287.648
<b>75</b>	209.700	205.561	202.112	200.043	201.422
<b>80</b>	137.271	136.581	134.511	129.683	130.373
<b>85</b>	69.670	72.429	64.152	64.152	65.531
<b>90</b>	0.000	0.000	0.000	0.000	0.000

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	691.85	N.A.	15.90
0-30	1442.2	N.A.	33.10
0-40	2293.46	N.A.	52.60
0-60	3683.92	N.A.	84.40
0-80	4290.29	N.A.	98.30
0-90	4363.2	N.A.	100.00
10-90	4183.31	N.A.	95.90
20-40	1601.62	N.A.	36.70
20-50	2388.19	N.A.	54.70
40-70	1779.09	N.A.	40.80
60-80	606.36	N.A.	13.90
70-80	217.73	N.A.	5.00
80-90	72.91	N.A.	1.70
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	4363.2	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	179.88
10-20	511.96
20-30	750.35
30-40	851.27
40-50	786.58
50-60	603.88
60-70	388.63
70-80	217.73
80-90	72.91
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	110	105	101	98	107	103	99	96	99	96	93	95	93	90	91	89	88	86
2	101	93	87	81	98	91	85	80	88	83	79	84	80	77	81	78	75	73
3	92	83	75	69	90	81	74	68	78	72	67	75	70	66	73	69	65	63
4	85	74	66	59	83	73	65	59	70	63	58	68	62	57	66	61	57	55
5	79	67	58	52	77	65	57	51	63	56	51	61	55	50	60	54	50	48
6	73	60	52	46	71	59	51	46	58	50	45	56	50	45	54	49	44	42
7	68	55	47	41	66	54	46	41	53	46	40	51	45	40	50	44	40	38
8	63	50	42	37	62	50	42	37	48	41	36	47	41	36	46	40	36	34
9	59	46	39	33	58	46	38	33	45	38	33	44	37	33	43	37	33	31
10	56	43	35	30	54	42	35	30	41	35	30	41	34	30	40	34	30	28

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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	17.7	16.6	18.0	18.3	16.2	17.7	16.6	18.0	18.4
	3H	17.6	19.0	18.0	19.3	19.7	17.6	19.0	18.0	19.3	19.7
	4H	18.2	19.5	18.6	19.8	20.2	18.1	19.4	18.5	19.8	20.2
	6H	18.7	19.9	19.1	20.2	20.6	18.6	19.8	19.0	20.2	20.5
	8H	18.9	20.0	19.3	20.4	20.8	18.8	19.9	19.2	20.3	20.7
	12H	19.0	20.1	19.4	20.5	20.9	18.9	20.0	19.3	20.4	20.8

### UGR Viewed Endwise

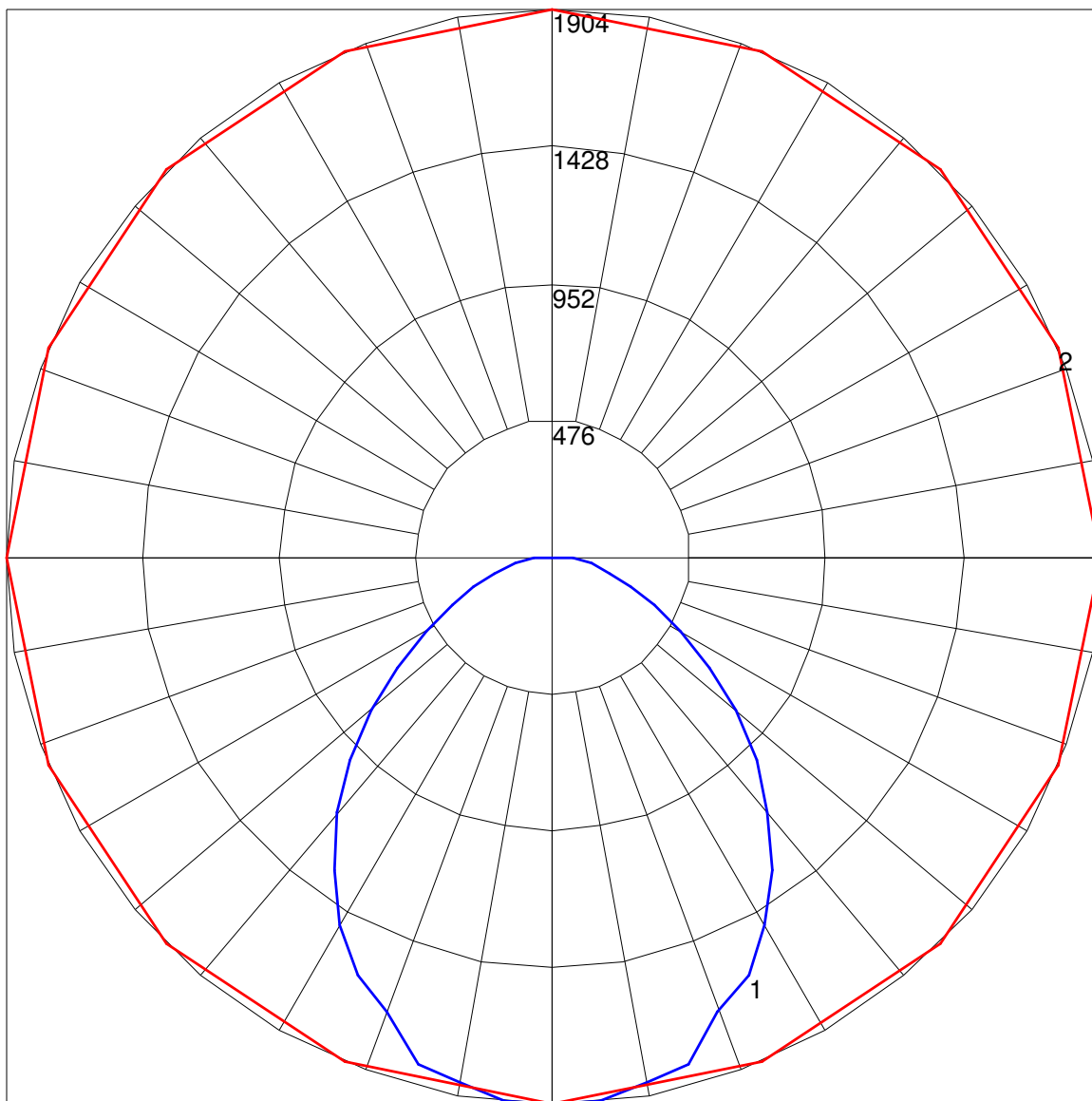
4H	2H	16.6	17.9	17.0	18.3	18.7	16.6	17.9	17.0	18.3	18.7
	3H	18.3	19.4	18.7	19.8	20.2	18.3	19.4	18.7	19.8	20.2
	4H	19.0	20.0	19.4	20.4	20.8	19.0	19.9	19.4	20.3	20.8
	6H	19.7	20.5	20.1	20.9	21.4	19.6	20.4	20.0	20.8	21.3
	8H	19.9	20.7	20.4	21.1	21.6	19.8	20.6	20.3	21.0	21.5
	12H	20.1	20.8	20.6	21.3	21.8	20.0	20.7	20.5	21.2	21.6

8H	4H	19.3	20.1	19.7	20.5	21.0	19.2	20.0	19.7	20.5	20.9
	6H	20.1	20.7	20.6	21.2	21.7	20.0	20.6	20.5	21.1	21.6
	8H	20.4	21.0	20.9	21.5	22.0	20.3	20.9	20.8	21.4	21.9
	12H	20.7	21.3	21.3	21.8	22.3	20.6	21.1	21.1	21.6	22.1

12H	4H	19.3	20.0	19.8	20.5	21.0	19.3	20.0	19.7	20.4	20.9
	6H	20.1	20.7	20.7	21.2	21.7	20.0	20.6	20.6	21.1	21.6
	8H	20.6	21.1	21.1	21.6	22.1	20.4	20.9	20.9	21.4	22.0

Maximum UGR = 22.3

POLAR GRAPH



Maximum Candela = 1903.854 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.)