



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 50G-S24-L90-840-FAF12125-DIM-UNV\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM BALLABS TEST NO. 18125.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUEDATE] 01-20-2022

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] 2x4' LED TROFFER

[MORE] FROSTED ACRYLIC LENS

[LUMCAT] 50G-S24-L90-840-FAF12125-DIM-UNV

[LAMPCAT] HLM 80 CRI, 4000K 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	9379
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	140
Total Luminaire Watts	67.1
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.14
Spacing Criterion (90-270)	1.16
Spacing Criterion (Diagonal)	1.24
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	3.77 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	5087	5016	4946
55	4198	4058	3934
65	3376	3173	3132
75	2735	2620	2765
85	2732	2732	3223

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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>	4223.425	4223.425	4223.425	4223.425	4223.425
<b>5</b>	4181.852	4179.126	4175.718	4173.674	4173.674
<b>10</b>	4106.202	4101.432	4104.839	4106.202	4106.202
<b>15</b>	3938.547	3938.547	3938.547	3943.317	3945.362
<b>20</b>	3792.018	3792.018	3796.789	3803.604	3796.789
<b>25</b>	3472.382	3468.974	3479.197	3485.331	3483.968
<b>30</b>	3199.090	3195.682	3202.497	3202.497	3209.312
<b>35</b>	2878.090	2876.727	2871.275	2869.912	2882.861
<b>40</b>	2546.868	2540.734	2527.104	2516.199	2525.740
<b>45</b>	2234.047	2225.868	2202.696	2182.932	2172.028
<b>50</b>	1837.398	1821.041	1802.640	1771.971	1753.570
<b>55</b>	1495.271	1470.055	1445.520	1408.036	1401.220
<b>60</b>	1157.233	1137.469	1106.119	1076.813	1073.406
<b>65</b>	885.986	869.629	832.826	821.922	821.922
<b>70</b>	645.406	635.865	604.515	616.101	617.464
<b>75</b>	439.585	432.770	421.184	436.178	444.356
<b>80</b>	296.464	291.694	291.694	304.643	314.184
<b>85</b>	147.891	143.121	147.891	167.656	174.471
<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	1511.57	N.A.	16.10
0-30	3119.79	N.A.	33.30
0-40	4916.23	N.A.	52.40
0-60	7895.77	N.A.	84.20
0-80	9213.47	N.A.	98.20
0-90	9379.07	N.A.	100.00
10-90	8982.41	N.A.	95.80
20-40	3404.66	N.A.	36.30
20-50	5089.69	N.A.	54.30
40-70	3825.79	N.A.	40.80
60-80	1317.7	N.A.	14.00
70-80	471.45	N.A.	5.00
80-90	165.60	N.A.	1.80
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	9379.07	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	396.67
10-20	1114.9
20-30	1608.22
30-40	1796.44
40-50	1685.03
50-60	1294.51
60-70	846.25
70-80	471.45
80-90	165.60
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	92	90	91	89	88	86
2	101	93	87	81	98	91	85	80	88	83	78	84	80	77	81	78	75	73
3	92	83	75	69	90	81	74	68	78	72	67	75	70	66	73	68	65	63
4	85	74	66	59	83	73	65	59	70	63	58	68	62	57	66	61	57	54
5	79	66	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	55	43	35	30	42	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	16.5	18.0	16.8	18.3	18.6	16.1	17.6	16.5	17.9	18.3
	3H	17.9	19.3	18.3	19.6	20.0	17.5	18.9	17.9	19.3	19.6
	4H	18.4	19.7	18.8	20.1	20.5	18.1	19.4	18.5	19.8	20.2
	6H	18.9	20.1	19.3	20.5	20.9	18.7	19.9	19.1	20.2	20.6
	8H	19.1	20.2	19.5	20.6	21.0	18.9	20.1	19.3	20.4	20.8
	12H	19.2	20.3	19.6	20.7	21.1	19.1	20.2	19.5	20.6	21.0

### UGR Viewed Endwise

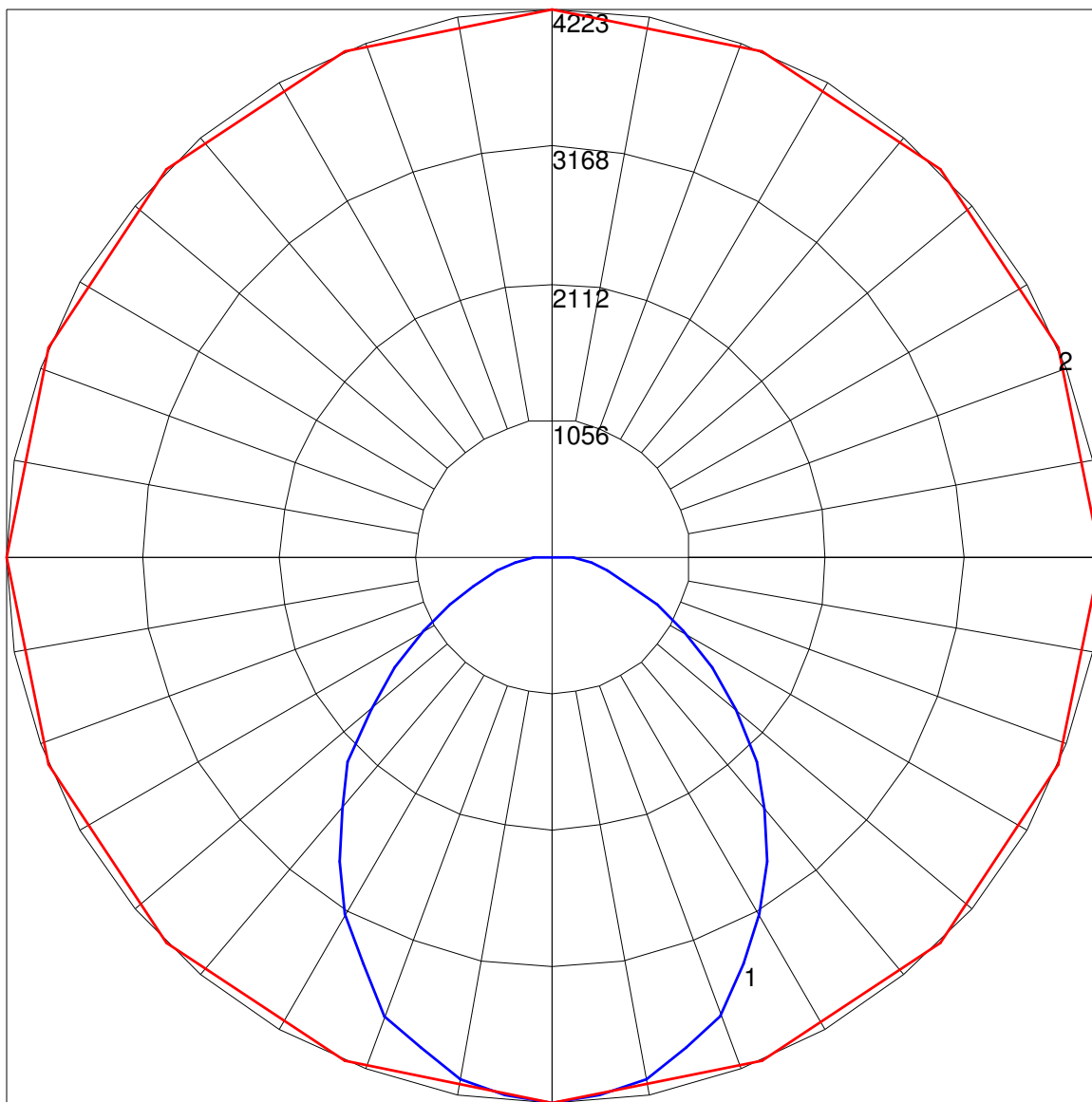
4H	2H	16.9	18.2	17.3	18.5	18.9	16.6	17.9	17.0	18.2	18.6
	3H	18.5	19.6	19.0	20.0	20.4	18.3	19.4	18.7	19.8	20.2
	4H	19.2	20.2	19.6	20.6	21.0	19.0	20.0	19.4	20.4	20.8
	6H	19.8	20.7	20.3	21.1	21.6	19.7	20.5	20.2	21.0	21.4
	8H	20.1	20.9	20.5	21.3	21.8	20.0	20.8	20.5	21.2	21.7
	12H	20.3	21.0	20.8	21.5	21.9	20.3	21.0	20.8	21.5	21.9

8H	4H	19.5	20.3	19.9	20.7	21.2	19.3	20.1	19.7	20.5	21.0
	6H	20.2	20.9	20.7	21.4	21.8	20.1	20.8	20.6	21.3	21.7
	8H	20.5	21.1	21.1	21.7	22.1	20.5	21.1	21.0	21.6	22.1
	12H	20.8	21.4	21.3	21.9	22.4	20.9	21.4	21.4	21.9	22.5

12H	4H	19.5	20.2	20.0	20.7	21.2	19.3	20.0	19.8	20.5	21.0
	6H	20.3	20.9	20.8	21.4	21.9	20.2	20.8	20.7	21.3	21.8
	8H	20.7	21.2	21.2	21.7	22.3	20.6	21.2	21.2	21.7	22.2

Maximum UGR = 22.5

POLAR GRAPH



Maximum Candela = 4223.425 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.)