



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 50G-S24-L59-840-SAF19156-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] 06-17-2022

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] 2x4' LED TROFFER

[MORE] FROSTED ACRYLIC LENS

[LUMCAT] 50G-S24-L59-840-SAF19156-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	6033
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	126
Total Luminaire Watts	48
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	3272	3226	3181
55	2700	2610	2530
65	2171	2041	2014
75	1759	1685	1778
85	1757	1757	2073

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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	2716.582	2716.582	2716.582	2716.582	2716.582
5	2689.841	2688.088	2685.896	2684.581	2684.581
10	2641.182	2638.114	2640.305	2641.182	2641.182
15	2533.343	2533.343	2533.343	2536.412	2537.727
20	2439.093	2439.093	2442.162	2446.546	2442.162
25	2233.498	2231.306	2237.881	2241.827	2240.950
30	2057.711	2055.519	2059.903	2059.903	2064.287
35	1851.239	1850.362	1846.855	1845.978	1854.307
40	1638.191	1634.245	1625.478	1618.464	1624.601
45	1436.978	1431.718	1416.813	1404.101	1397.087
50	1181.847	1171.326	1159.490	1139.763	1127.927
55	961.785	945.565	929.784	905.673	901.290
60	744.353	731.640	711.475	692.625	690.434
65	569.882	559.361	535.689	528.675	528.675
70	415.137	409.000	388.835	396.287	397.164
75	282.749	278.365	270.913	280.557	285.818
80	190.691	187.623	187.623	195.952	202.089
85	95.126	92.058	95.126	107.839	112.223
90	0.000	0.000	0.000	0.000	0.000

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	972.27	N.A.	16.10
0-30	2006.7	N.A.	33.30
0-40	3162.21	N.A.	52.40
0-60	5078.7	N.A.	84.20
0-80	5926.27	N.A.	98.20
0-90	6032.79	N.A.	100.00
10-90	5777.64	N.A.	95.80
20-40	2189.94	N.A.	36.30
20-50	3273.78	N.A.	54.30
40-70	2460.81	N.A.	40.80
60-80	847.57	N.A.	14.00
70-80	303.25	N.A.	5.00
80-90	106.52	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	6032.79	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	255.14
10-20	717.12
20-30	1034.44
30-40	1155.5
40-50	1083.84
50-60	832.65
60-70	544.32
70-80	303.25
80-90	106.52
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	14.9	16.4	15.2	16.7	17.0	14.5	16.0	14.9	16.3	16.7
	3H	16.3	17.7	16.7	18.0	18.4	15.9	17.3	16.3	17.7	18.0
	4H	16.8	18.1	17.2	18.5	18.9	16.5	17.8	16.9	18.2	18.6
	6H	17.3	18.5	17.7	18.9	19.3	17.1	18.3	17.5	18.6	19.0
	8H	17.5	18.6	17.9	19.0	19.4	17.3	18.5	17.7	18.8	19.2
	12H	17.6	18.7	18.0	19.1	19.5	17.5	18.6	17.9	19.0	19.4

UGR Viewed Endwise

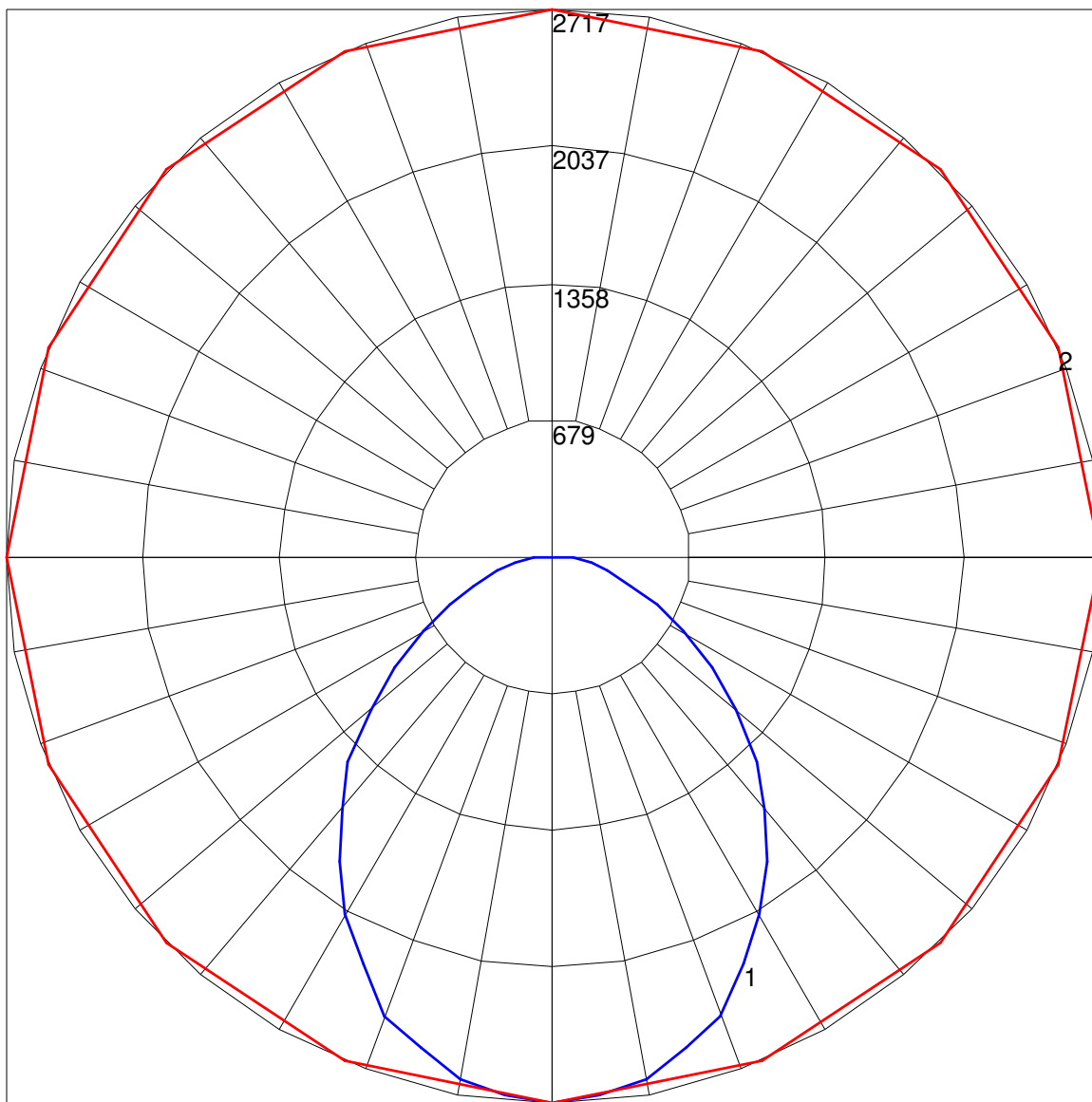
4H	2H	15.3	16.6	15.7	16.9	17.3	15.0	16.3	15.4	16.6	17.0
	3H	16.9	18.0	17.4	18.4	18.8	16.7	17.8	17.1	18.2	18.6
	4H	17.6	18.6	18.0	19.0	19.4	17.4	18.4	17.8	18.8	19.2
	6H	18.2	19.1	18.7	19.5	20.0	18.1	18.9	18.6	19.4	19.8
	8H	18.5	19.3	18.9	19.7	20.2	18.4	19.2	18.9	19.6	20.1
	12H	18.7	19.4	19.2	19.9	20.3	18.7	19.4	19.2	19.9	20.3

8H	4H	17.9	18.7	18.3	19.1	19.6	17.7	18.5	18.1	18.9	19.4
	6H	18.6	19.3	19.1	19.8	20.2	18.5	19.2	19.0	19.7	20.1
	8H	18.9	19.5	19.5	20.1	20.5	18.9	19.5	19.4	20.0	20.5
	12H	19.2	19.8	19.7	20.3	20.8	19.3	19.8	19.8	20.3	20.9

12H	4H	17.9	18.6	18.4	19.1	19.6	17.7	18.4	18.2	18.9	19.4
	6H	18.7	19.3	19.2	19.8	20.3	18.6	19.2	19.1	19.7	20.2
	8H	19.1	19.6	19.6	20.1	20.7	19.0	19.6	19.6	20.1	20.6

Maximum UGR = 20.9

POLAR GRAPH



Maximum Candela = 2716.582 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.)