



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 50G-S24-L33-840-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] 02-11-2022

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] 2x4' LED TROFFER

[MORE] FROSTED ACRYLIC LENS

[LUMCAT] 50G-S24-L33-840-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	3502
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	141
Total Luminaire Watts	24.9
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	1900	1873	1847
55	1567	1515	1469
65	1260	1185	1169
75	1021	978	1032
85	1020	1020	1204

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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>	1576.943	1576.943	1576.943	1576.943	1576.943
<b>5</b>	1561.421	1560.403	1559.130	1558.367	1558.367
<b>10</b>	1533.175	1531.393	1532.666	1533.175	1533.175
<b>15</b>	1470.575	1470.575	1470.575	1472.356	1473.120
<b>20</b>	1415.864	1415.864	1417.646	1420.190	1417.646
<b>25</b>	1296.519	1295.246	1299.063	1301.353	1300.844
<b>30</b>	1194.477	1193.204	1195.749	1195.749	1198.294
<b>35</b>	1074.622	1074.113	1072.077	1071.568	1076.403
<b>40</b>	950.950	948.660	943.570	939.499	943.061
<b>45</b>	834.149	831.095	822.443	815.064	810.992
<b>50</b>	686.048	679.941	673.070	661.619	654.748
<b>55</b>	558.305	548.889	539.728	525.733	523.188
<b>60</b>	432.088	424.708	413.003	402.061	400.788
<b>65</b>	330.809	324.702	310.961	306.889	306.889
<b>70</b>	240.982	237.419	225.714	230.040	230.549
<b>75</b>	164.132	161.588	157.262	162.860	165.914
<b>80</b>	110.694	108.913	108.913	113.748	117.310
<b>85</b>	55.220	53.438	55.220	62.599	65.144
<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	564.39	N.A.	16.10
0-30	1164.87	N.A.	33.30
0-40	1835.62	N.A.	52.40
0-60	2948.12	N.A.	84.20
0-80	3440.13	N.A.	98.20
0-90	3501.96	N.A.	100.00
10-90	3353.85	N.A.	95.80
20-40	1271.23	N.A.	36.30
20-50	1900.39	N.A.	54.30
40-70	1428.47	N.A.	40.80
60-80	492.00	N.A.	14.00
70-80	176.03	N.A.	5.00
80-90	61.83	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	3501.96	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	148.11
10-20	416.28
20-30	600.48
30-40	670.75
40-50	629.16
50-60	483.34
60-70	315.97
70-80	176.03
80-90	61.83
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

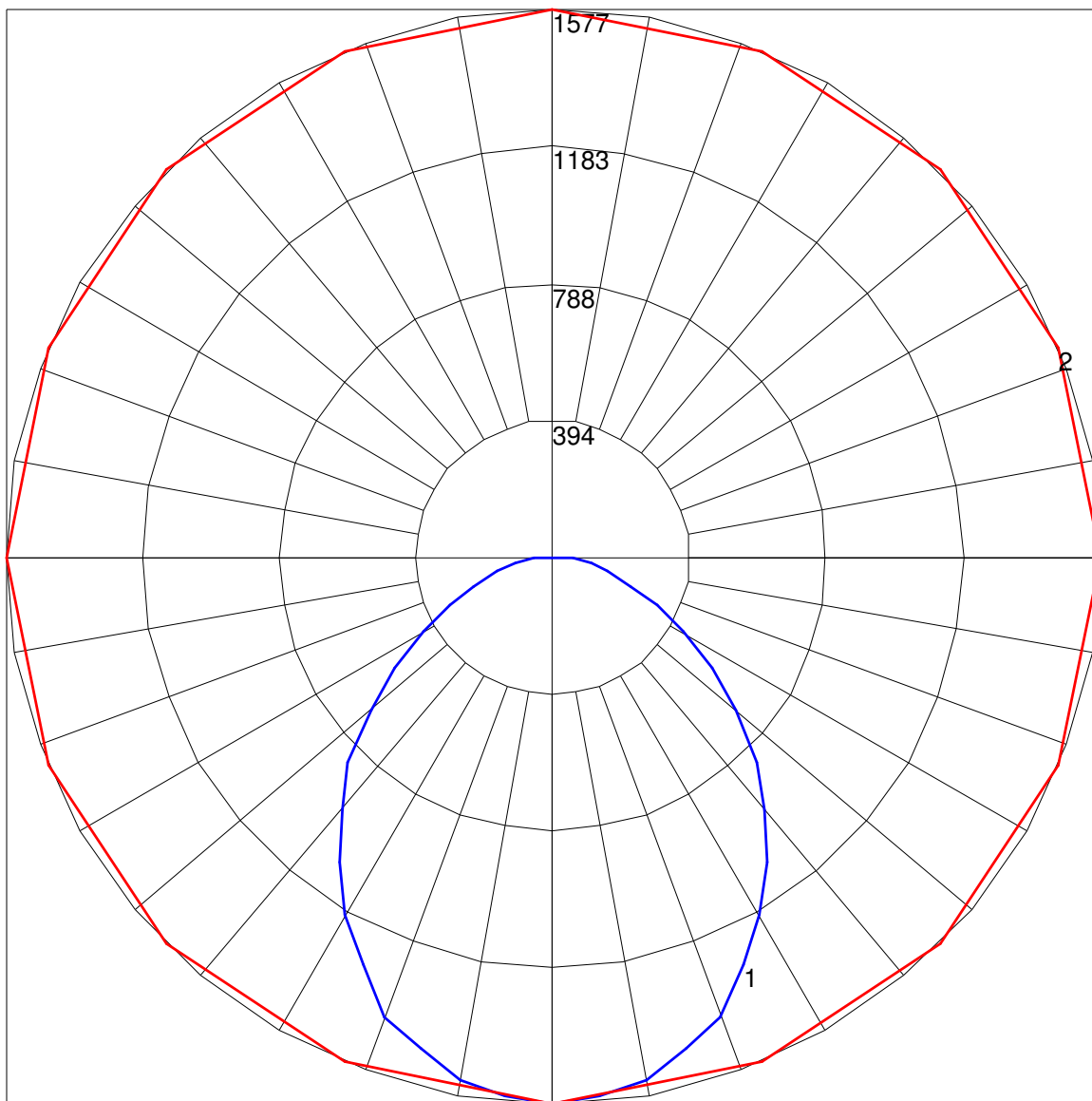
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**UGR TABLE - CORRECTED**

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					UGR Viewed Endwise				
X=2H	Y=2H	13.1	14.6	13.4	14.9	15.2	12.7	14.2	13.1	14.5	14.9
	3H	14.5	15.9	14.9	16.2	16.6	14.1	15.5	14.5	15.9	16.2
	4H	15.0	16.3	15.4	16.7	17.1	14.7	16.0	15.1	16.4	16.8
	6H	15.5	16.7	15.9	17.1	17.5	15.3	16.5	15.7	16.8	17.2
	8H	15.7	16.8	16.1	17.2	17.6	15.5	16.7	15.9	17.0	17.4
	12H	15.8	16.9	16.2	17.3	17.7	15.7	16.8	16.1	17.2	17.6
4H	2H	13.5	14.8	13.9	15.1	15.5	13.2	14.5	13.6	14.8	15.2
	3H	15.1	16.2	15.6	16.6	17.0	14.9	16.0	15.3	16.4	16.8
	4H	15.8	16.8	16.2	17.2	17.6	15.6	16.6	16.0	17.0	17.4
	6H	16.4	17.3	16.9	17.7	18.2	16.3	17.1	16.8	17.6	18.0
	8H	16.7	17.5	17.1	17.9	18.4	16.6	17.4	17.1	17.8	18.3
	12H	16.9	17.6	17.4	18.1	18.5	16.9	17.6	17.4	18.1	18.5
8H	4H	16.1	16.9	16.5	17.3	17.8	15.9	16.7	16.3	17.1	17.6
	6H	16.8	17.5	17.3	18.0	18.4	16.7	17.4	17.2	17.9	18.3
	8H	17.1	17.7	17.7	18.3	18.7	17.1	17.7	17.6	18.2	18.7
	12H	17.4	18.0	17.9	18.5	19.0	17.5	18.0	18.0	18.5	19.1
12H	4H	16.1	16.8	16.6	17.3	17.8	15.9	16.6	16.4	17.1	17.6
	6H	16.9	17.5	17.4	18.0	18.5	16.8	17.4	17.3	17.9	18.4
	8H	17.3	17.8	17.8	18.3	18.9	17.2	17.8	17.8	18.3	18.8

Maximum UGR = 19.1

POLAR GRAPH



Maximum Candela = 1576.943 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.)