



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 50G-S24-L33-840-SA19156-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] 11-04-2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] 2x4' LED TROFFER

[MORE] WITH ACRYLIC LENS

[LUMCAT] 50G-S24-L33-840-SA19156-DRV-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	1899	1873	1847
55	1567	1515	1469
65	1260	1185	1169
75	1021	978	1032
85	1020	1020	1203

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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>	1576.767	1576.767	1576.767	1576.767	1576.767
<b>5</b>	1561.246	1560.229	1558.956	1558.193	1558.193
<b>10</b>	1533.003	1531.222	1532.495	1533.003	1533.003
<b>15</b>	1470.411	1470.411	1470.411	1472.192	1472.955
<b>20</b>	1415.706	1415.706	1417.487	1420.032	1417.487
<b>25</b>	1296.374	1295.102	1298.918	1301.208	1300.699
<b>30</b>	1194.343	1193.071	1195.615	1195.615	1198.160
<b>35</b>	1074.502	1073.993	1071.957	1071.449	1076.283
<b>40</b>	950.844	948.554	943.465	939.394	942.956
<b>45</b>	834.056	831.002	822.351	814.973	810.902
<b>50</b>	685.971	679.865	672.995	661.545	654.675
<b>55</b>	558.242	548.828	539.668	525.674	523.129
<b>60</b>	432.040	424.661	412.957	402.016	400.744
<b>65</b>	330.773	324.666	310.926	306.855	306.855
<b>70</b>	240.955	237.393	225.689	230.014	230.523
<b>75</b>	164.114	161.570	157.244	162.842	165.895
<b>80</b>	110.682	108.900	108.900	113.735	117.297
<b>85</b>	55.214	53.432	55.214	62.592	65.137
<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	564.33	N.A.	16.10
0-30	1164.74	N.A.	33.30
0-40	1835.42	N.A.	52.40
0-60	2947.79	N.A.	84.20
0-80	3439.74	N.A.	98.20
0-90	3501.57	N.A.	100.00
10-90	3353.48	N.A.	95.80
20-40	1271.09	N.A.	36.30
20-50	1900.18	N.A.	54.30
40-70	1428.31	N.A.	40.80
60-80	491.95	N.A.	14.00
70-80	176.01	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	3501.57	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	148.09
10-20	416.24
20-30	600.41
30-40	670.68
40-50	629.09
50-60	483.29
60-70	315.94
70-80	176.01
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	85
2	101	93	87	81	98	91	85	80	88	83	78	84	80	77	81	78	75	73
3	92	82	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**

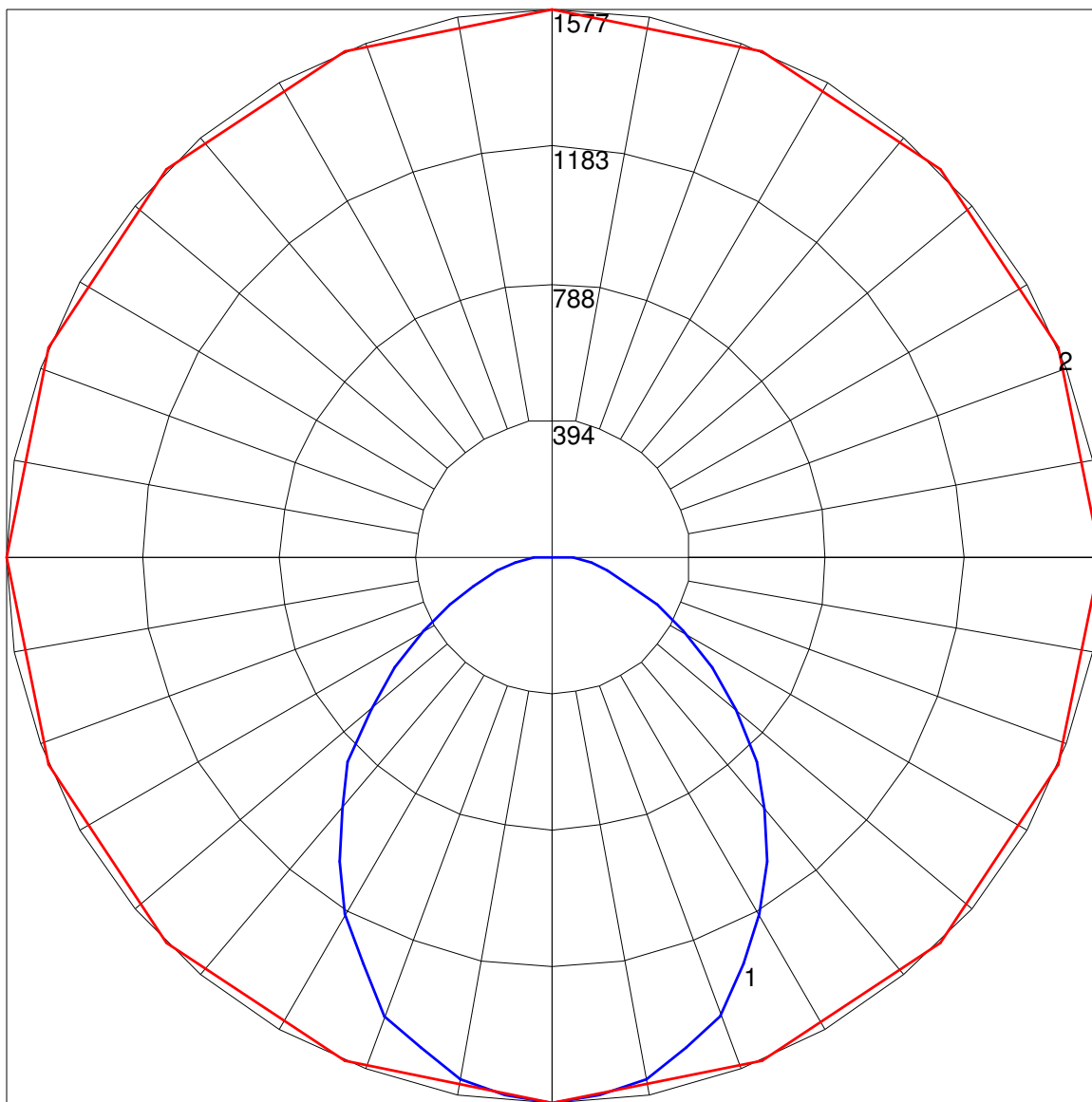
Reflectances

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	17.4	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	18.2	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	17.7	18.3	18.8

Maximum UGR = 19.1

POLAR GRAPH



Maximum Candela = 1576.767 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.)