



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 50G-S24-L59-935-SA12125-DRV-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] 02-17-2022

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] 2x4' LED TROFFER

[MORE] WITH ACRYLIC LENS

[LUMCAT] 50G-S24-L59-935-SA12125-DRV-UNV

[LAMPCAT] HLM 90 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	5120
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	107
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	2777	2738	2700
55	2292	2215	2147
65	1843	1732	1710
75	1493	1430	1509
85	1492	1492	1760

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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>	2305.526	2305.526	2305.526	2305.526	2305.526
<b>5</b>	2282.831	2281.343	2279.483	2278.367	2278.367
<b>10</b>	2241.535	2238.931	2240.791	2241.535	2241.535
<b>15</b>	2150.013	2150.013	2150.013	2152.618	2153.734
<b>20</b>	2070.025	2070.025	2072.629	2076.350	2072.629
<b>25</b>	1895.539	1893.678	1899.259	1902.607	1901.863
<b>30</b>	1746.351	1744.491	1748.211	1748.211	1751.932
<b>35</b>	1571.121	1570.377	1567.400	1566.656	1573.725
<b>40</b>	1390.310	1386.961	1379.521	1373.568	1378.776
<b>45</b>	1219.544	1215.079	1202.430	1191.641	1185.688
<b>50</b>	1003.017	994.088	984.043	967.301	957.256
<b>55</b>	816.254	802.488	789.095	768.633	764.912
<b>60</b>	631.722	620.933	603.819	587.822	585.961
<b>65</b>	483.651	474.722	454.632	448.679	448.679
<b>70</b>	352.321	347.112	329.999	336.323	337.067
<b>75</b>	239.965	236.245	229.920	238.105	242.569
<b>80</b>	161.837	159.233	159.233	166.301	171.510
<b>85</b>	80.732	78.128	80.732	91.522	95.242
<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	825.15	N.A.	16.10
0-30	1703.06	N.A.	33.30
0-40	2683.72	N.A.	52.40
0-60	4310.22	N.A.	84.20
0-80	5029.54	N.A.	98.20
0-90	5119.94	N.A.	100.00
10-90	4903.41	N.A.	95.80
20-40	1858.57	N.A.	36.30
20-50	2778.41	N.A.	54.30
40-70	2088.46	N.A.	40.80
60-80	719.32	N.A.	14.00
70-80	257.36	N.A.	5.00
80-90	90.40	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	5119.94	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	216.54
10-20	608.61
20-30	877.91
30-40	980.66
40-50	919.84
50-60	706.66
60-70	461.96
70-80	257.36
80-90	90.40
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	14.4	15.9	14.7	16.2	16.5	14.0	15.5	14.4	15.8	16.2
	3H	15.8	17.2	16.2	17.5	17.9	15.4	16.8	15.8	17.2	17.5
	4H	16.3	17.6	16.7	18.0	18.4	16.0	17.3	16.4	17.7	18.1
	6H	16.8	18.0	17.2	18.4	18.8	16.6	17.8	17.0	18.1	18.5
	8H	17.0	18.1	17.4	18.5	18.9	16.8	18.0	17.2	18.3	18.7
	12H	17.1	18.2	17.5	18.6	19.0	17.0	18.1	17.4	18.5	18.9

UGR Viewed Endwise

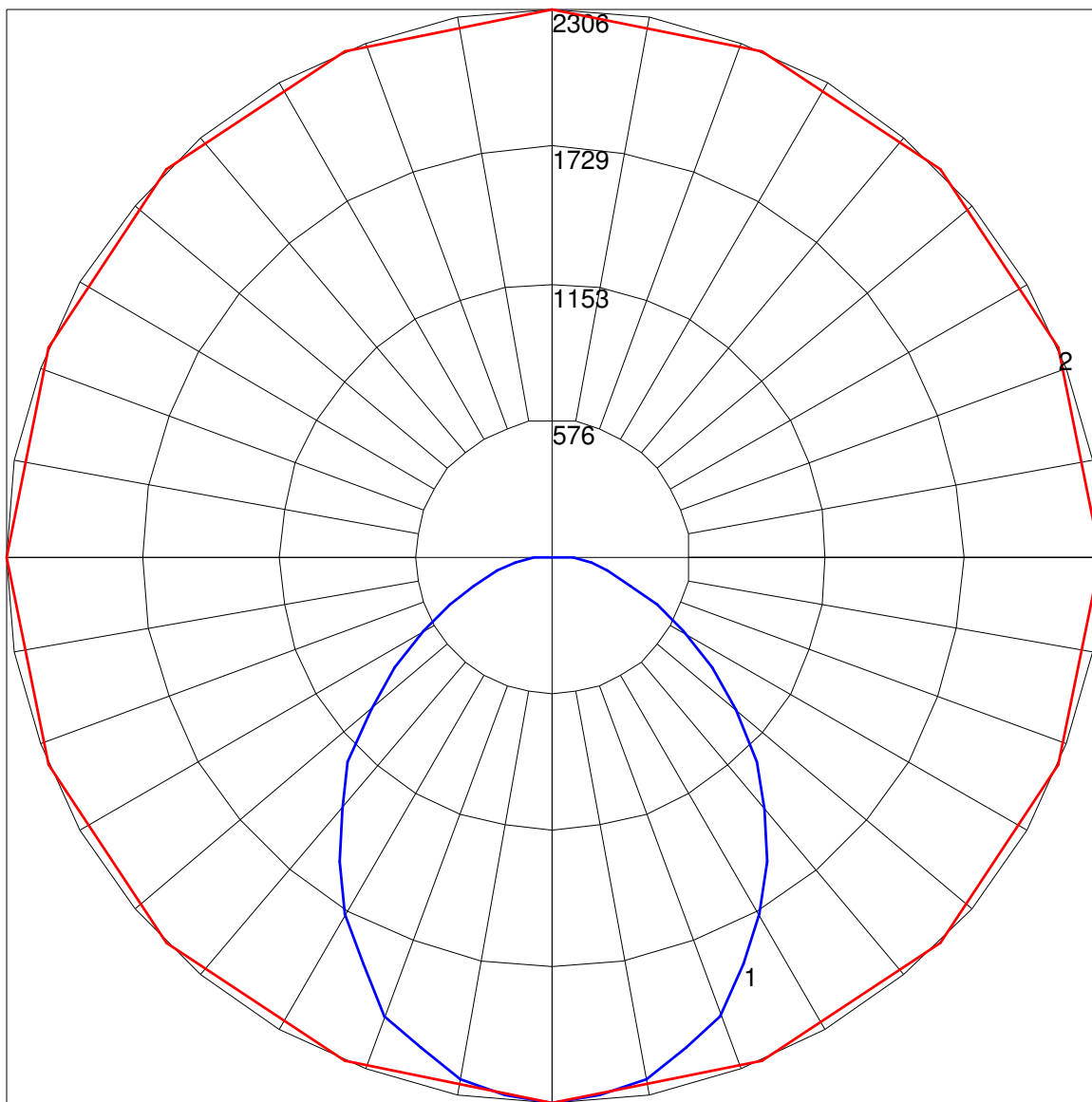
4H	2H	14.8	16.1	15.2	16.4	16.8	14.5	15.8	14.9	16.1	16.5
	3H	16.4	17.5	16.9	17.9	18.3	16.2	17.3	16.6	17.7	18.1
	4H	17.1	18.1	17.5	18.5	18.9	16.9	17.9	17.3	18.3	18.7
	6H	17.7	18.6	18.2	19.0	19.5	17.6	18.4	18.1	18.9	19.3
	8H	18.0	18.8	18.4	19.2	19.7	17.9	18.7	18.4	19.1	19.6
	12H	18.2	18.9	18.7	19.4	19.8	18.2	18.9	18.7	19.4	19.8

8H	4H	17.4	18.2	17.8	18.6	19.1	17.2	18.0	17.6	18.4	18.9
	6H	18.1	18.8	18.6	19.3	19.7	18.0	18.7	18.5	19.2	19.6
	8H	18.4	19.0	19.0	19.6	20.0	18.4	19.0	18.9	19.5	20.0
	12H	18.7	19.3	19.2	19.8	20.3	18.8	19.3	19.3	19.8	20.4

12H	4H	17.4	18.1	17.9	18.6	19.1	17.2	17.9	17.7	18.4	18.9
	6H	18.2	18.8	18.7	19.3	19.8	18.1	18.7	18.6	19.2	19.7
	8H	18.6	19.1	19.1	19.6	20.2	18.5	19.1	19.1	19.6	20.1

Maximum UGR = 20.4

POLAR GRAPH



Maximum Candela = 2305.526 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.)