



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 12-4-L84-840-SAF12125-DIM-UNV\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM BALLABS TEST NO. 18637.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIE, INC

[ISSUEDATE] 04-JUNE-2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] 4-72LED 22"ARRAYS 2x4'WHITE REFL SURFACE MOUNT LUMINAIRE

[MORE] ARRAYS ON INTERNAL WHITE REFLS w/PAT12 LENS (PRISMS DOWN)

[LUMCAT] 12-4-L84-840-SAF12125-DIM-UNV

[LAMPCAT] HLM 80 CRI 4000K CCT

[\_SEARCH\_SOURCETYPE] LED

[\_SEARCH\_APPLICATION] INDOOR

[\_SEARCH\_MOUNTING] SURFACE

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	8771
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	140
Total Luminaire Watts	62.8
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.14
Spacing Criterion (90-270)	1.12
Spacing Criterion (Diagonal)	1.22
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	4644	4540	4488
55	3881	3732	3668
65	3210	3071	3043
75	2725	2666	2835
85	2832	2870	3333

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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>	4008.021	4008.021	4008.021	4008.021	4008.021
<b>5</b>	3913.262	3913.262	3908.055	3905.972	3908.055
<b>10</b>	3850.783	3845.576	3843.494	3845.576	3843.494
<b>15</b>	3663.346	3658.139	3653.974	3653.974	3653.974
<b>20</b>	3568.586	3557.132	3557.132	3554.008	3547.760
<b>25</b>	3269.729	3267.646	3258.275	3254.109	3258.275
<b>30</b>	2978.161	2973.996	2962.541	2955.252	2957.334
<b>35</b>	2687.634	2678.262	2661.601	2654.312	2654.312
<b>40</b>	2370.033	2354.413	2331.504	2310.678	2310.678
<b>45</b>	2036.812	2021.192	1990.994	1968.085	1968.085
<b>50</b>	1687.972	1672.352	1642.154	1619.245	1619.245
<b>55</b>	1380.784	1357.875	1327.677	1301.644	1304.768
<b>60</b>	1091.298	1068.389	1043.398	1026.737	1028.819
<b>65</b>	841.382	820.556	804.936	797.647	797.647
<b>70</b>	636.243	619.582	606.045	615.417	624.789
<b>75</b>	437.352	427.980	427.980	441.518	455.055
<b>80</b>	291.568	291.568	291.568	310.312	323.849
<b>85</b>	153.073	153.073	155.156	175.982	180.147
<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	1411.5	N.A.	16.10
0-30	2914.43	N.A.	33.20
0-40	4577.96	N.A.	52.20
0-60	7314.14	N.A.	83.40
0-80	8600.54	N.A.	98.10
0-90	8770.89	N.A.	100.00
10-90	8398.82	N.A.	95.80
20-40	3166.46	N.A.	36.10
20-50	4704.21	N.A.	53.60
40-70	3550.14	N.A.	40.50
60-80	1286.4	N.A.	14.70
70-80	472.44	N.A.	5.40
80-90	170.36	N.A.	1.90
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	8770.89	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	372.07
10-20	1039.43
20-30	1502.93
30-40	1663.53
40-50	1537.74
50-60	1198.43
60-70	813.96
70-80	472.44
80-90	170.36
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	109	105	101	97	107	103	99	96	99	96	93	95	92	90	91	89	87	85
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73
3	92	82	75	68	90	81	74	68	78	72	67	75	70	65	73	68	64	62
4	85	74	65	59	83	72	64	59	70	63	58	67	62	57	65	60	56	54
5	78	66	58	51	76	65	57	51	63	56	51	61	55	50	59	54	50	48
6	73	60	52	45	71	59	51	45	57	50	45	56	49	44	54	49	44	42
7	68	55	46	41	66	54	46	40	52	45	40	51	45	40	50	44	40	38
8	63	50	42	37	62	50	42	36	48	41	36	47	41	36	46	40	36	34
9	59	46	38	33	58	46	38	33	45	38	33	44	37	33	43	37	33	31
10	56	43	35	30	54	42	35	30	41	35	30	41	34	30	40	34	30	28

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**UGR TABLE - CORRECTED**

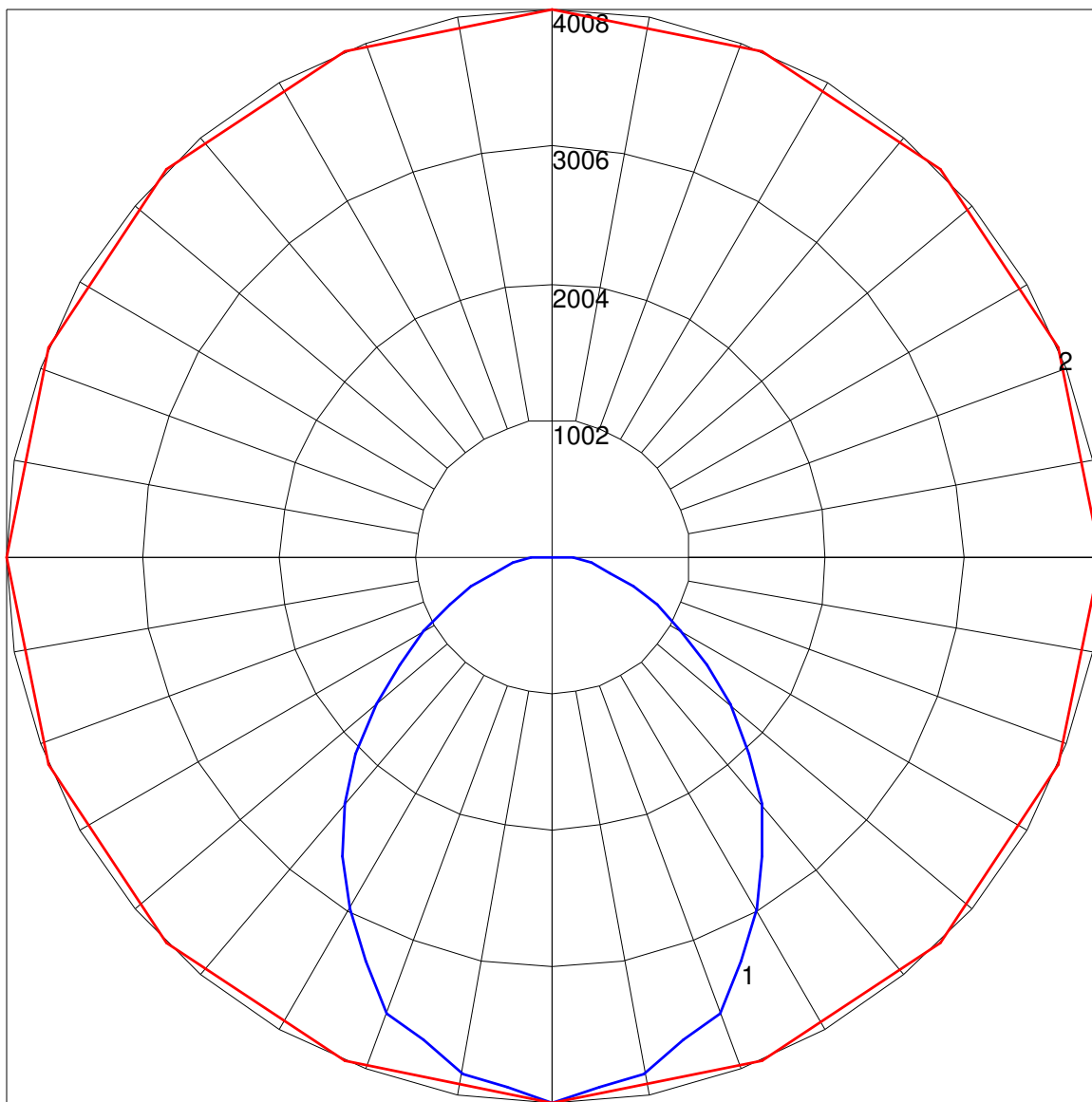
Reflectances

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	16.1	17.7	16.5	18.0	18.3	15.8	17.4	16.2	17.7	18.0
	3H	17.7	19.1	18.1	19.4	19.8	17.4	18.8	17.8	19.1	19.5
	4H	18.2	19.6	18.6	19.9	20.3	18.1	19.4	18.5	19.7	20.1
	6H	18.7	20.0	19.2	20.3	20.7	18.7	19.9	19.1	20.3	20.7
	8H	19.0	20.1	19.4	20.5	20.9	19.0	20.1	19.4	20.5	20.9
	12H	19.1	20.2	19.5	20.6	21.0	19.2	20.3	19.6	20.7	21.1
4H	2H	16.6	17.9	17.0	18.3	18.6	16.3	17.7	16.7	18.0	18.4
	3H	18.4	19.5	18.8	19.9	20.3	18.2	19.3	18.6	19.7	20.1
	4H	19.1	20.1	19.5	20.5	20.9	19.0	20.0	19.4	20.4	20.8
	6H	19.7	20.6	20.2	21.0	21.5	19.7	20.6	20.2	21.1	21.5
	8H	20.0	20.8	20.5	21.3	21.7	20.1	20.9	20.5	21.3	21.8
	12H	20.2	21.0	20.7	21.4	21.9	20.4	21.1	20.9	21.6	22.1
8H	4H	19.4	20.2	19.8	20.6	21.1	19.3	20.1	19.7	20.5	21.0
	6H	20.2	20.8	20.7	21.3	21.8	20.2	20.9	20.7	21.4	21.8
	8H	20.5	21.1	21.1	21.6	22.1	20.6	21.2	21.2	21.8	22.2
	12H	20.9	21.4	21.4	21.9	22.5	21.1	21.6	21.6	22.1	22.7
12H	4H	19.4	20.1	19.9	20.6	21.1	19.3	20.0	19.8	20.5	21.0
	6H	20.3	20.9	20.8	21.3	21.9	20.3	20.9	20.8	21.3	21.9
	8H	20.7	21.2	21.2	21.7	22.3	20.8	21.3	21.3	21.8	22.4

Maximum UGR = 22.7

POLAR GRAPH



Maximum Candela = 4008.021 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.)