



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 12-4-L84-840-SAF12125-(L50)-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] 07-02-2021

[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-(L50)-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	5271
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	141
Total Luminaire Watts	37.4
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	2791	2728	2697
55	2333	2243	2204
65	1929	1846	1829
75	1637	1602	1704
85	1702	1725	2003

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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	2408.652	2408.652	2408.652	2408.652	2408.652
5	2351.706	2351.706	2348.577	2347.325	2348.577
10	2314.158	2311.029	2309.778	2311.029	2309.778
15	2201.517	2198.388	2195.885	2195.885	2195.885
20	2144.570	2137.687	2137.687	2135.809	2132.055
25	1964.970	1963.718	1958.086	1955.583	1958.086
30	1789.749	1787.246	1780.363	1775.982	1777.234
35	1615.155	1609.523	1599.510	1595.130	1595.130
40	1424.290	1414.903	1401.136	1388.620	1388.620
45	1224.038	1214.652	1196.504	1182.736	1182.736
50	1014.400	1005.013	986.865	973.098	973.098
55	829.793	816.026	797.878	782.233	784.110
60	655.824	642.057	627.038	617.025	618.277
65	505.635	493.120	483.733	479.352	479.352
70	382.356	372.343	364.208	369.840	375.472
75	262.830	257.198	257.198	265.333	273.469
80	175.220	175.220	175.220	186.484	194.620
85	91.991	91.991	93.242	105.758	108.261
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	848.25	N.A.	16.10
0-30	1751.45	N.A.	33.20
0-40	2751.16	N.A.	52.20
0-60	4395.49	N.A.	83.40
0-80	5168.56	N.A.	98.10
0-90	5270.94	N.A.	100.00
10-90	5047.34	N.A.	95.80
20-40	1902.91	N.A.	36.10
20-50	2827.03	N.A.	53.60
40-70	2133.48	N.A.	40.50
60-80	773.07	N.A.	14.70
70-80	283.92	N.A.	5.40
80-90	102.38	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	5270.94	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	223.60
10-20	624.65
20-30	903.20
30-40	999.71
40-50	924.12
50-60	720.21
60-70	489.16
70-80	283.92
80-90	102.38
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

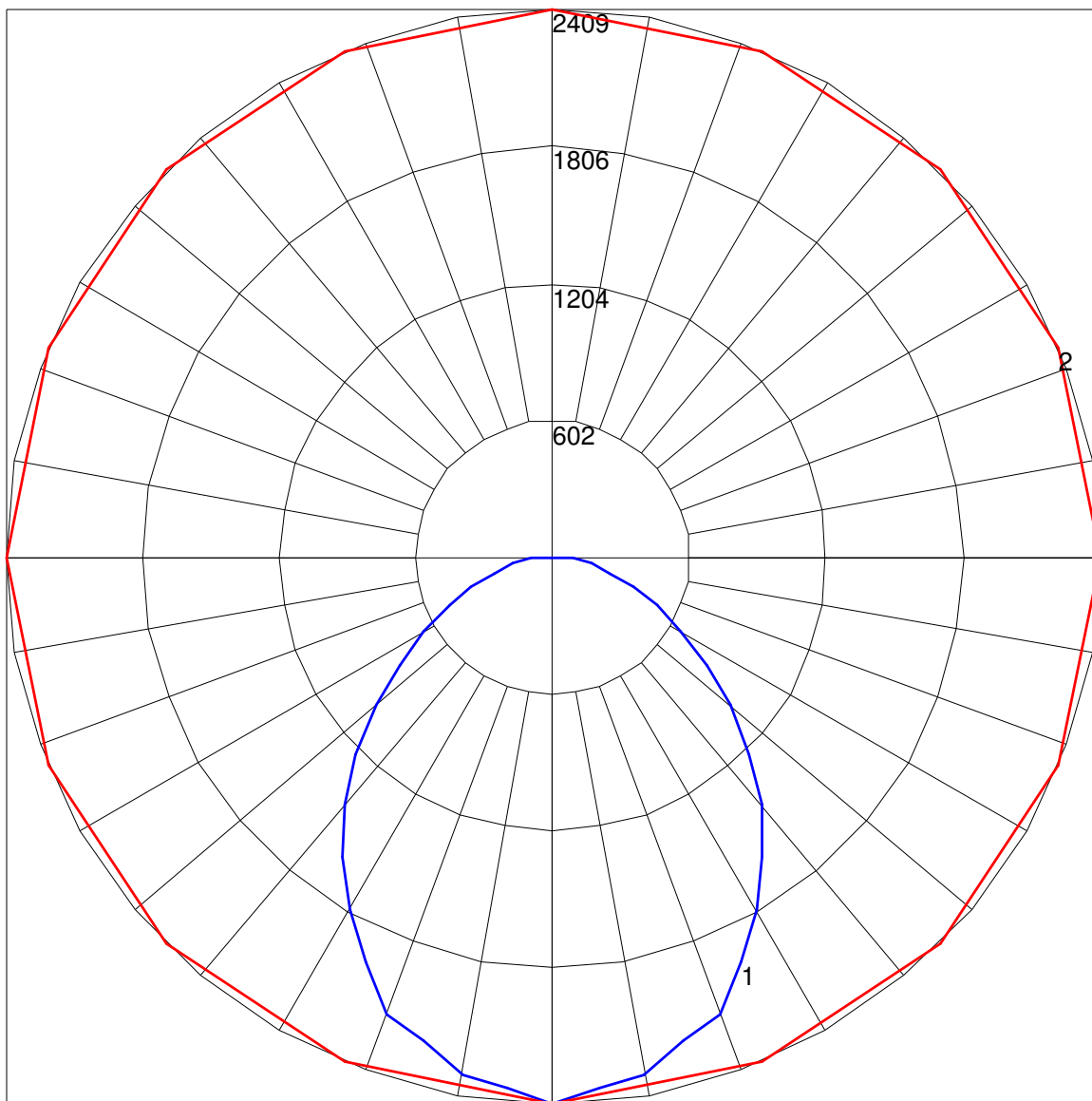
Reflectances

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	14.4	16.0	14.8	16.3	16.6	14.1	15.7	14.5	16.0	16.3
	3H	16.0	17.4	16.4	17.7	18.1	15.7	17.1	16.1	17.4	17.8
	4H	16.5	17.9	16.9	18.2	18.6	16.4	17.7	16.8	18.0	18.4
	6H	17.0	18.3	17.5	18.6	19.0	17.0	18.2	17.4	18.6	19.0
	8H	17.3	18.4	17.7	18.8	19.2	17.3	18.4	17.7	18.8	19.2
	12H	17.4	18.5	17.8	18.9	19.3	17.5	18.6	17.9	19.0	19.4
4H	2H	14.9	16.2	15.3	16.6	16.9	14.6	16.0	15.0	16.3	16.7
	3H	16.7	17.8	17.1	18.2	18.6	16.5	17.6	16.9	18.0	18.4
	4H	17.4	18.4	17.8	18.8	19.2	17.3	18.3	17.7	18.7	19.1
	6H	18.0	18.9	18.5	19.3	19.8	18.0	18.9	18.5	19.4	19.8
	8H	18.3	19.1	18.8	19.6	20.0	18.4	19.2	18.8	19.6	20.1
	12H	18.5	19.3	19.0	19.7	20.2	18.7	19.4	19.2	19.9	20.4
8H	4H	17.7	18.5	18.1	18.9	19.4	17.6	18.4	18.0	18.8	19.3
	6H	18.5	19.1	19.0	19.6	20.1	18.5	19.2	19.0	19.7	20.1
	8H	18.8	19.4	19.4	19.9	20.4	18.9	19.5	19.5	20.1	20.5
	12H	19.2	19.7	19.7	20.2	20.8	19.4	19.9	19.9	20.4	21.0
12H	4H	17.7	18.4	18.2	18.9	19.4	17.6	18.3	18.1	18.8	19.3
	6H	18.6	19.2	19.1	19.6	20.2	18.6	19.2	19.1	19.6	20.2
	8H	19.0	19.5	19.5	20.0	20.6	19.1	19.6	19.6	20.1	20.7

Maximum UGR = 21.0

POLAR GRAPH



Maximum Candela = 2408.652 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.)