



**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : 82-4-L107-835-(L104)-DIM-UNV\_.IES**

**DESCRIPTION INFORMATION (From Photometric File)**

IESNA:LM-63-2002  
[TEST] GEN from BALLABS TEST NO. 20804.0  
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC  
[ISSUEDATE] 02-24-2021  
[MANUFAC] WILLIAMS INDOOR  
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO. 64836  
[LUMINAIRE] 4-28 LED 22" ARRAYS 4' INDUSTRIAL LUMINAIRE  
[MORE] WHITE REFLECTOR w/OPEN BOTTOM  
[LUMCAT] 82-4-L107-835-(L104)-DIM-UNV

**CHARACTERISTICS**

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	10181
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	154
Total Luminaire Watts	65.9
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.34
Spacing Criterion (90-270)	1.30
Spacing Criterion (Diagonal)	1.44
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	4.00 ft
Luminous Width (90-270)	1.08 ft
Luminous Height	0.00 ft



**LUMINANCE DATA (cd/sq.m)**

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	9735	9584	9461
55	9510	9420	4886
65	8926	4861	4768
75	7097	1575	1468
85	2453	1226	545

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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>	3801.555	3801.555	3801.555	3801.555	3801.555
<b>5</b>	3862.150	3795.177	3761.690	3755.311	3756.906
<b>10</b>	3820.690	3755.311	3721.824	3715.446	3715.446
<b>15</b>	3756.906	3689.932	3656.445	3742.554	3801.555
<b>20</b>	3664.418	3597.445	3669.202	3643.688	3702.689
<b>25</b>	3536.849	3482.633	3563.958	3431.605	3434.794
<b>30</b>	3396.524	3356.658	3312.009	3292.874	3289.685
<b>35</b>	3217.927	3296.063	3125.440	3141.386	3125.440
<b>40</b>	2993.087	3141.386	2954.816	2940.465	2919.735
<b>45</b>	2773.030	2763.463	2729.976	2696.489	2694.894
<b>50</b>	2492.379	2468.459	2455.702	2383.945	1516.476
<b>55</b>	2197.375	2190.997	2176.645	1138.553	1128.985
<b>60</b>	1852.939	1881.642	1001.416	980.686	980.686
<b>65</b>	1519.665	1513.287	827.604	798.901	811.658
<b>70</b>	1122.607	1135.364	637.845	221.651	173.813
<b>75</b>	739.900	449.681	164.245	151.488	153.083
<b>80</b>	381.112	194.543	118.001	98.866	92.487
<b>85</b>	86.109	71.758	43.055	22.325	19.135
<b>90</b>	3.189	30.298	11.162	0.000	0.000

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	1409.05	N.A.	13.80
0-30	3020.57	N.A.	29.70
0-40	5010.59	N.A.	49.20
0-60	8709.04	N.A.	85.50
0-80	10107.83	N.A.	99.30
0-90	10180.69	N.A.	100.00
10-90	9821.01	N.A.	96.50
20-40	3601.54	N.A.	35.40
20-50	5684.62	N.A.	55.80
40-70	4720.9	N.A.	46.40
60-80	1398.78	N.A.	13.70
70-80	376.34	N.A.	3.70
80-90	72.86	N.A.	0.70
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	10180.69	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	359.68
10-20	1049.38
20-30	1611.52
30-40	1990.02
40-50	2083.08
50-60	1615.37
60-70	1022.45
70-80	376.34
80-90	72.86
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	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75	73
3	92	82	75	69	90	81	74	68	78	72	67	75	70	66	73	68	65	63
4	85	73	65	59	82	72	64	58	70	63	57	67	61	57	65	60	56	54
5	78	66	57	51	76	65	56	50	62	55	50	61	54	49	59	53	49	47
6	72	59	51	44	70	58	50	44	56	49	44	55	48	43	53	48	43	41
7	67	54	45	39	65	53	45	39	51	44	39	50	43	39	49	43	38	36
8	62	49	41	35	61	48	40	35	47	40	35	46	39	34	45	39	34	32
9	58	45	37	32	57	44	37	31	43	36	31	42	36	31	41	35	31	29
10	54	41	34	29	53	41	34	28	40	33	28	39	33	28	38	32	28	26

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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	20.8	22.3	21.1	22.6	23.0	16.2	17.8	16.6	18.1	18.4
	3H	22.5	23.9	22.9	24.3	24.6	16.8	18.2	17.2	18.6	18.9
	4H	23.0	24.3	23.4	24.6	25.0	16.9	18.2	17.3	18.6	19.0
	6H	23.3	24.5	23.7	24.8	25.2	17.0	18.2	17.4	18.6	19.0
	8H	23.3	24.5	23.8	24.9	25.3	17.0	18.2	17.4	18.5	18.9
	12H	23.3	24.4	23.8	24.8	25.2	17.0	18.1	17.4	18.5	18.9

UGR Viewed Endwise

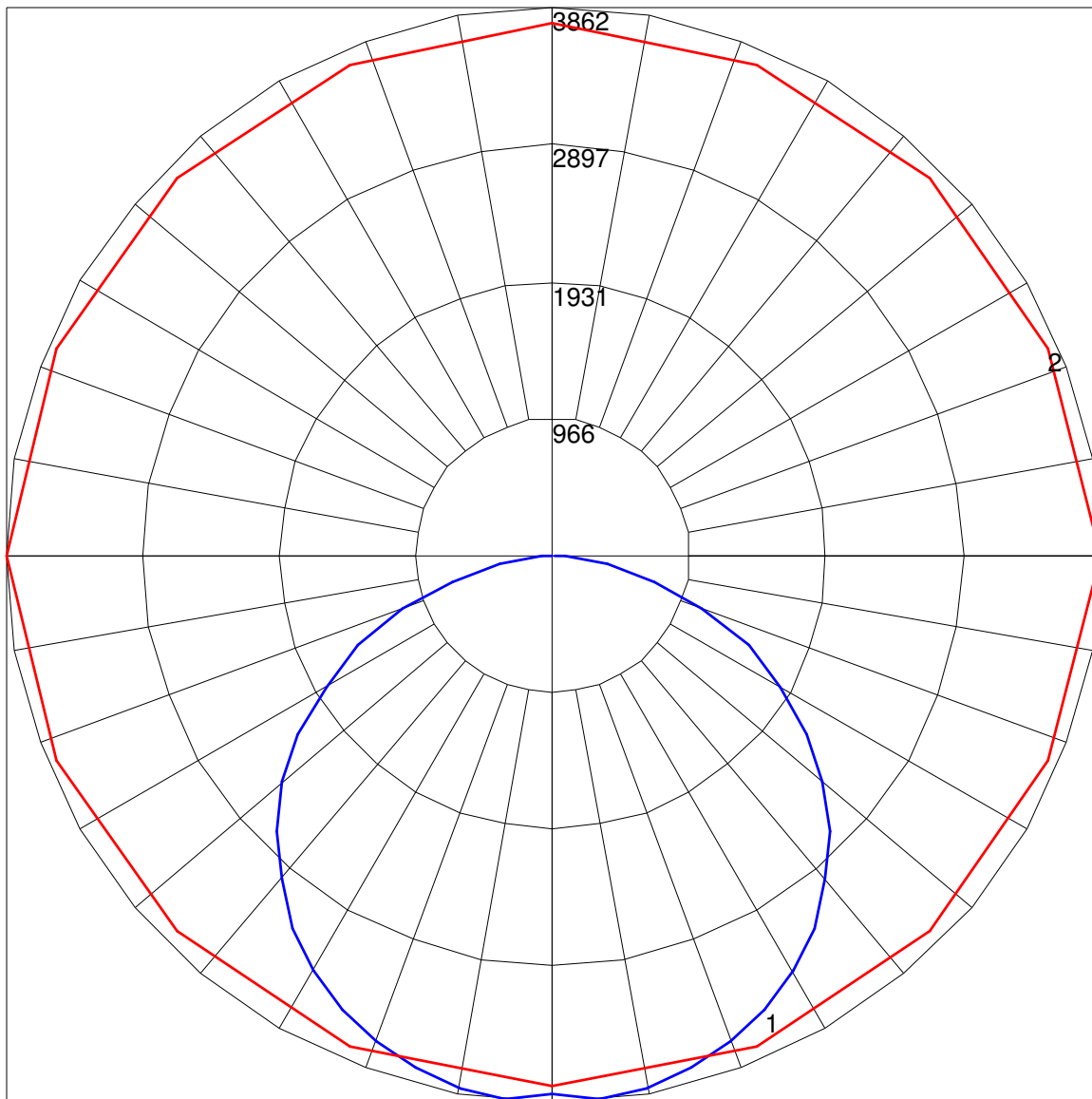
4H	2H	20.8	22.2	21.2	22.5	22.9	16.9	18.3	17.3	18.6	19.0
	3H	22.9	23.9	23.3	24.3	24.7	17.7	18.7	18.1	19.1	19.5
	4H	23.4	24.3	23.8	24.7	25.2	17.8	18.7	18.2	19.2	19.6
	6H	23.7	24.5	24.1	25.0	25.4	17.9	18.7	18.3	19.2	19.6
	8H	23.8	24.6	24.2	25.0	25.5	17.9	18.7	18.4	19.1	19.6
	12H	23.8	24.5	24.3	25.0	25.5	17.9	18.6	18.4	19.1	19.5

8H	4H	23.3	24.1	23.8	24.5	25.0	18.1	18.9	18.5	19.3	19.8
	6H	23.6	24.3	24.1	24.8	25.3	18.2	18.9	18.7	19.4	19.8
	8H	23.8	24.3	24.3	24.9	25.3	18.3	18.8	18.8	19.4	19.8
	12H	23.8	24.3	24.3	24.8	25.4	18.3	18.8	18.8	19.3	19.8

12H	4H	23.3	24.0	23.8	24.5	24.9	18.1	18.8	18.6	19.3	19.8
	6H	23.6	24.2	24.2	24.7	25.2	18.3	18.8	18.8	19.3	19.9
	8H	23.7	24.3	24.3	24.8	25.3	18.3	18.8	18.8	19.3	19.9

Maximum UGR = 25.5

POLAR GRAPH



Maximum Candela = 3862.15 Located At Horizontal Angle = 0, Vertical Angle = 5  
# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)