



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : LT-22-L27-835-AF-(L20)-DIM-UNV\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
 [TEST]GEN FROM BALLABS TEST NO. 20169.0  
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC  
 [ISSUE]DATE] 06-12-2023  
 [MANUFAC] WILLIAMS INDOOR  
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO. 64836  
 [LUMINAIRE] 2x2' LED TROFFER  
 [MORE] WITH FROSTED ACRYLIC LENS  
 [LUMCAT] LT-22-L27-835-AF-(L20)-DIM-UNV  
 [LAMPCAT] HLM 80 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	2017
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	117
Total Luminaire Watts	17.3
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.22
Spacing Criterion (90-270)	1.30
Spacing Criterion (Diagonal)	1.38
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	1.92 ft
Luminous Width (90-270)	1.92 ft
Luminous Height	0.00 ft

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

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	1704	1871	2007
55	1559	1833	2072
65	1391	1826	2227
75	1057	1925	2564
85	515	1640	1312

IES INDOOR REPORT  
PHOTOMETRIC FILENAME : LT-22-L27-835-AF-(L20)-DIM-UNV\_.IES

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>	673.263	673.263	673.263	673.263	673.263
<b>5</b>	674.659	669.775	669.077	667.682	668.380
<b>10</b>	663.496	659.310	658.612	659.310	660.008
<b>15</b>	644.659	642.565	644.659	646.752	646.752
<b>20</b>	618.147	618.147	625.123	630.007	629.310
<b>25</b>	586.053	588.844	600.705	607.681	608.379
<b>30</b>	551.169	556.053	570.007	583.960	583.960
<b>35</b>	510.704	518.378	535.820	551.867	552.564
<b>40</b>	462.563	475.819	496.052	518.378	521.169
<b>45</b>	411.633	428.377	452.098	481.401	484.889
<b>50</b>	357.911	374.655	406.051	440.935	445.819
<b>55</b>	305.585	323.027	359.306	398.377	406.051
<b>60</b>	253.956	272.794	312.562	357.911	363.493
<b>65</b>	200.933	222.561	263.724	313.957	321.632
<b>70</b>	144.420	170.235	214.886	270.003	278.375
<b>75</b>	93.489	120.699	170.235	223.258	226.747
<b>80</b>	49.535	73.954	117.908	157.676	148.606
<b>85</b>	15.349	27.907	48.838	53.722	39.070
<b>90</b>	0.000	0.000	0.000	0.000	0.000

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : LT-22-L27-835-AF-(L20)-DIM-UNV\_.IES**

**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	245.59	N.A.	12.20
0-30	521.66	N.A.	25.90
0-40	856.05	N.A.	42.40
0-60	1526.74	N.A.	75.70
0-80	1965.2	N.A.	97.40
0-90	2017.18	N.A.	100.00
10-90	1953.57	N.A.	96.80
20-40	610.45	N.A.	30.30
20-50	959.45	N.A.	47.60
40-70	933.35	N.A.	46.30
60-80	438.46	N.A.	21.70
70-80	175.80	N.A.	8.70
80-90	51.98	N.A.	2.60
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	2017.18	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	63.60
10-20	181.99
20-30	276.07
30-40	334.39
40-50	349.00
50-60	321.70
60-70	262.65
70-80	175.80
80-90	51.98
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

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : LT-22-L27-835-AF-(L20)-DIM-UNV\_.IES**

**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	108	103	98	94	105	101	97	93	96	93	90	92	90	87	89	87	84	82
2	98	89	82	76	95	87	81	75	84	78	73	80	76	72	77	73	70	68
3	89	78	69	63	86	76	68	62	73	67	61	70	65	60	68	63	59	57
4	81	69	60	53	79	67	59	52	65	58	52	63	56	51	60	55	50	48
5	75	61	52	45	72	60	52	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	46	39	52	45	39	51	44	38	49	43	38	36
7	64	50	41	35	62	49	41	35	48	40	34	46	39	34	45	39	34	32
8	59	46	37	31	58	45	37	31	43	36	31	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	28	40	33	28	39	32	27	38	32	27	25
10	52	39	31	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : LT-22-L27-835-AF-(L20)-DIM-UNV\_.IES**

**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	13.3	15.0	13.7	15.3	15.6	15.1	16.8	15.4	17.1	17.4
	3H	15.0	16.5	15.3	16.8	17.2	17.5	19.1	17.9	19.4	19.7
	4H	15.5	16.9	15.9	17.3	17.7	18.7	20.1	19.0	20.4	20.8
	6H	15.9	17.2	16.3	17.6	18.0	19.6	20.9	20.0	21.3	21.7
	8H	15.9	17.2	16.4	17.6	18.0	19.8	21.1	20.2	21.5	21.9
	12H	16.0	17.2	16.4	17.6	18.0	19.9	21.2	20.4	21.5	22.0

UGR Viewed Endwise

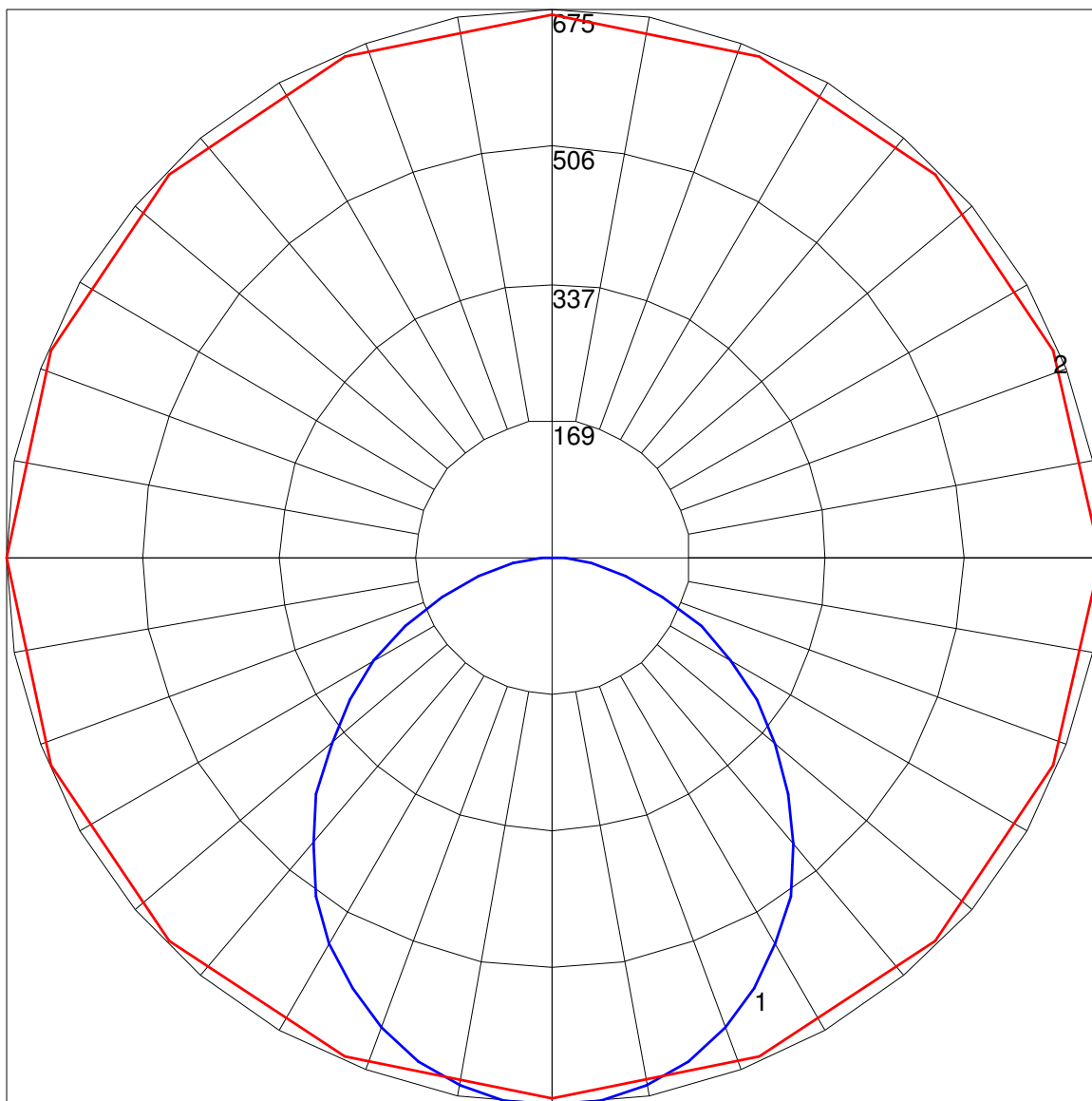
4H	2H	14.2	15.7	14.6	16.0	16.4	15.6	17.0	16.0	17.4	17.8
	3H	16.2	17.4	16.6	17.8	18.2	18.4	19.6	18.8	20.0	20.4
	4H	16.9	18.0	17.3	18.4	18.8	19.7	20.8	20.1	21.2	21.7
	6H	17.3	18.3	17.8	18.7	19.2	20.8	21.8	21.3	22.2	22.7
	8H	17.4	18.4	17.9	18.8	19.3	21.1	22.1	21.6	22.5	23.0
	12H	17.5	18.3	18.0	18.8	19.3	21.3	22.1	21.8	22.6	23.1

8H	4H	17.6	18.5	18.0	18.9	19.4	20.0	20.9	20.4	21.3	21.8
	6H	18.2	19.0	18.7	19.5	19.9	21.3	22.1	21.8	22.5	23.0
	8H	18.4	19.1	18.9	19.6	20.1	21.8	22.4	22.3	22.9	23.4
	12H	18.5	19.1	19.0	19.6	20.2	22.0	22.6	22.5	23.1	23.6

12H	4H	17.8	18.6	18.2	19.0	19.5	20.0	20.8	20.5	21.3	21.8
	6H	18.5	19.2	19.0	19.6	20.2	21.4	22.1	21.9	22.5	23.0
	8H	18.8	19.4	19.3	19.8	20.4	21.9	22.5	22.4	23.0	23.5

Maximum UGR = 23.6

POLAR GRAPH



Maximum Candela = 674.659 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.)