



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 96-4-L62-850-HIAFR-DIM-UNV\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM BALLABS TEST NO. 19227.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUEDATE] 09-10-2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] 4' SUSPENDED ENCLOSED & GASKETED LED LUMINAIRE

[MORE] w/FROSTED ACRYLIC LINEAR RIBBED DIFFUSER

[LUMCAT] 96-4-L62-850-HIAFR-DIM-UNV

[LAMPCAT] HLM 80 CRI 5000K CCT

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	6627
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	138
Total Luminaire Watts	48
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.26
Spacing Criterion (90-270)	1.16
Spacing Criterion (Diagonal)	1.30
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	4.23 ft
Luminous Width (90-270)	0.50 ft
Luminous Height	0.18 ft

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

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	9987	7874	7667
55	8497	6700	6617
65	6228	5443	5875
75	3819	4589	5067
85	1407	3603	4323

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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	2341.166	2341.166	2341.166	2341.166	2341.166
5	2361.693	2331.443	2316.318	2305.514	2302.273
10	2330.362	2292.549	2268.781	2260.138	2251.495
15	2272.022	2228.807	2193.155	2172.628	2160.744
20	2187.753	2143.458	2090.520	2047.305	2046.225
25	2088.359	2040.823	1963.036	1907.937	1890.651
30	1963.036	1902.535	1797.739	1781.533	1783.694
35	1808.543	1746.961	1647.567	1696.184	1722.113
40	1632.442	1576.263	1527.646	1581.665	1603.272
45	1446.618	1393.680	1401.242	1413.127	1443.377
50	1238.106	1187.329	1232.704	1253.231	1272.678
55	1015.550	989.621	1057.684	1098.738	1123.587
60	788.672	815.681	879.423	951.808	987.460
65	563.954	643.902	723.849	828.645	858.896
70	385.693	473.203	598.526	707.644	726.010
75	224.717	329.513	477.524	579.079	598.526
80	105.876	219.316	357.603	454.837	473.203
85	35.652	139.368	259.289	354.362	373.809
90	15.125	84.269	189.065	265.772	285.218
95	11.884	58.340	151.252	209.592	227.958
100	10.804	35.652	124.243	175.020	184.744
105	8.643	21.607	93.992	140.448	150.172
110	5.402	6.482	65.903	109.118	119.921
115	3.241	3.241	43.215	81.028	93.992
120	0.000	0.000	21.607	58.340	70.224
125	0.000	0.000	6.482	35.652	46.456
130	0.000	0.000	0.000	18.366	25.929
135	0.000	0.000	0.000	4.321	9.723
140	0.000	0.000	0.000	0.000	0.000
145	0.000	0.000	0.000	0.000	0.000
150	0.000	0.000	0.000	0.000	0.000
155	0.000	0.000	0.000	0.000	0.000
160	0.000	0.000	0.000	0.000	0.000
165	0.000	0.000	0.000	0.000	0.000
170	0.000	0.000	0.000	0.000	0.000
175	0.000	0.000	0.000	0.000	0.000
180	0.000	0.000	0.000	0.000	0.000

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	840.65	N.A.	12.70
0-30	1750.71	N.A.	26.40
0-40	2822.77	N.A.	42.60
0-60	4855.73	N.A.	73.30
0-80	6057.9	N.A.	91.40
0-90	6325.46	N.A.	95.40
10-90	6105.18	N.A.	92.10
20-40	1982.13	N.A.	29.90
20-50	3070.13	N.A.	46.30
40-70	2756.41	N.A.	41.60
60-80	1202.17	N.A.	18.10
70-80	478.71	N.A.	7.20
80-90	267.56	N.A.	4.00
90-110	239.36	N.A.	3.60
90-120	283.66	N.A.	4.30
90-130	299.34	N.A.	4.50
90-150	301.81	N.A.	4.60
90-180	301.81	N.A.	4.60
110-180	62.45	N.A.	0.90
0-180	6627.27	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	220.27
10-20	620.37
20-30	910.06
30-40	1072.06
40-50	1088.01
50-60	944.95
60-70	723.46
70-80	478.71
80-90	267.56
90-100	150.10
100-110	89.26
110-120	44.30
120-130	15.68
130-140	2.47
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	118	118	118	118	115	115	115	115	109	109	109	103	103	103	98	98	98	95
1	107	102	97	93	104	99	95	91	94	90	87	89	86	84	85	83	81	78
2	97	89	82	76	94	86	80	74	82	77	72	78	73	70	74	71	67	65
3	89	78	69	63	86	76	68	62	72	66	60	69	63	59	66	61	57	55
4	81	69	60	53	78	67	59	53	64	57	51	61	55	50	59	53	49	47
5	75	62	53	46	72	60	52	46	58	50	45	55	49	44	53	47	43	41
6	69	56	47	40	67	54	46	40	52	45	39	50	43	38	48	42	38	36
7	64	50	42	36	62	49	41	35	47	40	35	46	39	34	44	38	34	32
8	60	46	38	32	58	45	37	32	44	36	31	42	35	31	40	35	30	28
9	56	42	34	29	54	42	34	28	40	33	28	39	32	28	37	32	27	25
10	52	39	31	26	51	38	31	26	37	30	25	36	30	25	35	29	25	23

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**UGR TABLE - CORRECTED**

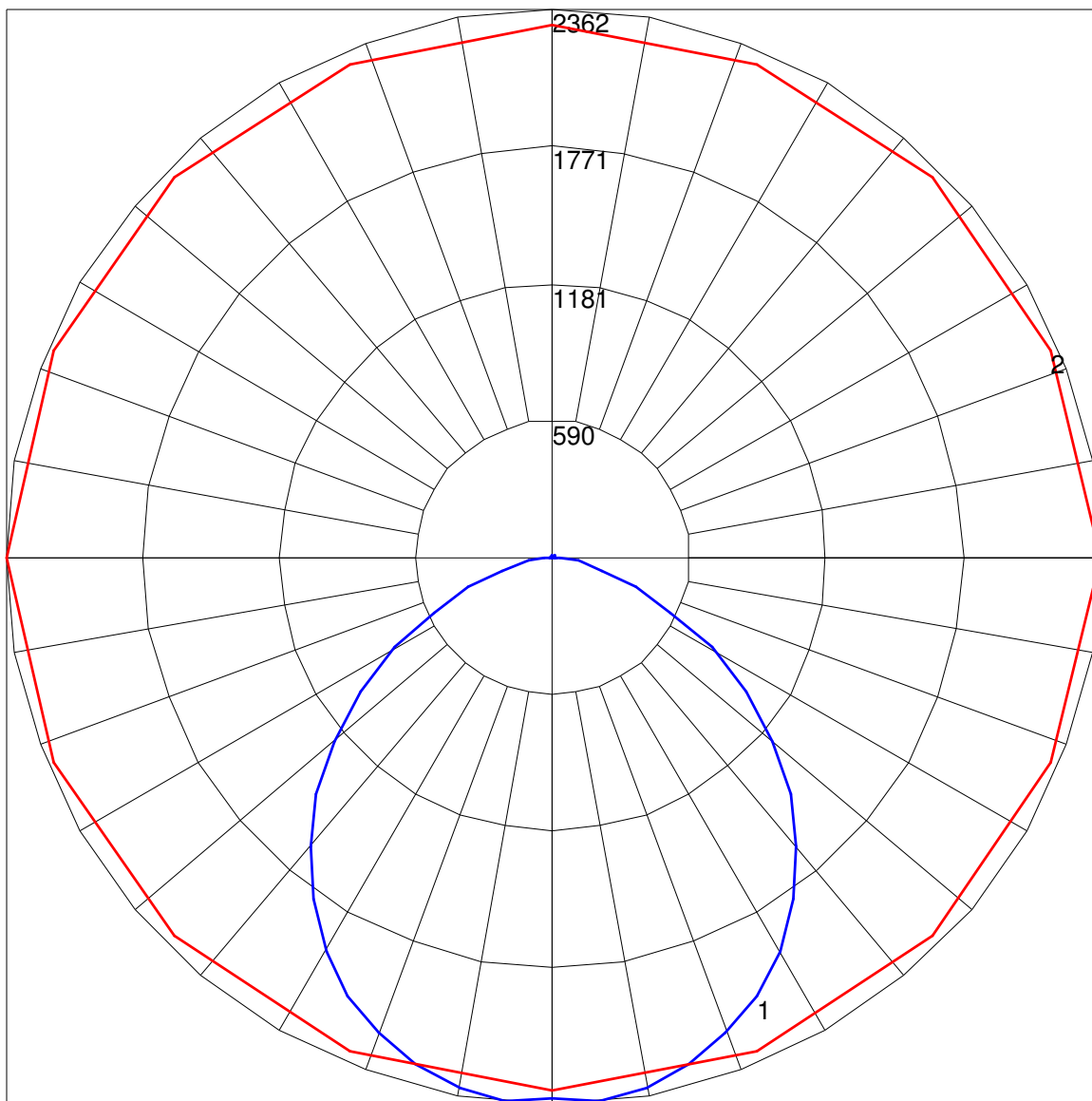
Reflectances

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	17.3	18.8	17.7	19.2	19.7	19.0	20.5	19.4	20.9	21.4
	3H	18.4	19.8	18.9	20.2	20.7	21.3	22.6	21.7	23.1	23.6
	4H	18.7	20.0	19.2	20.5	21.0	22.3	23.6	22.8	24.1	24.5
	6H	18.8	20.0	19.3	20.5	21.0	23.3	24.5	23.8	25.0	25.5
	8H	18.8	20.0	19.3	20.5	21.0	23.8	24.9	24.3	25.4	25.9
	12H	18.8	19.9	19.3	20.4	21.0	24.3	25.4	24.8	25.9	26.4
4H	2H	18.0	19.3	18.5	19.7	20.2	19.4	20.7	19.8	21.1	21.6
	3H	19.4	20.5	19.9	21.0	21.5	21.9	23.0	22.4	23.5	24.0
	4H	19.8	20.8	20.3	21.3	21.9	23.1	24.1	23.6	24.6	25.1
	6H	20.0	20.9	20.6	21.5	22.0	24.3	25.1	24.8	25.7	26.2
	8H	20.1	20.9	20.6	21.5	22.0	24.8	25.7	25.4	26.2	26.8
	12H	20.1	20.9	20.7	21.4	22.0	25.5	26.2	26.0	26.8	27.4
8H	4H	20.4	21.2	20.9	21.8	22.4	23.3	24.1	23.8	24.6	25.2
	6H	20.8	21.5	21.4	22.1	22.7	24.6	25.3	25.2	25.9	26.5
	8H	20.9	21.6	21.5	22.1	22.7	25.3	25.9	25.9	26.5	27.1
	12H	21.0	21.6	21.6	22.1	22.8	26.1	26.7	26.7	27.2	27.9
12H	4H	20.6	21.3	21.1	21.9	22.5	23.3	24.0	23.8	24.6	25.2
	6H	21.1	21.7	21.6	22.2	22.9	24.6	25.3	25.2	25.8	26.5
	8H	21.3	21.8	21.8	22.4	23.0	25.4	25.9	26.0	26.5	27.2

Maximum UGR = 27.9

POLAR GRAPH



Maximum Candela = 2361.693 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.)