



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 96-4-L62-840-HIAFR-(L51)-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  
 [ISSUE DATE] 27-DEC-2023  
 [MANUFAC] WILLIAMS INDOOR  
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO  
 [LUMINAIRE] 4'SUSPENDED ENCLOSED & GASKETED LUMINAIRE  
 [MORE] WHITE REFLECTOR w/FROSTED ACRYLIC RIBBED DIFFUSER  
 [MORE] 0-10V DIMMIGN DRIVER  
 [LUMCAT] 96-4-L62-840-HIAFR-(L51)-DIM-UNV  
 [LAMPCAT] HLMX 80 CRI 4000K CCT

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	5219
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	137
Total Luminaire Watts	38.1
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	7865	6201	6038
55	6691	5276	5211
65	4904	4287	4627
75	3008	3614	3990
85	1108	2837	3404

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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	1843.684	1843.684	1843.684	1843.684	1843.684
5	1859.849	1836.026	1824.115	1815.607	1813.055
10	1835.176	1805.398	1786.680	1779.874	1773.067
15	1789.232	1755.200	1727.124	1710.959	1701.600
20	1722.870	1687.987	1646.298	1612.266	1611.415
25	1644.596	1607.161	1545.904	1502.513	1488.900
30	1545.904	1498.259	1415.731	1402.969	1404.671
35	1424.239	1375.744	1297.470	1335.756	1356.175
40	1285.559	1241.317	1203.031	1245.571	1262.587
45	1139.221	1097.532	1103.488	1112.846	1136.669
50	975.017	935.029	970.763	986.928	1002.242
55	799.752	779.333	832.933	865.264	884.832
60	621.084	642.354	692.551	749.555	777.631
65	444.118	507.077	570.036	652.564	676.386
70	303.736	372.650	471.343	557.274	571.738
75	176.966	259.494	376.054	456.029	471.343
80	83.378	172.712	281.615	358.187	372.650
85	28.076	109.753	204.192	279.062	294.377
90	11.911	66.362	148.890	209.297	224.611
95	9.359	45.943	119.112	165.055	179.519
100	8.508	28.076	97.842	137.830	145.487
105	6.806	17.016	74.020	110.604	118.261
110	4.254	5.105	51.899	85.931	94.439
115	2.552	2.552	34.032	63.810	74.020
120	0.000	0.000	17.016	45.943	55.302
125	0.000	0.000	5.105	28.076	36.584
130	0.000	0.000	0.000	14.464	20.419
135	0.000	0.000	0.000	3.403	7.657
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	662.01	N.A.	12.70
0-30	1378.69	N.A.	26.40
0-40	2222.95	N.A.	42.60
0-60	3823.92	N.A.	73.30
0-80	4770.63	N.A.	91.40
0-90	4981.34	N.A.	95.40
10-90	4807.87	N.A.	92.10
20-40	1560.94	N.A.	29.90
20-50	2417.75	N.A.	46.30
40-70	2170.69	N.A.	41.60
60-80	946.72	N.A.	18.10
70-80	376.99	N.A.	7.20
80-90	210.71	N.A.	4.00
90-110	188.50	N.A.	3.60
90-120	223.38	N.A.	4.30
90-130	235.73	N.A.	4.50
90-150	237.68	N.A.	4.60
90-180	237.68	N.A.	4.60
110-180	49.18	N.A.	0.90
0-180	5219.02	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	173.47
10-20	488.55
20-30	716.68
30-40	844.26
40-50	856.81
50-60	744.15
60-70	569.73
70-80	376.99
80-90	210.71
90-100	118.20
100-110	70.29
110-120	34.89
120-130	12.35
130-140	1.95
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	81	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**

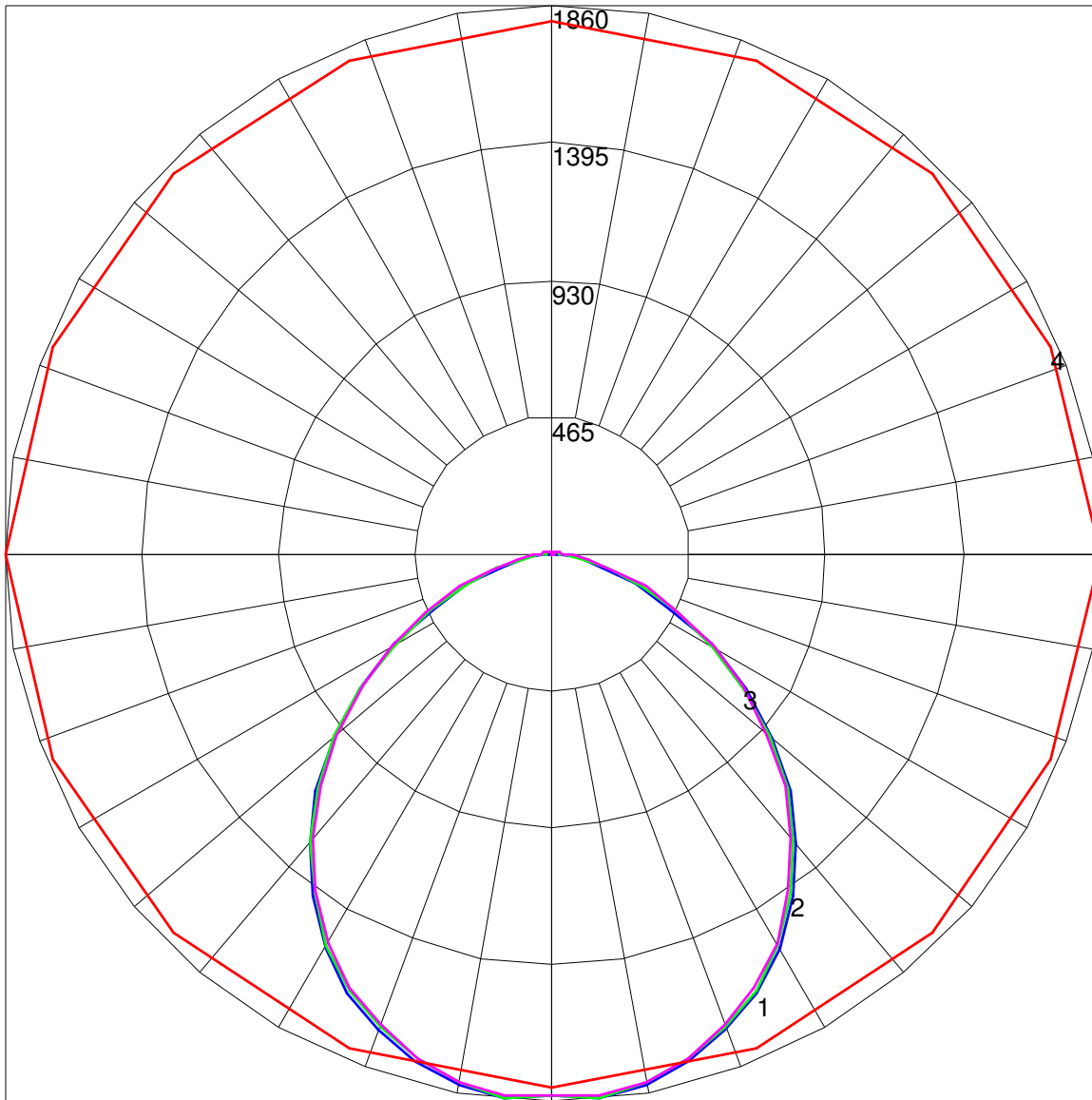
Reflectances

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	16.4	17.9	16.8	18.3	18.8	18.1	19.6	18.5	20.0	20.5
	3H	17.5	18.9	18.0	19.3	19.8	20.4	21.7	20.8	22.2	22.7
	4H	17.8	19.1	18.3	19.6	20.1	21.4	22.7	21.9	23.2	23.6
	6H	17.9	19.1	18.4	19.6	20.1	22.4	23.6	22.9	24.1	24.6
	8H	17.9	19.1	18.4	19.6	20.1	22.9	24.0	23.4	24.5	25.0
	12H	17.9	19.0	18.4	19.5	20.1	23.4	24.5	23.9	25.0	25.5
4H	2H	17.1	18.4	17.6	18.8	19.3	18.5	19.8	18.9	20.2	20.7
	3H	18.5	19.6	19.0	20.1	20.6	21.0	22.1	21.5	22.6	23.1
	4H	18.9	19.9	19.4	20.4	21.0	22.2	23.2	22.7	23.7	24.2
	6H	19.1	20.0	19.7	20.6	21.1	23.4	24.2	23.9	24.8	25.3
	8H	19.2	20.0	19.7	20.6	21.1	23.9	24.8	24.5	25.3	25.9
	12H	19.2	20.0	19.8	20.5	21.1	24.6	25.3	25.1	25.9	26.5
8H	4H	19.5	20.3	20.0	20.9	21.4	22.4	23.2	22.9	23.7	24.3
	6H	19.9	20.6	20.5	21.2	21.8	23.7	24.4	24.3	25.0	25.6
	8H	20.0	20.7	20.6	21.2	21.8	24.4	25.0	25.0	25.6	26.2
	12H	20.1	20.7	20.7	21.2	21.9	25.2	25.8	25.8	26.3	27.0
12H	4H	19.7	20.4	20.2	21.0	21.6	22.4	23.1	22.9	23.7	24.3
	6H	20.2	20.8	20.7	21.3	22.0	23.7	24.4	24.3	24.9	25.6
	8H	20.4	20.9	20.9	21.5	22.1	24.5	25.0	25.1	25.6	26.3

Maximum UGR = 27.0

POLAR GRAPH



Maximum Candela = 1859.849 Located At Horizontal Angle = 0, Vertical Angle = 5  
# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)  
# 2 - Vertical Plane Through Horizontal Angles (5 - 185)  
# 3 - Vertical Plane Through Horizontal Angles (10 - 190)  
# 4 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)