



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 96-4-L62-850-HIAFR-(L60)-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] 11-07-2023

[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-(L60)-DIM-UNV

[LAMPCAT] HLM 80 CRI 5000K CCT

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	6462
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	141
Total Luminaire Watts	45.7
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	9738	7678	7476
55	8285	6533	6452
65	6073	5308	5729
75	3724	4475	4941
85	1372	3513	4215

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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	2282.874	2282.874	2282.874	2282.874	2282.874
5	2302.890	2273.393	2258.644	2248.109	2244.949
10	2272.339	2235.468	2212.291	2203.864	2195.436
15	2215.452	2173.313	2138.548	2118.532	2106.944
20	2133.281	2090.089	2038.468	1996.330	1995.276
25	2036.361	1990.009	1914.159	1860.432	1843.576
30	1914.159	1855.164	1752.977	1737.175	1739.282
35	1763.512	1703.464	1606.545	1653.951	1679.234
40	1591.796	1537.016	1489.609	1542.283	1563.353
45	1410.599	1358.979	1366.353	1377.941	1407.439
50	1207.279	1157.766	1202.012	1222.028	1240.990
55	990.264	964.980	1031.349	1071.381	1095.611
60	769.035	795.371	857.526	928.109	962.873
65	549.912	627.869	705.826	808.013	837.510
70	376.090	461.421	583.624	690.024	707.933
75	219.122	321.309	465.635	564.661	583.624
80	103.240	213.855	348.699	443.512	461.421
85	34.765	135.898	252.833	345.539	364.501
90	14.749	82.171	184.358	259.154	278.117
95	11.588	56.887	147.486	204.374	222.283
100	10.535	34.765	121.149	170.662	180.144
105	8.428	21.069	91.652	136.951	146.433
110	5.267	6.321	64.262	106.401	116.935
115	3.160	3.160	42.139	79.010	91.652
120	0.000	0.000	21.069	56.887	68.476
125	0.000	0.000	6.321	34.765	45.299
130	0.000	0.000	0.000	17.909	25.283
135	0.000	0.000	0.000	4.214	9.481
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	819.71	N.A.	12.70
0-30	1707.12	N.A.	26.40
0-40	2752.49	N.A.	42.60
0-60	4734.83	N.A.	73.30
0-80	5907.06	N.A.	91.40
0-90	6167.96	N.A.	95.40
10-90	5953.17	N.A.	92.10
20-40	1932.77	N.A.	29.90
20-50	2993.69	N.A.	46.30
40-70	2687.78	N.A.	41.60
60-80	1172.24	N.A.	18.10
70-80	466.79	N.A.	7.20
80-90	260.90	N.A.	4.00
90-110	233.40	N.A.	3.60
90-120	276.60	N.A.	4.30
90-130	291.89	N.A.	4.50
90-150	294.30	N.A.	4.60
90-180	294.30	N.A.	4.60
110-180	60.90	N.A.	0.90
0-180	6462.26	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	214.79
10-20	604.93
20-30	887.40
30-40	1045.37
40-50	1060.92
50-60	921.42
60-70	705.44
70-80	466.80
80-90	260.90
90-100	146.36
100-110	87.04
110-120	43.20
120-130	15.29
130-140	2.41
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

X=2H	Y=2H	17.2	18.7	17.6	19.1	19.6	18.9	20.4	19.3	20.8	21.3
	3H	18.3	19.7	18.8	20.1	20.6	21.2	22.5	21.6	23.0	23.5
	4H	18.6	19.9	19.1	20.4	20.9	22.2	23.5	22.7	24.0	24.4
	6H	18.7	19.9	19.2	20.4	20.9	23.2	24.4	23.7	24.9	25.4
	8H	18.7	19.9	19.2	20.4	20.9	23.7	24.8	24.2	25.3	25.8
	12H	18.7	19.8	19.2	20.3	20.9	24.2	25.3	24.7	25.8	26.3

UGR Viewed Endwise

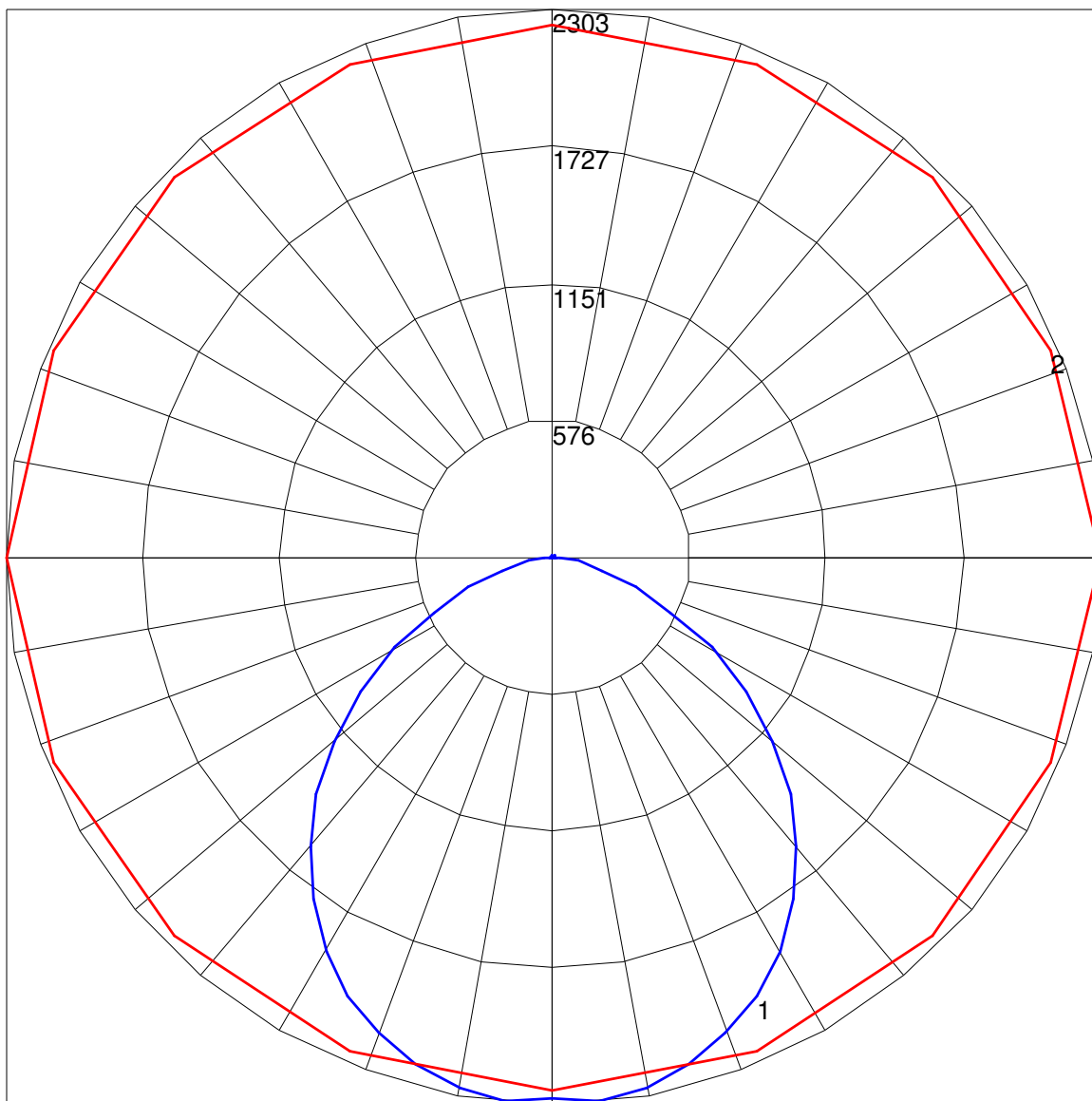
4H	2H	17.9	19.2	18.4	19.6	20.1	19.3	20.6	19.7	21.0	21.5
	3H	19.3	20.4	19.8	20.9	21.4	21.8	22.9	22.3	23.4	23.9
	4H	19.7	20.7	20.2	21.2	21.8	23.0	24.0	23.5	24.5	25.0
	6H	19.9	20.8	20.5	21.4	21.9	24.2	25.0	24.7	25.6	26.1
	8H	20.0	20.8	20.5	21.4	21.9	24.7	25.6	25.3	26.1	26.7
	12H	20.0	20.8	20.6	21.3	21.9	25.4	26.1	25.9	26.7	27.3

8H	4H	20.3	21.1	20.8	21.7	22.3	23.2	24.0	23.7	24.5	25.1
	6H	20.7	21.4	21.3	22.0	22.6	24.5	25.2	25.1	25.8	26.4
	8H	20.8	21.5	21.4	22.0	22.6	25.2	25.8	25.8	26.4	27.0
	12H	20.9	21.5	21.5	22.0	22.7	26.0	26.6	26.6	27.1	27.8

12H	4H	20.5	21.2	21.0	21.8	22.4	23.2	23.9	23.7	24.5	25.1
	6H	21.0	21.6	21.5	22.1	22.8	24.5	25.2	25.1	25.7	26.4
	8H	21.2	21.7	21.7	22.3	22.9	25.3	25.8	25.9	26.4	27.1

Maximum UGR = 27.8

POLAR GRAPH



Maximum Candela = 2302.89 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.)