



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 96-2-L29-830-HIAFR-DIM-UNV\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST]GEN FROM BALLABS TEST NO. 18128.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUEDATE] 02-11-2022

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] 1-22" LED BOARD 2' SUSPENDED ENCLOSED/GASKETED LUMINAIRE

[MORE] WHITE FLAT REFL w/WHITE FROSTED RIBBED ACRYLIC LENS

[LUMCAT] 96-2-L29-830-HIAFR-DIM-UNV

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2907
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	161
Total Luminaire Watts	18
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.22
Spacing Criterion (90-270)	1.24
Spacing Criterion (Diagonal)	1.34
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	2.25 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	7056	5971	6084
55	6190	5341	5774
65	5210	4767	5376
75	3941	3962	4644
85	2392	3150	3900

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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	941.679	941.679	941.679	941.679	941.679
5	945.624	936.749	933.791	930.833	932.805
10	930.833	921.958	919.000	918.014	916.042
15	904.209	899.279	891.391	894.349	892.377
20	867.725	859.837	855.893	860.823	860.823
25	820.395	814.479	817.437	817.437	818.423
30	770.106	765.176	767.148	772.078	774.051
35	706.013	705.027	707.985	715.873	718.832
40	636.003	637.975	642.906	657.696	661.641
45	563.035	565.008	576.840	602.478	609.380
50	489.082	495.984	515.705	552.189	565.008
55	413.156	425.974	460.486	502.886	521.621
60	337.230	356.951	405.267	453.584	474.291
65	269.192	289.899	349.062	398.365	418.086
70	203.127	228.764	289.899	336.244	356.951
75	138.047	171.573	229.750	274.122	291.871
80	82.828	122.270	174.531	214.959	232.708
85	41.414	79.870	129.173	169.601	179.461
90	19.721	50.289	92.689	130.159	138.047
95	15.777	40.428	74.940	105.508	113.396
100	14.791	28.595	61.135	85.786	93.675
105	9.861	17.749	44.372	66.065	76.912
110	6.902	10.847	35.498	52.261	61.135
115	4.930	5.916	24.651	41.414	48.317
120	4.930	3.944	15.777	31.554	38.456
125	2.958	1.972	7.888	22.679	27.609
130	0.000	0.000	1.972	12.819	16.763
135	0.000	0.000	0.000	3.944	7.888
140	0.000	0.000	0.000	0.000	1.972
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	341.29	N.A.	11.70
0-30	717.97	N.A.	24.70
0-40	1162.26	N.A.	40.00
0-60	2028.86	N.A.	69.80
0-80	2607.29	N.A.	89.70
0-90	2743.58	N.A.	94.40
10-90	2654.75	N.A.	91.30
20-40	820.97	N.A.	28.20
20-50	1271.97	N.A.	43.80
40-70	1208.33	N.A.	41.60
60-80	578.44	N.A.	19.90
70-80	236.70	N.A.	8.10
80-90	136.28	N.A.	4.70
90-110	125.36	N.A.	4.30
90-120	150.42	N.A.	5.20
90-130	161.26	N.A.	5.50
90-150	163.28	N.A.	5.60
90-180	163.28	N.A.	5.60
110-180	37.92	N.A.	1.30
0-180	2906.86	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	88.82
10-20	252.47
20-30	376.68
30-40	444.29
40-50	451.00
50-60	415.59
60-70	341.74
70-80	236.70
80-90	136.28
90-100	78.64
100-110	46.72
110-120	25.06
120-130	10.84
130-140	1.98
140-150	0.04
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	114	114	114	114	108	108	108	102	102	102	97	97	97	94
1	106	101	96	92	103	98	94	90	93	89	86	88	85	82	83	81	79	76
2	96	87	80	74	93	85	78	72	80	75	70	76	72	67	72	69	65	63
3	87	76	68	61	84	74	66	60	70	64	58	67	61	57	64	59	55	52
4	80	68	58	51	77	66	57	51	63	55	49	60	53	48	57	51	47	45
5	73	60	51	44	71	59	50	44	56	48	43	53	47	42	51	45	41	38
6	68	54	45	39	65	53	44	38	51	43	37	48	42	37	46	40	36	34
7	63	49	40	34	61	48	40	34	46	39	33	44	37	32	42	36	32	30
8	59	45	36	30	57	44	36	30	42	35	30	40	34	29	39	33	29	27
9	55	41	33	27	53	40	32	27	39	32	27	37	31	26	36	30	26	24
10	51	38	30	25	50	37	30	25	36	29	24	35	28	24	33	28	23	22

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**UGR TABLE - CORRECTED**

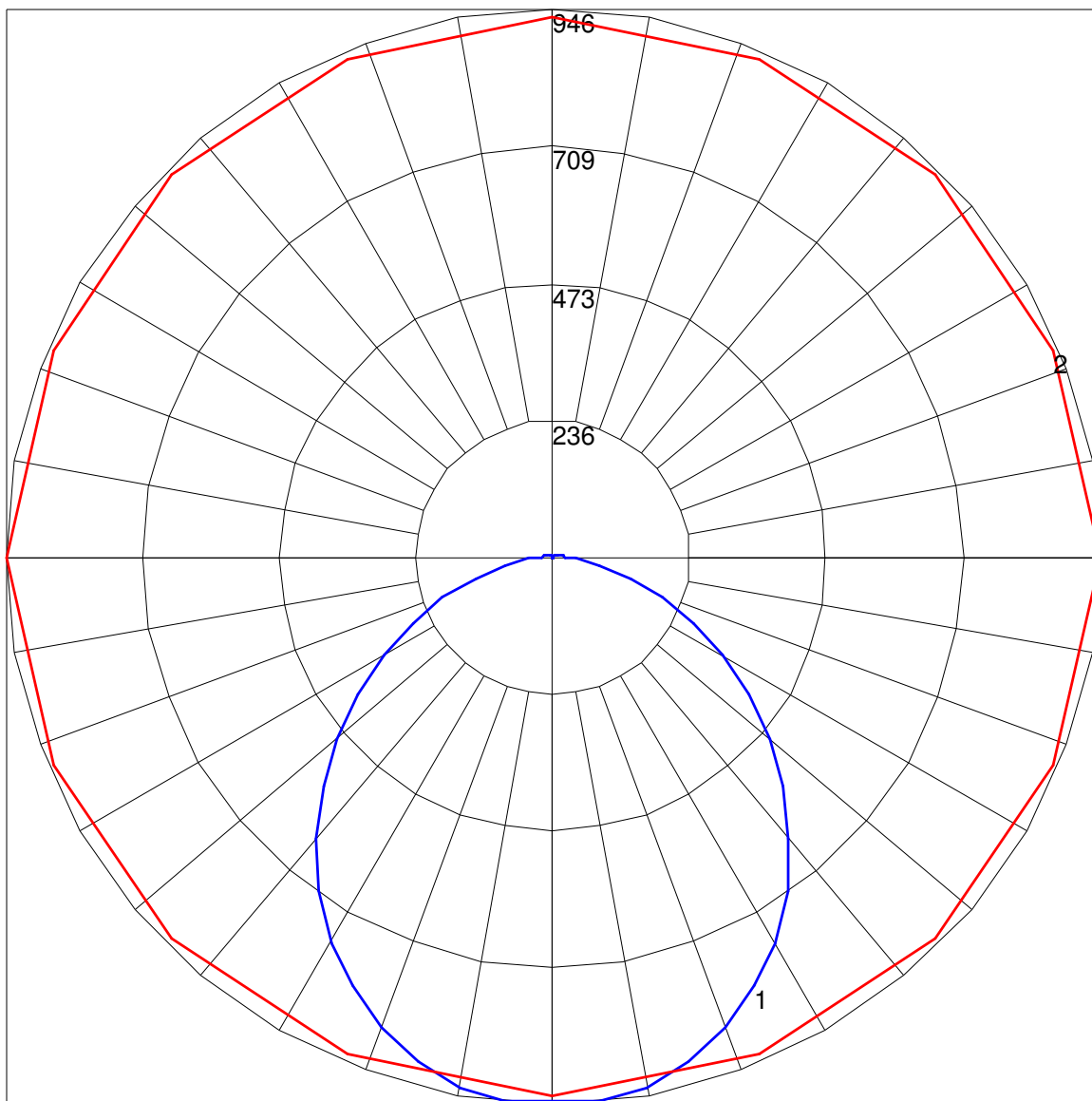
Reflectances

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	16.3	17.9	16.8	18.3	18.8	18.5	20.0	19.0	20.5	20.9
	3H	17.8	19.2	18.2	19.6	20.1	20.8	22.2	21.3	22.7	23.2
	4H	18.2	19.6	18.7	20.0	20.5	21.9	23.2	22.4	23.7	24.2
	6H	18.5	19.8	19.0	20.2	20.8	22.8	24.1	23.3	24.6	25.1
	8H	18.6	19.8	19.1	20.3	20.8	23.3	24.5	23.8	25.0	25.5
	12H	18.6	19.8	19.2	20.3	20.8	23.8	24.9	24.3	25.4	26.0
4H	2H	17.2	18.5	17.7	19.0	19.5	18.9	20.2	19.4	20.7	21.2
	3H	18.9	20.0	19.4	20.5	21.0	21.5	22.6	22.0	23.1	23.7
	4H	19.5	20.5	20.0	21.0	21.6	22.7	23.7	23.2	24.2	24.8
	6H	19.9	20.8	20.4	21.3	21.9	23.8	24.7	24.4	25.3	25.9
	8H	20.0	20.8	20.6	21.4	22.0	24.4	25.2	24.9	25.8	26.4
	12H	20.1	20.8	20.7	21.4	22.0	24.9	25.7	25.5	26.3	26.9
8H	4H	20.1	20.9	20.6	21.5	22.1	22.9	23.7	23.4	24.3	24.9
	6H	20.6	21.4	21.2	22.0	22.6	24.1	24.9	24.7	25.5	26.1
	8H	20.9	21.5	21.5	22.1	22.7	24.8	25.5	25.4	26.1	26.7
	12H	21.0	21.6	21.6	22.2	22.9	25.6	26.1	26.2	26.7	27.4
12H	4H	20.2	21.0	20.8	21.6	22.2	22.9	23.6	23.4	24.2	24.8
	6H	20.9	21.5	21.5	22.1	22.8	24.2	24.8	24.8	25.4	26.1
	8H	21.2	21.7	21.8	22.3	23.0	24.9	25.5	25.5	26.1	26.8

Maximum UGR = 27.4

POLAR GRAPH



Maximum Candela = 945.624 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.)