

IES INDOOR REPORT

PHOTOMETRIC FILENAME : 96-2-L21-835-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

[ISSUE DATE] 03-27-2023

[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-L21-835-HIAFR-DIM-UNV

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2135
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	119
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	5182	4386	4468
55	4546	3923	4241
65	3826	3501	3948
75	2895	2910	3411
85	1757	2314	2865

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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	691.620	691.620	691.620	691.620	691.620
5	694.517	687.999	685.826	683.654	685.102
10	683.654	677.136	674.963	674.239	672.791
15	664.100	660.479	654.685	656.858	655.410
20	637.304	631.511	628.614	632.235	632.235
25	602.542	598.197	600.370	600.370	601.094
30	565.608	561.987	563.435	567.056	568.505
35	518.534	517.810	519.982	525.776	527.949
40	467.115	468.564	472.185	483.048	485.945
45	413.524	414.972	423.663	442.492	447.562
50	359.208	364.277	378.762	405.557	414.972
55	303.444	312.859	338.206	369.347	383.107
60	247.680	262.164	297.650	333.136	348.345
65	197.709	212.918	256.370	292.581	307.065
70	149.187	168.017	212.918	246.955	262.164
75	101.389	126.012	168.741	201.330	214.366
80	60.834	89.802	128.185	157.878	170.913
85	30.417	58.661	94.871	124.564	131.806
90	14.484	36.935	68.076	95.596	101.389
95	11.587	29.693	55.040	77.490	83.284
100	10.863	21.002	44.901	63.006	68.800
105	7.242	13.036	32.589	48.522	56.488
110	5.069	7.966	26.072	38.383	44.901
115	3.621	4.345	18.105	30.417	35.486
120	3.621	2.897	11.587	23.175	28.244
125	2.173	1.448	5.794	16.657	20.278
130	0.000	0.000	1.448	9.415	12.312
135	0.000	0.000	0.000	2.897	5.794
140	0.000	0.000	0.000	0.000	1.448
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	250.66	N.A.	11.70
0-30	527.32	N.A.	24.70
0-40	853.63	N.A.	40.00
0-60	1490.1	N.A.	69.80
0-80	1914.94	N.A.	89.70
0-90	2015.03	N.A.	94.40
10-90	1949.79	N.A.	91.30
20-40	602.97	N.A.	28.20
20-50	934.21	N.A.	43.80
40-70	887.47	N.A.	41.60
60-80	424.84	N.A.	19.90
70-80	173.84	N.A.	8.10
80-90	100.09	N.A.	4.70
90-110	92.07	N.A.	4.30
90-120	110.48	N.A.	5.20
90-130	118.44	N.A.	5.50
90-150	119.92	N.A.	5.60
90-180	119.92	N.A.	5.60
110-180	27.85	N.A.	1.30
0-180	2134.95	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	65.24
10-20	185.43
20-30	276.65
30-40	326.31
40-50	331.24
50-60	305.23
60-70	250.99
70-80	173.84
80-90	100.09
90-100	57.75
100-110	34.32
110-120	18.41
120-130	7.96
130-140	1.45
140-150	0.03
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

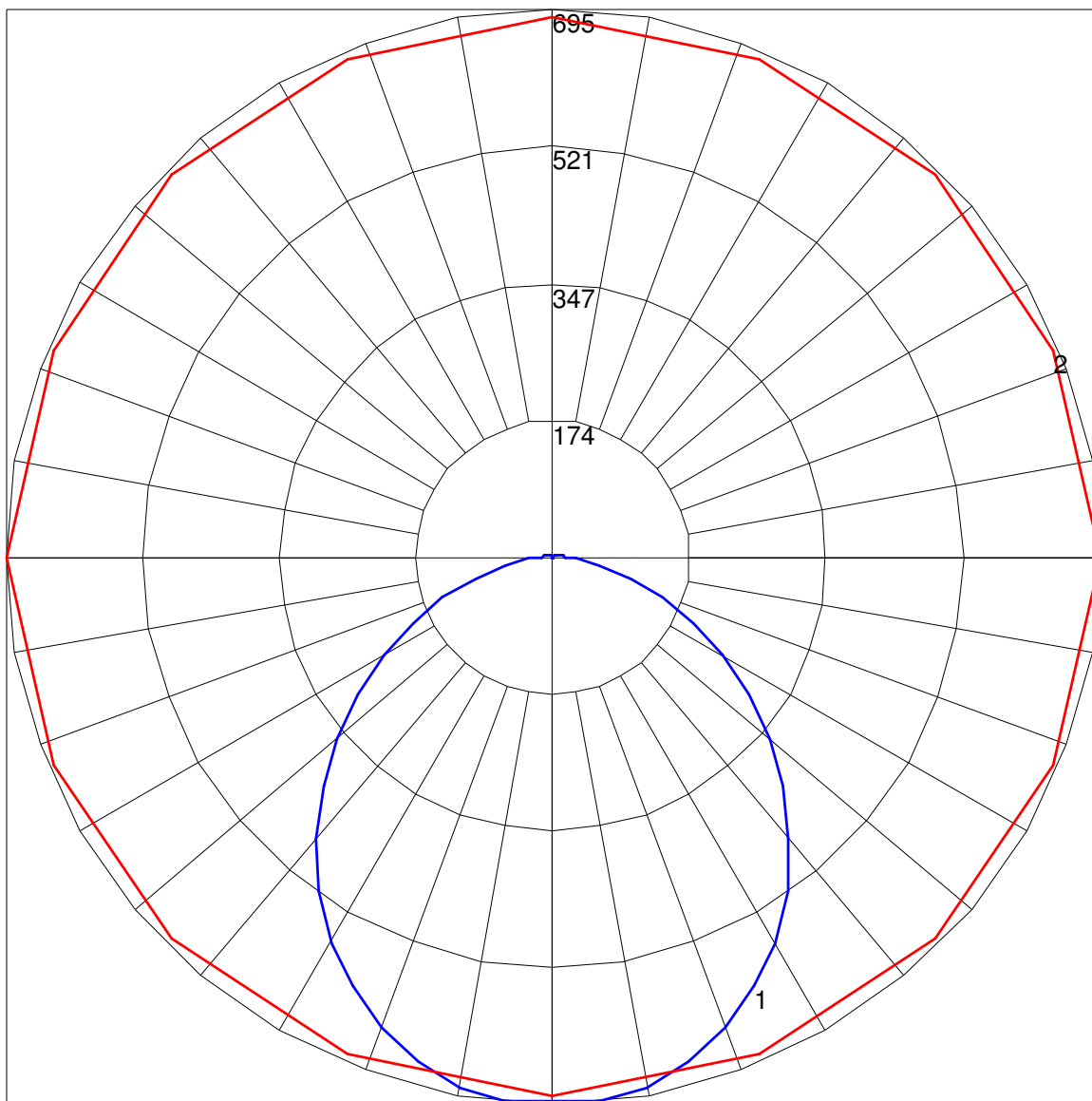
Reflectances

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	15.2	16.8	15.7	17.2	17.7	17.4	18.9	17.9	19.4	19.8
	3H	16.7	18.1	17.1	18.5	19.0	19.7	21.1	20.2	21.6	22.1
	4H	17.1	18.5	17.6	18.9	19.4	20.8	22.1	21.3	22.6	23.1
	6H	17.4	18.7	17.9	19.1	19.7	21.7	23.0	22.2	23.5	24.0
	8H	17.5	18.7	18.0	19.2	19.7	22.2	23.4	22.7	23.9	24.4
	12H	17.6	18.7	18.1	19.2	19.8	22.7	23.8	23.2	24.3	24.9
4H	2H	16.1	17.4	16.6	17.9	18.4	17.8	19.1	18.3	19.6	20.1
	3H	17.8	18.9	18.3	19.4	19.9	20.4	21.5	20.9	22.0	22.6
	4H	18.4	19.4	18.9	19.9	20.5	21.6	22.6	22.1	23.1	23.7
	6H	18.8	19.7	19.3	20.2	20.8	22.7	23.6	23.3	24.2	24.8
	8H	18.9	19.7	19.5	20.3	20.9	23.3	24.1	23.8	24.7	25.3
	12H	19.0	19.7	19.6	20.3	20.9	23.8	24.6	24.4	25.2	25.8
8H	4H	19.0	19.8	19.5	20.4	21.0	21.8	22.6	22.3	23.2	23.8
	6H	19.5	20.3	20.1	20.9	21.5	23.0	23.8	23.6	24.4	25.0
	8H	19.8	20.4	20.4	21.0	21.6	23.7	24.4	24.3	25.0	25.6
	12H	19.9	20.5	20.5	21.1	21.8	24.5	25.0	25.1	25.6	26.3
12H	4H	19.1	19.9	19.7	20.5	21.1	21.8	22.5	22.3	23.1	23.7
	6H	19.8	20.4	20.4	21.0	21.7	23.1	23.7	23.7	24.3	25.0
	8H	20.1	20.6	20.7	21.2	21.9	23.8	24.4	24.4	25.0	25.7

Maximum UGR = 26.3

POLAR GRAPH



Maximum Candela = 694.517 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.)