



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 97-2-L37-840-FR-DRV-UNV\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from BALLABS TEST NO. 19304.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUE DATE] 12-NOV-2019

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] 2 LED 22" ARRAYS 2' SUSPENDED ENCLOSED/GASKETED

[MORE] LUMINAIRE WHITE FLAT REFL w/HIGHLY SPEC CENTER REFL & FROSTED

[MORE] ACRYLIC DROP LENS

[LUMCAT] 97-2-L37-840-FR-DIM-UNV

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3756
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	138
Total Luminaire Watts	27.2
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.32
Spacing Criterion (90-270)	1.86
Spacing Criterion (Diagonal)	1.90
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	2.30 ft
Luminous Width (90-270)	0.46 ft
Luminous Height	0.27 ft

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

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	5502	6133	7283
55	5034	7524	9620
65	4271	9436	11584
75	3299	8929	8780
85	2128	4875	4074

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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	605.208	605.208	605.208	605.208	605.208
5	615.078	624.158	626.132	597.707	570.861
10	609.551	619.420	629.290	604.418	578.757
15	598.496	611.130	630.079	612.709	587.837
20	580.336	599.681	630.474	619.025	596.128
25	559.018	587.048	629.685	626.526	608.366
30	532.172	571.256	626.526	637.975	626.132
35	503.353	550.333	624.552	658.899	658.109
40	466.243	520.724	624.947	693.245	715.353
45	425.975	489.141	637.975	759.175	802.996
50	379.785	455.979	672.322	851.555	898.534
55	330.436	425.185	725.618	949.857	997.231
60	275.166	397.550	778.519	1037.104	1084.479
65	221.475	377.021	810.892	1051.711	1088.032
70	169.363	354.518	778.519	955.778	962.885
75	120.410	315.829	650.214	745.752	714.169
80	75.799	254.243	448.083	473.744	457.558
85	42.637	181.997	280.298	283.457	270.034
90	27.240	125.542	180.023	177.654	161.073
95	20.134	84.090	123.173	117.252	110.145
100	16.976	57.244	90.011	84.879	81.721
105	14.212	39.873	72.641	70.272	67.509
110	10.659	26.056	58.428	61.587	58.823
115	8.685	17.765	45.795	54.086	52.507
120	5.922	11.844	34.741	46.585	45.400
125	4.343	7.106	25.266	37.505	37.110
130	3.553	4.343	17.371	27.240	28.425
135	0.000	0.000	11.844	20.134	21.318
140	0.000	0.000	7.501	14.607	15.397
145	0.000	0.000	4.737	10.264	11.054
150	0.000	0.000	0.000	6.711	7.501
155	0.000	0.000	0.000	3.553	3.948
160	0.000	0.000	0.000	0.000	3.553
165	0.000	1.974	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	231.47	N.A.	6.20
0-30	512.20	N.A.	13.60
0-40	892.05	N.A.	23.70
0-60	1998.47	N.A.	53.20
0-80	3253.03	N.A.	86.60
0-90	3513.59	N.A.	93.50
10-90	3455.35	N.A.	92.00
20-40	660.58	N.A.	17.60
20-50	1147.44	N.A.	30.50
40-70	1809.44	N.A.	48.20
60-80	1254.56	N.A.	33.40
70-80	551.55	N.A.	14.70
80-90	260.56	N.A.	6.90
90-110	172.01	N.A.	4.60
90-120	209.07	N.A.	5.60
90-130	229.62	N.A.	6.10
90-150	241.65	N.A.	6.40
90-180	242.46	N.A.	6.50
110-180	70.45	N.A.	1.90
0-180	3756.05	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	58.25
10-20	173.22
20-30	280.73
30-40	379.85
40-50	486.86
50-60	619.57
60-70	703.01
70-80	551.55
80-90	260.56
90-100	111.79
100-110	60.22
110-120	37.06
120-130	20.56
130-140	8.79
140-150	3.24
150-160	0.70
160-170	0.11
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	172	172	172	172	167	167	167	167	158	158	158	149	149	149	141	141	141	137
1	151	141	133	125	146	137	129	122	129	122	116	121	116	111	114	110	106	102
2	134	118	105	94	128	114	102	92	107	97	89	101	92	85	95	88	82	77
3	119	100	85	74	114	97	83	72	91	79	70	85	75	67	80	72	65	60
4	108	86	71	59	103	84	69	58	79	66	56	74	63	54	69	60	53	49
5	98	76	60	49	94	73	59	48	69	56	47	65	54	45	61	51	44	40
6	90	67	52	41	86	65	51	41	61	49	40	58	47	38	54	45	37	34
7	82	60	46	35	79	58	45	35	55	43	34	52	41	33	49	39	32	29
8	76	54	40	31	73	53	40	31	50	38	30	47	37	29	45	35	28	25
9	71	49	36	27	68	48	36	27	46	34	26	43	33	26	41	32	25	22
10	66	45	33	24	64	44	32	24	42	31	23	40	30	23	38	29	22	19

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**UGR TABLE - CORRECTED**

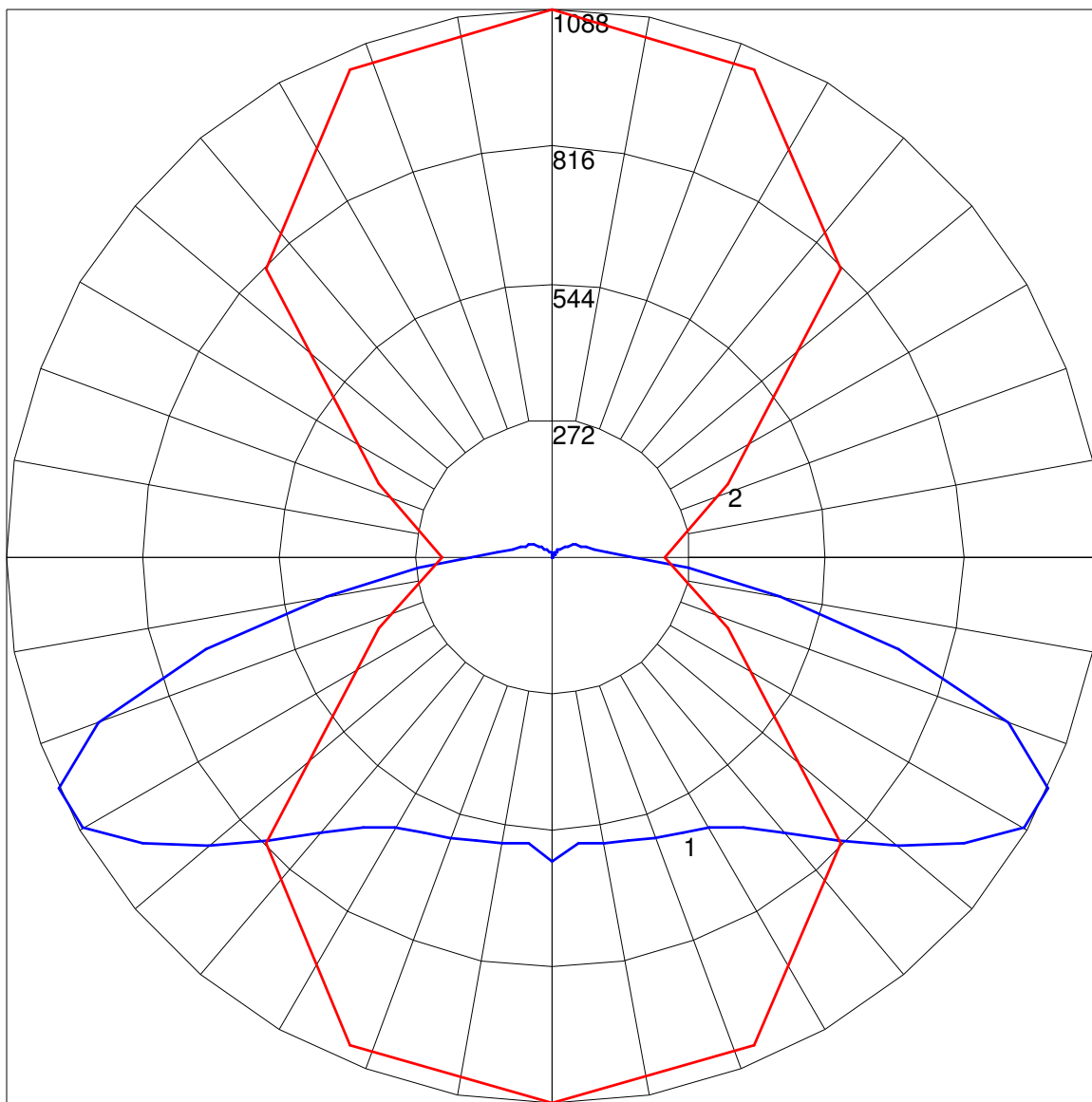
Reflectances

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	14.4	16.2	14.9	16.6	17.0	21.0	22.7	21.4	23.2	23.6
	3H	16.4	18.1	16.9	18.5	19.0	24.3	25.9	24.8	26.4	26.9
	4H	17.2	18.7	17.7	19.2	19.7	25.5	27.0	25.9	27.5	28.0
	6H	17.7	19.2	18.2	19.6	20.2	26.2	27.7	26.7	28.1	28.7
	8H	17.9	19.3	18.4	19.8	20.3	26.5	27.9	27.0	28.4	28.9
	12H	18.0	19.3	18.5	19.8	20.4	26.7	28.0	27.2	28.5	29.1
4H	2H	17.3	18.8	17.8	19.3	19.8	21.5	23.0	21.9	23.5	24.0
	3H	19.4	20.7	19.9	21.2	21.8	25.0	26.3	25.5	26.8	27.4
	4H	20.1	21.4	20.7	21.9	22.4	26.3	27.5	26.8	28.0	28.6
	6H	20.7	21.8	21.3	22.4	22.9	27.2	28.3	27.7	28.8	29.4
	8H	20.9	21.9	21.4	22.5	23.1	27.5	28.6	28.1	29.1	29.7
	12H	21.0	22.0	21.6	22.6	23.2	27.8	28.7	28.4	29.3	29.9
8H	4H	21.5	22.5	22.0	23.1	23.7	26.5	27.5	27.0	28.1	28.7
	6H	22.3	23.2	22.9	23.8	24.4	27.5	28.4	28.1	29.0	29.6
	8H	22.6	23.4	23.2	24.0	24.6	27.9	28.7	28.5	29.3	29.9
	12H	22.9	23.6	23.4	24.1	24.8	28.3	29.0	28.9	29.6	30.3
12H	4H	21.7	22.6	22.2	23.2	23.8	26.5	27.5	27.1	28.0	28.6
	6H	22.6	23.4	23.2	24.0	24.6	27.6	28.4	28.2	28.9	29.6
	8H	23.0	23.7	23.6	24.3	25.0	28.0	28.7	28.6	29.3	30.0

Maximum UGR = 30.3

POLAR GRAPH



Maximum Candela = 1088.032 Located At Horizontal Angle = 90, Vertical Angle = 65  
# 1 - Vertical Plane Through Horizontal Angles (90 - 270) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (65) (Through Max. Cd.)