



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 97-2-L25-840-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

[ISSUEDATE] 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-L25-840-FR-DIM-UNV

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2559
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	140
Total Luminaire Watts	18.3
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	3748	4179	4962
55	3430	5126	6554
65	2910	6429	7892
75	2247	6083	5982
85	1450	3321	2776

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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	412.334	412.334	412.334	412.334	412.334
5	419.058	425.245	426.590	407.224	388.934
10	415.293	422.017	428.741	411.796	394.313
15	407.762	416.369	429.279	417.445	400.499
20	395.389	408.568	429.548	421.748	406.148
25	380.864	399.961	429.010	426.859	414.486
30	362.574	389.202	426.859	434.659	426.590
35	342.939	374.947	425.514	448.914	448.376
40	317.656	354.774	425.783	472.315	487.377
45	290.221	333.256	434.659	517.233	547.089
50	258.751	310.663	458.059	580.173	612.180
55	225.130	289.683	494.371	647.147	679.423
60	187.473	270.855	530.413	706.589	738.866
65	150.893	256.868	552.469	716.541	741.287
70	115.389	241.537	530.413	651.181	656.023
75	82.036	215.178	442.997	508.088	486.570
80	51.643	173.218	305.283	322.766	311.739
85	29.049	123.996	190.970	193.122	183.977
90	18.559	85.533	122.651	121.037	109.741
95	13.718	57.291	83.919	79.885	75.043
100	11.566	39.001	61.326	57.829	55.677
105	9.683	27.166	49.491	47.877	45.994
110	7.262	17.752	39.808	41.960	40.077
115	5.917	12.104	31.201	36.849	35.773
120	4.035	8.069	23.670	31.739	30.932
125	2.959	4.841	17.214	25.552	25.283
130	2.421	2.959	11.835	18.559	19.366
135	0.000	0.000	8.069	13.718	14.524
140	0.000	0.000	5.110	9.952	10.490
145	0.000	0.000	3.228	6.993	7.531
150	0.000	0.000	0.000	4.573	5.110
155	0.000	0.000	0.000	2.421	2.690
160	0.000	0.000	0.000	0.000	2.421
165	0.000	1.345	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	157.70	N.A.	6.20
0-30	348.97	N.A.	13.60
0-40	607.76	N.A.	23.70
0-60	1361.58	N.A.	53.20
0-80	2216.32	N.A.	86.60
0-90	2393.85	N.A.	93.50
10-90	2354.16	N.A.	92.00
20-40	450.06	N.A.	17.60
20-50	781.76	N.A.	30.50
40-70	1232.79	N.A.	48.20
60-80	854.74	N.A.	33.40
70-80	375.77	N.A.	14.70
80-90	177.52	N.A.	6.90
90-110	117.19	N.A.	4.60
90-120	142.44	N.A.	5.60
90-130	156.45	N.A.	6.10
90-150	164.64	N.A.	6.40
90-180	165.19	N.A.	6.50
110-180	48.00	N.A.	1.90
0-180	2559.03	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	39.68
10-20	118.02
20-30	191.26
30-40	258.79
40-50	331.70
50-60	422.12
60-70	478.97
70-80	375.77
80-90	177.52
90-100	76.16
100-110	41.03
110-120	25.25
120-130	14.01
130-140	5.99
140-150	2.21
150-160	0.48
160-170	0.07
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	31	31	31	31	30	30	30	30	29	29	29	27	27	27	26	26	26	25
1	27	26	24	23	26	25	23	22	23	22	21	22	21	20	21	20	19	18
2	24	21	19	17	23	21	19	17	19	18	16	18	17	15	17	16	15	14
3	22	18	16	13	21	18	15	13	17	14	13	16	14	12	15	13	12	11
4	20	16	13	11	19	15	13	11	14	12	10	13	11	10	13	11	10	9
5	18	14	11	9	17	13	11	9	13	10	8	12	10	8	11	9	8	7
6	16	12	9	8	16	12	9	7	11	9	7	11	9	7	10	8	7	6
7	15	11	8	6	14	11	8	6	10	8	6	9	7	6	9	7	6	5
8	14	10	7	6	13	10	7	6	9	7	5	9	7	5	8	6	5	5
9	13	9	7	5	12	9	6	5	8	6	5	8	6	5	7	6	5	4
10	12	8	6	4	12	8	6	4	8	6	4	7	5	4	7	5	4	4

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UGR TABLE - CORRECTED

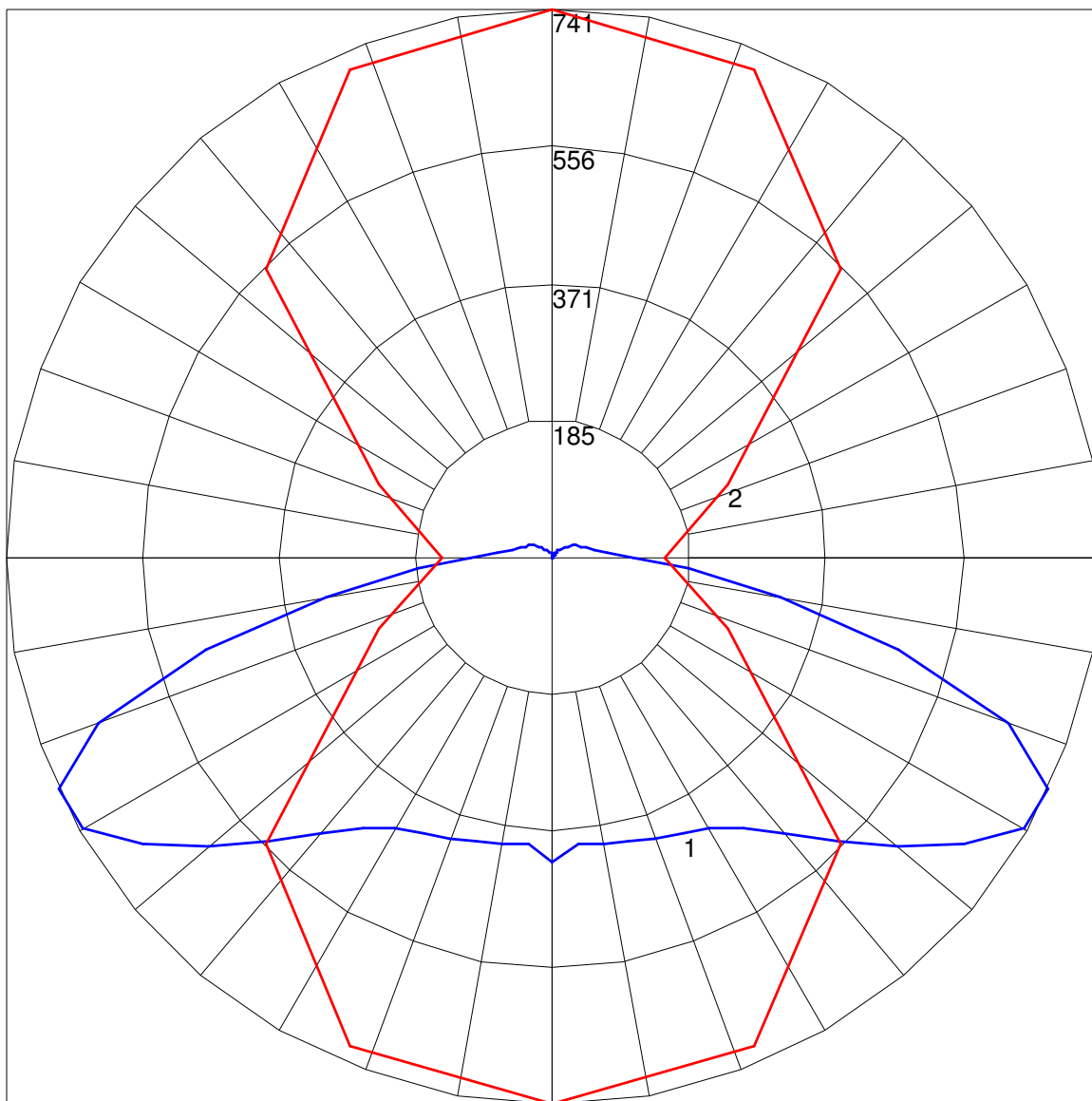
Reflectances

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	17.1	18.8	17.5	19.3	19.7	23.7	25.4	24.1	25.8	26.3
	3H	19.2	20.8	19.6	21.2	21.7	27.1	28.7	27.5	29.1	29.6
	4H	19.9	21.5	20.4	21.9	22.5	28.2	29.8	28.7	30.2	30.7
	6H	20.5	22.0	21.0	22.4	23.0	29.0	30.5	29.5	30.9	31.5
	8H	20.7	22.1	21.2	22.6	23.1	29.3	30.7	29.8	31.2	31.7
	12H	20.8	22.2	21.3	22.7	23.2	29.6	30.9	30.1	31.4	32.0
4H	2H	19.9	21.5	20.4	21.9	22.4	24.1	25.6	24.6	26.1	26.6
	3H	22.0	23.4	22.5	23.9	24.4	27.7	29.1	28.2	29.6	30.1
	4H	22.8	24.1	23.4	24.6	25.1	29.1	30.3	29.6	30.8	31.4
	6H	23.5	24.5	24.0	25.1	25.7	30.0	31.1	30.5	31.6	32.2
	8H	23.7	24.7	24.2	25.2	25.8	30.3	31.4	30.9	31.9	32.5
	12H	23.8	24.8	24.4	25.3	25.9	30.7	31.6	31.2	32.2	32.8
8H	4H	24.2	25.2	24.7	25.8	26.3	29.2	30.3	29.8	30.8	31.4
	6H	25.0	25.9	25.6	26.5	27.1	30.3	31.2	30.9	31.8	32.4
	8H	25.3	26.1	25.9	26.7	27.3	30.8	31.6	31.3	32.1	32.8
	12H	25.6	26.3	26.2	26.9	27.6	31.2	31.9	31.7	32.5	33.1
12H	4H	24.4	25.3	24.9	25.9	26.5	29.3	30.2	29.8	30.8	31.4
	6H	25.3	26.1	25.9	26.7	27.3	30.4	31.2	31.0	31.7	32.4
	8H	25.7	26.4	26.3	27.0	27.7	30.8	31.5	31.4	32.1	32.8

Maximum UGR = 33.1

POLAR GRAPH



Maximum Candela = 741.287 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.)