



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 39-4-L30-940-A-DIM1-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from BALLABS TEST NO. 19011.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUEDATE] 02-23-2021

[MANUFAC] WILLIAMS INDOOR

[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO 64836

[LUMINAIRE] 4' SURFACE MOUNT LED LUMINAIRE

[MORE] WITH FROSTED ACRYLIC RIBBED LENS

[LUMCAT] 39-4-L30-940-A-DIM1-UNV

[LAMPCAT]HLM 90 CRI, 4000K CCT

[_SEARCH_SOURCETYPE] LED

[_SEARCH_APPLICATION] INDOOR, ARCHITECTURAL, COMMERCIAL, DIRECT, LINEAR

[_SEARCH_MOUNTING] SURFACE, SUSPENDED

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2660
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	111
Total Luminaire Watts	24
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.18
Spacing Criterion (90-270)	1.18
Spacing Criterion (Diagonal)	1.30
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	4.01 ft
Luminous Width (90-270)	0.79 ft
Luminous Height	0.18 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	2637	2386	2357
55	2200	1961	1971
65	1820	1605	1712
75	1327	1273	1477
85	783	1060	1376

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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	1016.682	1016.682	1016.682	1016.682	1016.682
5	1022.327	1021.814	1021.300	1021.300	1021.814
10	999.745	999.232	999.232	999.745	1000.772
15	964.333	965.360	966.900	967.926	968.952
20	935.080	935.593	938.673	939.186	939.186
25	856.558	858.611	861.177	862.717	862.717
30	791.380	793.946	797.538	799.591	800.104
35	736.465	740.571	746.217	748.783	750.322
40	646.139	651.272	658.970	663.589	665.642
45	574.289	581.474	591.738	598.923	601.490
50	479.857	487.042	500.899	511.677	515.782
55	395.690	404.414	421.351	434.181	439.826
60	315.628	324.866	342.828	361.818	369.516
65	248.397	258.148	281.243	307.417	315.628
70	180.652	192.456	222.736	250.963	262.254
75	118.040	132.410	165.769	196.049	206.826
80	69.284	87.760	124.198	154.991	165.769
85	30.280	50.295	86.220	115.474	125.738
90	0.000	22.068	51.322	74.930	84.167
95	0.000	9.238	32.846	53.888	62.099
100	0.000	0.000	20.015	36.438	42.084
105	0.000	0.000	12.830	24.121	29.253
110	0.000	0.000	0.000	16.423	20.015
115	0.000	0.000	0.000	12.317	14.883
120	0.000	0.000	0.000	10.264	11.291
125	0.000	0.000	0.000	0.000	0.000
130	0.000	0.000	0.000	0.000	0.000
135	0.000	0.000	0.000	0.000	0.000
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	370.26	N.A.	13.90
0-30	768.58	N.A.	28.90
0-40	1229.51	N.A.	46.20
0-60	2056.62	N.A.	77.30
0-80	2513.5	N.A.	94.50
0-90	2604.45	N.A.	97.90
10-90	2507.78	N.A.	94.30
20-40	859.25	N.A.	32.30
20-50	1310.35	N.A.	49.30
40-70	1106.74	N.A.	41.60
60-80	456.88	N.A.	17.20
70-80	177.25	N.A.	6.70
80-90	90.95	N.A.	3.40
90-110	49.35	N.A.	1.90
90-120	54.44	N.A.	2.00
90-130	55.36	N.A.	2.10
90-150	55.36	N.A.	2.10
90-180	55.36	N.A.	2.10
110-180	6.01	N.A.	0.20
0-180	2659.82	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	96.67
10-20	273.59
20-30	398.32
30-40	460.93
40-50	451.10
50-60	376.01
60-70	279.64
70-80	177.25
80-90	90.95
90-100	35.62
100-110	13.73
110-120	5.09
120-130	0.92
130-140	0.00
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	119	119	119	119	116	116	116	116	110	110	110	105	105	105	100	100	100	98
1	108	103	99	95	105	101	97	93	96	93	90	92	89	86	88	86	83	81
2	98	90	83	77	95	88	82	76	84	79	74	80	76	72	77	74	70	68
3	90	79	71	65	87	78	70	64	74	68	63	71	66	61	69	64	60	58
4	82	71	62	55	80	69	61	55	66	59	54	64	58	53	61	56	52	50
5	76	63	54	48	74	62	54	48	60	52	47	58	51	46	55	50	45	43
6	70	57	48	42	68	56	48	42	54	47	41	52	46	41	50	45	40	38
7	65	52	43	37	64	51	43	37	49	42	37	48	41	36	46	40	36	34
8	61	48	39	33	59	47	39	33	45	38	33	44	37	33	43	37	32	30
9	57	44	36	30	55	43	35	30	42	35	30	41	34	30	39	34	29	27
10	53	40	33	27	52	40	32	27	39	32	27	38	31	27	37	31	27	25

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UGR TABLE - CORRECTED

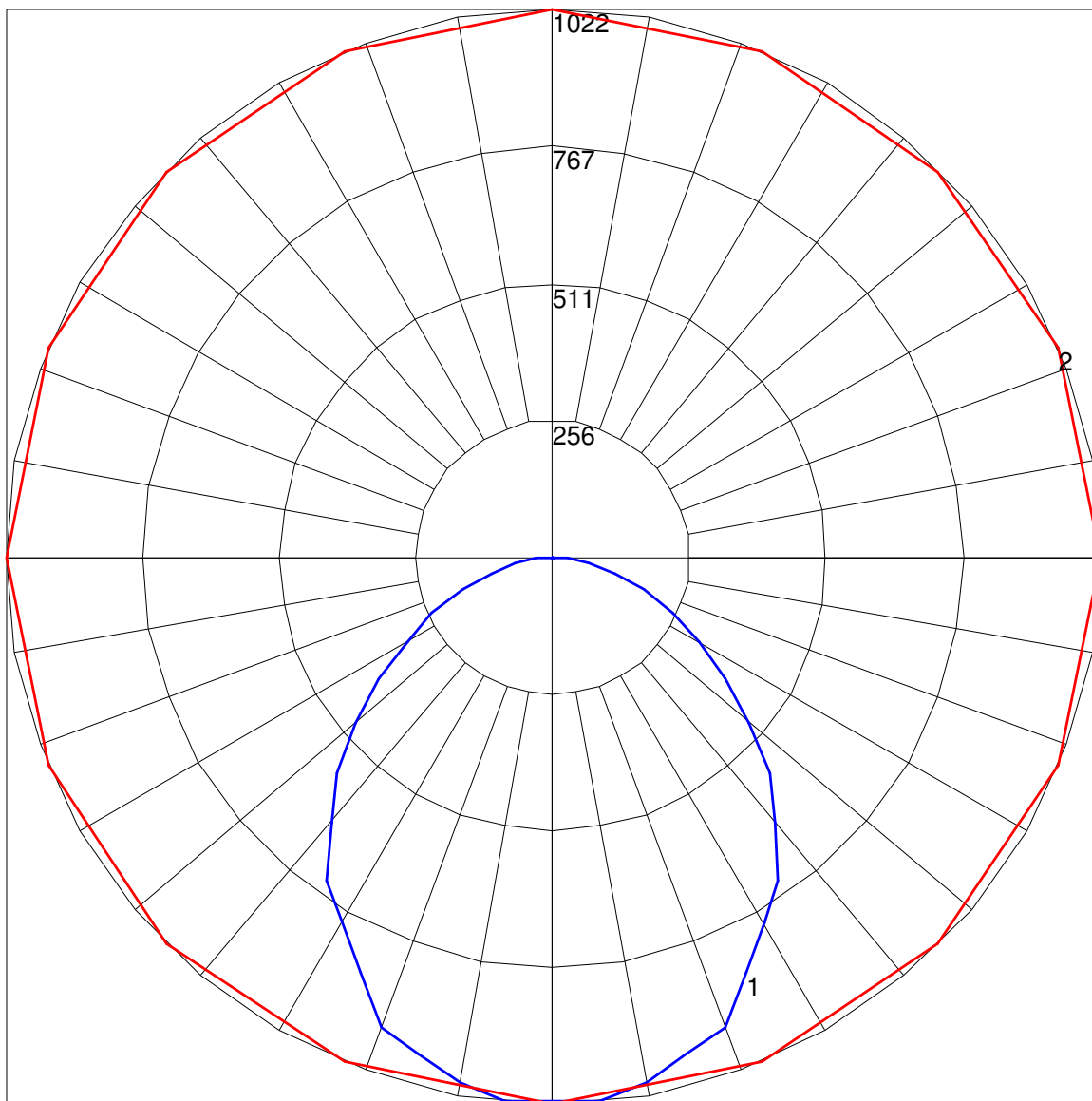
Reflectances

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	13.3	14.8	13.7	15.2	15.6	14.4	16.0	14.8	16.4	16.7
	3H	14.6	16.1	15.0	16.4	16.8	16.5	17.9	16.9	18.3	18.7
	4H	15.0	16.4	15.5	16.8	17.2	17.4	18.7	17.8	19.1	19.5
	6H	15.3	16.6	15.7	17.0	17.4	18.3	19.5	18.7	19.9	20.3
	8H	15.4	16.6	15.8	17.0	17.4	18.7	19.9	19.2	20.3	20.8
	12H	15.4	16.5	15.9	17.0	17.4	19.1	20.3	19.6	20.7	21.2
4H	2H	13.9	15.3	14.4	15.7	16.1	14.9	16.2	15.3	16.6	17.0
	3H	15.5	16.6	16.0	17.1	17.5	17.1	18.3	17.6	18.7	19.1
	4H	16.0	17.1	16.5	17.5	18.0	18.2	19.2	18.6	19.7	20.1
	6H	16.4	17.3	16.9	17.8	18.3	19.3	20.1	19.7	20.6	21.1
	8H	16.5	17.3	17.0	17.8	18.3	19.8	20.6	20.3	21.1	21.6
	12H	16.6	17.3	17.1	17.8	18.4	20.3	21.1	20.9	21.6	22.1
8H	4H	16.5	17.3	17.0	17.8	18.3	18.4	19.2	18.9	19.7	20.2
	6H	17.0	17.7	17.5	18.2	18.7	19.6	20.3	20.1	20.8	21.4
	8H	17.1	17.8	17.7	18.3	18.9	20.2	20.9	20.8	21.4	22.0
	12H	17.3	17.8	17.8	18.4	19.0	21.0	21.5	21.5	22.1	22.7
12H	4H	16.6	17.3	17.1	17.9	18.4	18.4	19.1	18.9	19.7	20.2
	6H	17.1	17.8	17.7	18.3	18.9	19.6	20.3	20.2	20.8	21.4
	8H	17.4	18.0	17.9	18.5	19.1	20.3	20.9	20.9	21.4	22.0

Maximum UGR = 22.7

POLAR GRAPH



Maximum Candela = 1022.327 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.)