



IES INDOOR REPORT

PHOTOMETRIC FILENAME : LT-24-L64-940-AF-(L60)-EM10W-DIM-UNV_EM MODE ONLY.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] GEN FROM BALLABS TEST NO. 20802.0
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
 [ISSUEDATE] 10-31-2023
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
 [LUMINAIRE] 2x4' RECESSED LED LUMINAIRE
 [LUMINAIRE] WHITE REFLECTOR w/FROSTED CENTER LENS
 [LUMINAIRE] 0-10V DIMMING DRIVER
 [LUMCAT] LT-24-L64-940-AF-(L60)-EMBSL10LST-DIM-UNV
 [LAMPCAT] 22 INCH LED ARRAYS
 [_SEARCH_SOURCETYPE] LED
 [_SEARCH_APPLICATION] Indoor, Classroom, Office, Direct
 [_SEARCH_MOUNTING] Recessed

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1190
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	119
Total Luminaire Watts	10
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.22
Spacing Criterion (90-270)	1.28
Spacing Criterion (Diagonal)	1.36
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	3.93 ft
Luminous Width (90-270)	1.91 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	492	546	588
55	447	530	593
65	382	527	620
75	282	553	694
85	108	444	408

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	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>
0	413.379	413.379	413.379	413.379	413.379
5	417.342	412.388	409.812	408.821	408.821
10	409.614	404.461	403.074	403.272	402.678
15	397.327	393.760	393.166	394.553	395.346
20	381.276	378.105	379.492	383.257	384.050
25	360.270	357.495	362.450	367.800	368.989
30	336.093	335.499	342.236	349.371	352.145
35	307.755	310.133	320.042	329.157	332.526
40	277.832	282.192	297.450	307.953	311.917
45	241.963	249.494	268.914	286.353	289.326
50	212.040	221.354	240.378	257.420	262.375
55	178.550	187.863	211.644	229.875	236.613
60	145.654	155.958	181.324	203.321	209.662
65	112.361	126.629	154.968	176.370	182.513
70	81.249	97.301	126.629	149.419	154.373
75	50.731	70.350	99.679	120.090	125.044
80	24.375	45.579	72.331	81.843	79.069
85	6.540	22.591	26.951	23.978	24.771
90	0.000	0.000	0.000	0.000	0.000

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Zone	Lumens	%Lamp	%Fixt
0-20	150.30	N.A.	12.60
0-30	317.66	N.A.	26.70
0-40	517.93	N.A.	43.50
0-60	911.95	N.A.	76.60
0-80	1160.72	N.A.	97.50
0-90	1189.96	N.A.	100.00
10-90	1150.94	N.A.	96.70
20-40	367.63	N.A.	30.90
20-50	574.30	N.A.	48.30
40-70	543.88	N.A.	45.70
60-80	248.77	N.A.	20.90
70-80	98.90	N.A.	8.30
80-90	29.24	N.A.	2.50
90-110	0.00	N.A.	0.00
90-120	0.00	N.A.	0.00
90-130	0.00	N.A.	0.00
90-150	0.00	N.A.	0.00
90-180	0.00	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	1189.96	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	39.02
10-20	111.28
20-30	167.36
30-40	200.27
40-50	206.67
50-60	187.35
60-70	149.86
70-80	98.90
80-90	29.24
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
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	111	111	111	106	106	106	102	102	102	100
1	108	103	99	95	105	101	97	93	97	93	90	93	90	87	89	87	85	83
2	98	90	82	77	95	88	81	76	84	79	74	81	76	72	78	74	70	68
3	89	78	70	63	87	77	69	63	74	67	62	71	65	61	68	64	59	57
4	82	69	60	53	79	68	60	53	65	58	52	63	57	52	61	55	51	49
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44	42
6	69	56	47	40	67	55	46	40	53	45	40	51	44	39	50	44	39	37
7	64	51	42	35	62	50	41	35	48	41	35	47	40	35	45	39	34	32
8	60	46	37	32	58	45	37	31	44	37	31	43	36	31	42	35	31	29
9	56	42	34	28	54	42	34	28	41	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	39	31	26	38	30	26	37	30	25	36	30	25	24

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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

X=2H	Y=2H	8.9	10.6	9.3	10.9	11.2	10.6	12.3	11.0	12.6	12.9
	3H	10.5	12.0	10.9	12.3	12.7	13.0	14.5	13.4	14.8	15.2
	4H	11.0	12.4	11.4	12.8	13.2	14.0	15.5	14.4	15.8	16.2
	6H	11.3	12.7	11.7	13.0	13.4	14.9	16.2	15.3	16.6	16.9
	8H	11.4	12.7	11.8	13.1	13.5	15.1	16.4	15.5	16.8	17.2
	12H	11.4	12.6	11.9	13.0	13.5	15.2	16.5	15.7	16.8	17.3

UGR Viewed Endwise

4H	2H	9.9	11.3	10.3	11.6	12.0	11.2	12.6	11.6	13.0	13.3
	3H	11.7	12.9	12.1	13.3	13.7	13.8	15.0	14.2	15.4	15.8
	4H	12.4	13.5	12.8	13.9	14.3	15.1	16.2	15.5	16.6	17.0
	6H	12.9	13.8	13.3	14.3	14.7	16.1	17.1	16.6	17.5	17.9
	8H	13.0	13.9	13.5	14.3	14.8	16.4	17.3	16.9	17.7	18.2
	12H	13.1	13.9	13.5	14.3	14.8	16.6	17.4	17.0	17.8	18.3

8H	4H	13.2	14.1	13.6	14.5	15.0	15.4	16.3	15.9	16.7	17.2
	6H	13.8	14.6	14.3	15.1	15.5	16.6	17.3	17.1	17.8	18.3
	8H	14.1	14.7	14.6	15.2	15.7	17.0	17.7	17.5	18.2	18.7
	12H	14.2	14.8	14.7	15.3	15.8	17.2	17.8	17.7	18.3	18.9

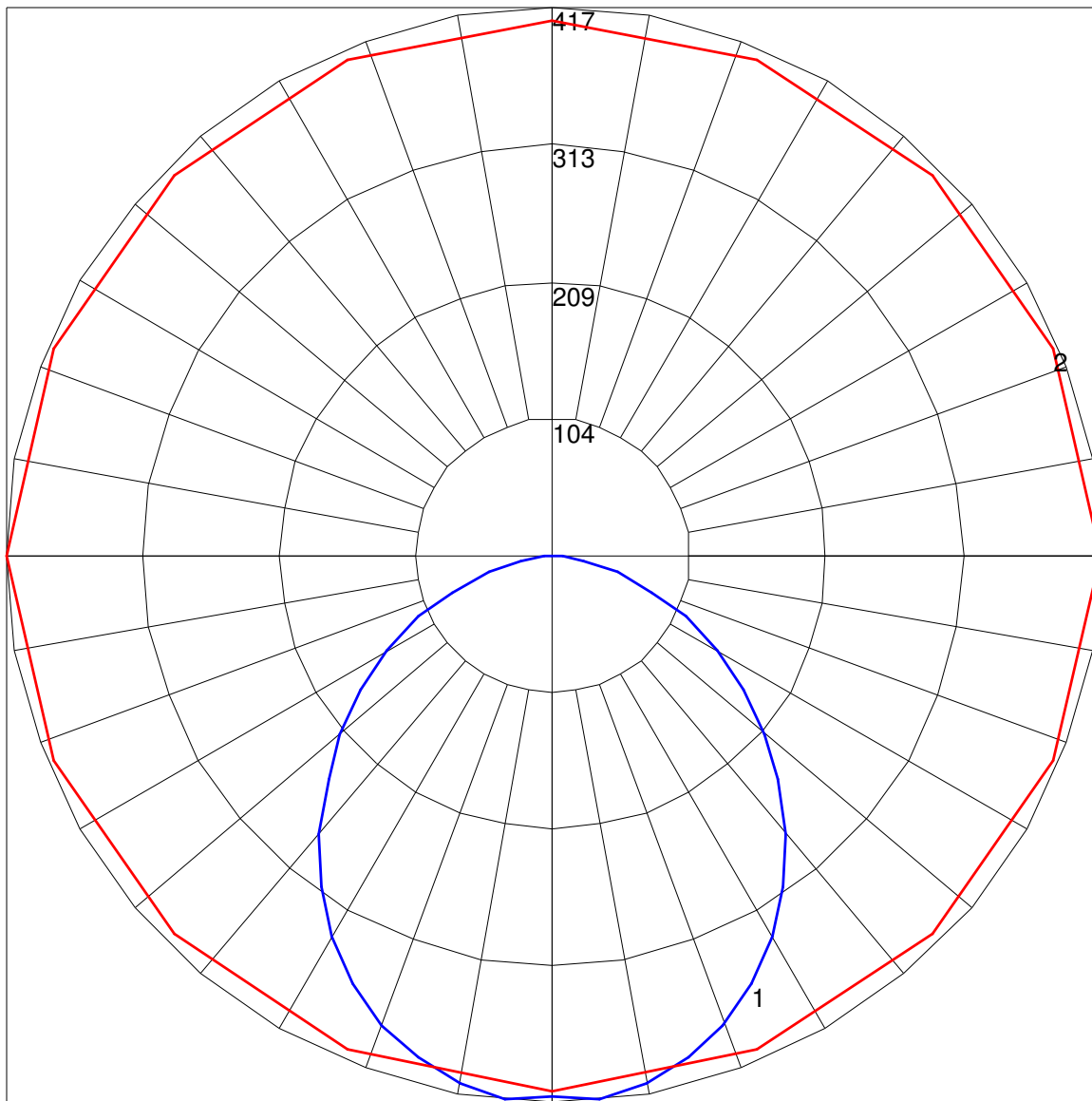
12H	4H	13.3	14.1	13.8	14.6	15.1	15.4	16.2	15.9	16.7	17.2
	6H	14.1	14.8	14.6	15.2	15.8	16.7	17.3	17.2	17.8	18.3
	8H	14.4	15.0	14.9	15.5	16.0	17.1	17.7	17.6	18.2	18.8

Maximum UGR = 18.9

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POLAR GRAPH



Maximum Candela = 417.342 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.)