



IES INDOOR REPORT

PHOTOMETRIC FILENAME : LT-24-L82-840-AF-DIM-UNV_.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] 2023-07-24
 [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-L82-840-AF-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	8460
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	132
Total Luminaire Watts	64.3
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	3495	3885	4180
55	3180	3769	4214
65	2716	3746	4411
75	2002	3934	4935
85	766	3159	2903

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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	2938.957	2938.957	2938.957	2938.957	2938.957
5	2967.135	2931.913	2913.597	2906.552	2906.552
10	2912.188	2875.557	2865.694	2867.103	2862.877
15	2824.836	2799.476	2795.250	2805.112	2810.747
20	2710.716	2688.174	2698.036	2724.805	2730.440
25	2561.373	2541.648	2576.871	2614.911	2623.364
30	2389.488	2385.261	2433.163	2483.884	2503.608
35	2188.015	2204.922	2275.367	2340.176	2364.127
40	1975.272	2006.268	2114.753	2189.424	2217.602
45	1720.262	1773.800	1911.872	2035.855	2056.988
50	1507.519	1573.737	1708.991	1830.156	1865.378
55	1269.415	1335.633	1504.701	1634.319	1682.222
60	1035.539	1108.801	1289.140	1445.527	1490.612
65	798.844	900.285	1101.757	1253.917	1297.593
70	577.647	691.768	900.285	1062.308	1097.530
75	360.677	500.158	708.675	853.791	889.013
80	173.294	324.046	514.247	581.874	562.149
85	46.494	160.614	191.610	170.476	176.112
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1068.55	N.A.	12.60
0-30	2258.42	N.A.	26.70
0-40	3682.27	N.A.	43.50
0-60	6483.61	N.A.	76.60
0-80	8252.23	N.A.	97.50
0-90	8460.15	N.A.	100.00
10-90	8182.74	N.A.	96.70
20-40	2613.73	N.A.	30.90
20-50	4083.06	N.A.	48.30
40-70	3866.79	N.A.	45.70
60-80	1768.62	N.A.	20.90
70-80	703.17	N.A.	8.30
80-90	207.92	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	8460.15	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	277.42
10-20	791.13
20-30	1189.87
30-40	1423.86
40-50	1469.33
50-60	1332.01
60-70	1065.45
70-80	703.17
80-90	207.92
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

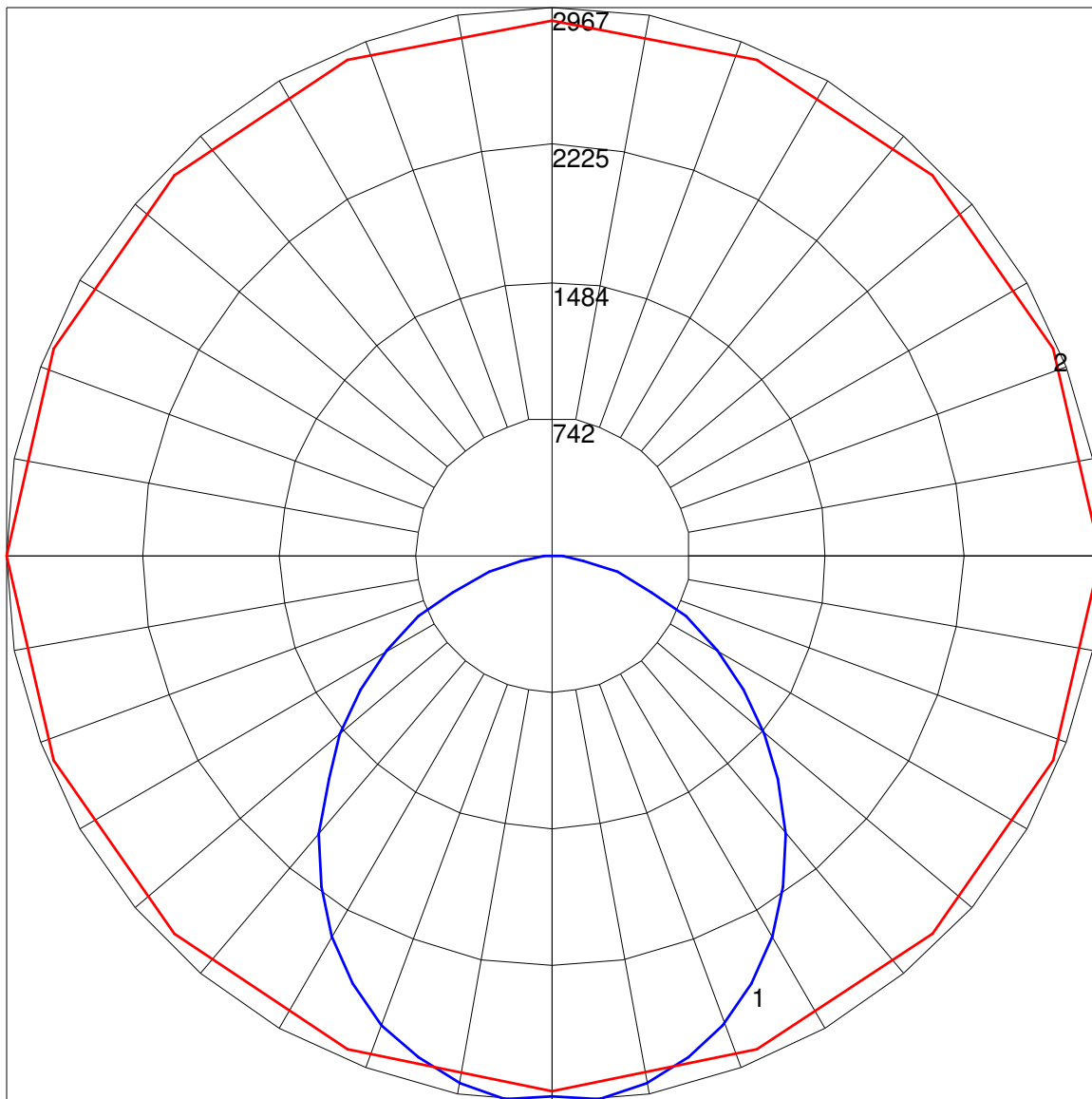
Reflectances

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					UGR Viewed Endwise				
X=2H	Y=2H	15.7	17.4	16.1	17.7	18.0	17.4	19.1	17.8	19.4	19.7
	3H	17.3	18.8	17.7	19.1	19.5	19.8	21.3	20.2	21.6	22.0
	4H	17.8	19.2	18.2	19.6	20.0	20.8	22.3	21.2	22.6	23.0
	6H	18.1	19.5	18.5	19.8	20.2	21.7	23.0	22.1	23.4	23.8
	8H	18.2	19.5	18.6	19.9	20.3	21.9	23.2	22.3	23.6	24.0
	12H	18.2	19.5	18.7	19.8	20.3	22.0	23.3	22.5	23.6	24.1
4H	2H	16.7	18.1	17.1	18.4	18.8	18.0	19.4	18.4	19.8	20.1
	3H	18.5	19.7	18.9	20.1	20.5	20.6	21.8	21.0	22.2	22.6
	4H	19.2	20.3	19.6	20.7	21.2	21.9	23.0	22.3	23.4	23.8
	6H	19.7	20.6	20.1	21.1	21.5	22.9	23.9	23.4	24.3	24.7
	8H	19.8	20.7	20.3	21.1	21.6	23.2	24.1	23.7	24.5	25.0
	12H	19.9	20.7	20.3	21.1	21.6	23.4	24.2	23.8	24.6	25.1
8H	4H	20.0	20.9	20.4	21.3	21.8	22.2	23.1	22.7	23.5	24.0
	6H	20.6	21.4	21.1	21.9	22.3	23.4	24.1	23.9	24.6	25.1
	8H	20.9	21.5	21.4	22.0	22.5	23.8	24.5	24.3	25.0	25.5
	12H	21.0	21.6	21.5	22.1	22.6	24.0	24.6	24.5	25.1	25.7
12H	4H	20.1	20.9	20.6	21.4	21.9	22.2	23.0	22.7	23.5	24.0
	6H	20.9	21.6	21.4	22.0	22.6	23.5	24.1	24.0	24.6	25.1
	8H	21.2	21.8	21.7	22.3	22.8	23.9	24.5	24.4	25.0	25.6

Maximum UGR = 25.7

POLAR GRAPH



Maximum Candela = 2967.135 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.)