



IES INDOOR REPORT

PHOTOMETRIC FILENAME : LT-24-L82-850-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-L82-850-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	8707
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	135
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	3597	3998	4301
55	3272	3879	4337
65	2795	3855	4540
75	2060	4049	5079
85	789	3251	2988

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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	3024.558	3024.558	3024.558	3024.558	3024.558
5	3053.557	3017.308	2998.459	2991.210	2991.210
10	2997.009	2959.311	2949.162	2950.612	2946.262
15	2907.114	2881.015	2876.665	2886.815	2892.614
20	2789.669	2766.470	2776.620	2804.168	2809.968
25	2635.976	2615.677	2651.926	2691.074	2699.773
30	2459.085	2454.735	2504.033	2556.230	2576.529
35	2251.744	2269.144	2341.640	2408.337	2432.986
40	2032.805	2064.703	2176.348	2253.194	2282.193
45	1770.367	1825.464	1967.558	2095.152	2116.901
50	1551.427	1619.574	1758.767	1883.462	1919.710
55	1306.389	1374.536	1548.527	1681.921	1731.219
60	1065.700	1141.096	1326.688	1487.630	1534.028
65	822.111	926.507	1133.847	1290.439	1335.387
70	594.472	711.917	926.507	1093.249	1129.497
75	371.183	514.726	729.316	878.659	914.907
80	178.342	333.484	529.225	598.822	578.523
85	47.848	165.292	197.191	175.442	181.241
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1099.67	N.A.	12.60
0-30	2324.2	N.A.	26.70
0-40	3789.53	N.A.	43.50
0-60	6672.46	N.A.	76.60
0-80	8492.59	N.A.	97.50
0-90	8706.57	N.A.	100.00
10-90	8421.07	N.A.	96.70
20-40	2689.86	N.A.	30.90
20-50	4201.99	N.A.	48.30
40-70	3979.41	N.A.	45.70
60-80	1820.13	N.A.	20.90
70-80	723.65	N.A.	8.30
80-90	213.98	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	8706.57	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	285.50
10-20	814.17
20-30	1224.53
30-40	1465.33
40-50	1512.13
50-60	1370.8
60-70	1096.48
70-80	723.65
80-90	213.98
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

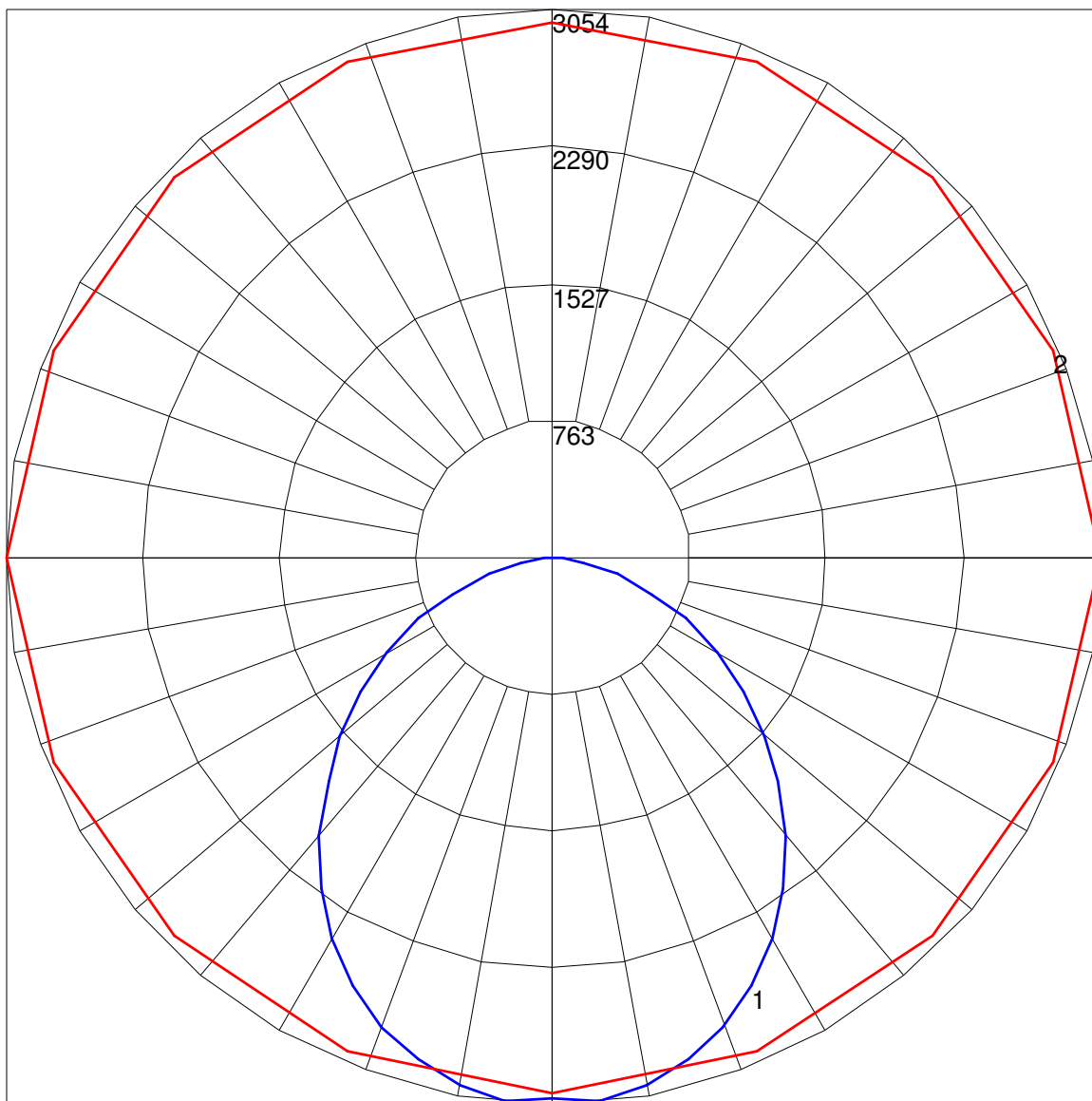
Reflectances

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	15.8	17.5	16.2	17.8	18.1	17.5	19.2	17.9	19.5	19.8
	3H	17.4	18.9	17.8	19.2	19.6	19.9	21.4	20.3	21.7	22.1
	4H	17.9	19.3	18.3	19.7	20.1	20.9	22.4	21.3	22.7	23.1
	6H	18.2	19.6	18.6	19.9	20.3	21.8	23.1	22.2	23.5	23.9
	8H	18.3	19.6	18.7	20.0	20.4	22.0	23.3	22.4	23.7	24.1
	12H	18.3	19.6	18.8	19.9	20.4	22.1	23.4	22.6	23.7	24.2
4H	2H	16.8	18.2	17.2	18.5	18.9	18.1	19.5	18.5	19.9	20.2
	3H	18.6	19.8	19.0	20.2	20.6	20.7	21.9	21.1	22.3	22.7
	4H	19.3	20.4	19.7	20.8	21.3	22.0	23.1	22.4	23.5	23.9
	6H	19.8	20.7	20.2	21.2	21.6	23.0	24.0	23.5	24.4	24.8
	8H	19.9	20.8	20.4	21.2	21.7	23.3	24.2	23.8	24.6	25.1
	12H	20.0	20.8	20.4	21.2	21.7	23.5	24.3	23.9	24.7	25.2
8H	4H	20.1	21.0	20.5	21.4	21.9	22.3	23.2	22.8	23.6	24.1
	6H	20.7	21.5	21.2	22.0	22.4	23.5	24.2	24.0	24.7	25.2
	8H	21.0	21.6	21.5	22.1	22.6	23.9	24.6	24.4	25.1	25.6
	12H	21.1	21.7	21.6	22.2	22.7	24.1	24.7	24.6	25.2	25.8
12H	4H	20.2	21.0	20.7	21.5	22.0	22.3	23.1	22.8	23.6	24.1
	6H	21.0	21.7	21.5	22.1	22.7	23.6	24.2	24.1	24.7	25.2
	8H	21.3	21.9	21.8	22.4	22.9	24.0	24.6	24.5	25.1	25.7

Maximum UGR = 25.8

POLAR GRAPH



Maximum Candela = 3053.557 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.)