



IES INDOOR REPORT

PHOTOMETRIC FILENAME : LT-24-L64-840-AF-(L60)-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] 15-MAR-2024
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
 [LUMINAIRE] RECESSED 2 X 4 LED LUMINAIRE
 [LUMINAIRE] WHITE REFLECTOR w/FROSTED CENTER LENS
 [LUMINAIRE] 0-10V DIMMING DRIVER
 [LUMCAT] LT-24-L64-840-AF-(L60)-DIM-UNV
 [LAMPCAT] HLM 80 CRI 4000K CCT

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	6391
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	140
Total Luminaire Watts	45.8
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	2640	2934	3157
55	2402	2847	3183
65	2051	2829	3332
75	1512	2972	3728
85	579	2386	2193

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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	2220.086	2220.086	2220.086	2220.086	2220.086
5	2241.371	2214.765	2200.929	2195.607	2195.607
10	2199.865	2172.193	2164.743	2165.808	2162.615
15	2133.879	2114.722	2111.529	2118.979	2123.237
20	2047.673	2030.644	2038.094	2058.316	2062.573
25	1934.859	1919.959	1946.566	1975.302	1981.687
30	1805.017	1801.824	1838.010	1876.324	1891.224
35	1652.825	1665.597	1718.811	1767.767	1785.860
40	1492.119	1515.533	1597.483	1653.890	1675.175
45	1299.485	1339.927	1444.227	1537.883	1553.847
50	1138.778	1188.800	1290.970	1382.498	1409.105
55	958.915	1008.936	1136.650	1234.564	1270.749
60	782.245	837.588	973.815	1091.950	1126.007
65	603.446	680.074	832.266	947.208	980.201
70	436.354	522.561	680.074	802.466	829.073
75	272.455	377.819	535.332	644.953	671.560
80	130.906	244.784	388.462	439.547	424.647
85	35.121	121.328	144.742	128.778	133.035
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	807.18	N.A.	12.60
0-30	1706.01	N.A.	26.70
0-40	2781.59	N.A.	43.50
0-60	4897.72	N.A.	76.60
0-80	6233.73	N.A.	97.50
0-90	6390.79	N.A.	100.00
10-90	6181.23	N.A.	96.70
20-40	1974.41	N.A.	30.90
20-50	3084.34	N.A.	48.30
40-70	2920.97	N.A.	45.70
60-80	1336.01	N.A.	20.90
70-80	531.17	N.A.	8.30
80-90	157.06	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	6390.79	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	209.56
10-20	597.62
20-30	898.83
30-40	1075.58
40-50	1109.93
50-60	1006.2
60-70	804.84
70-80	531.17
80-90	157.06
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

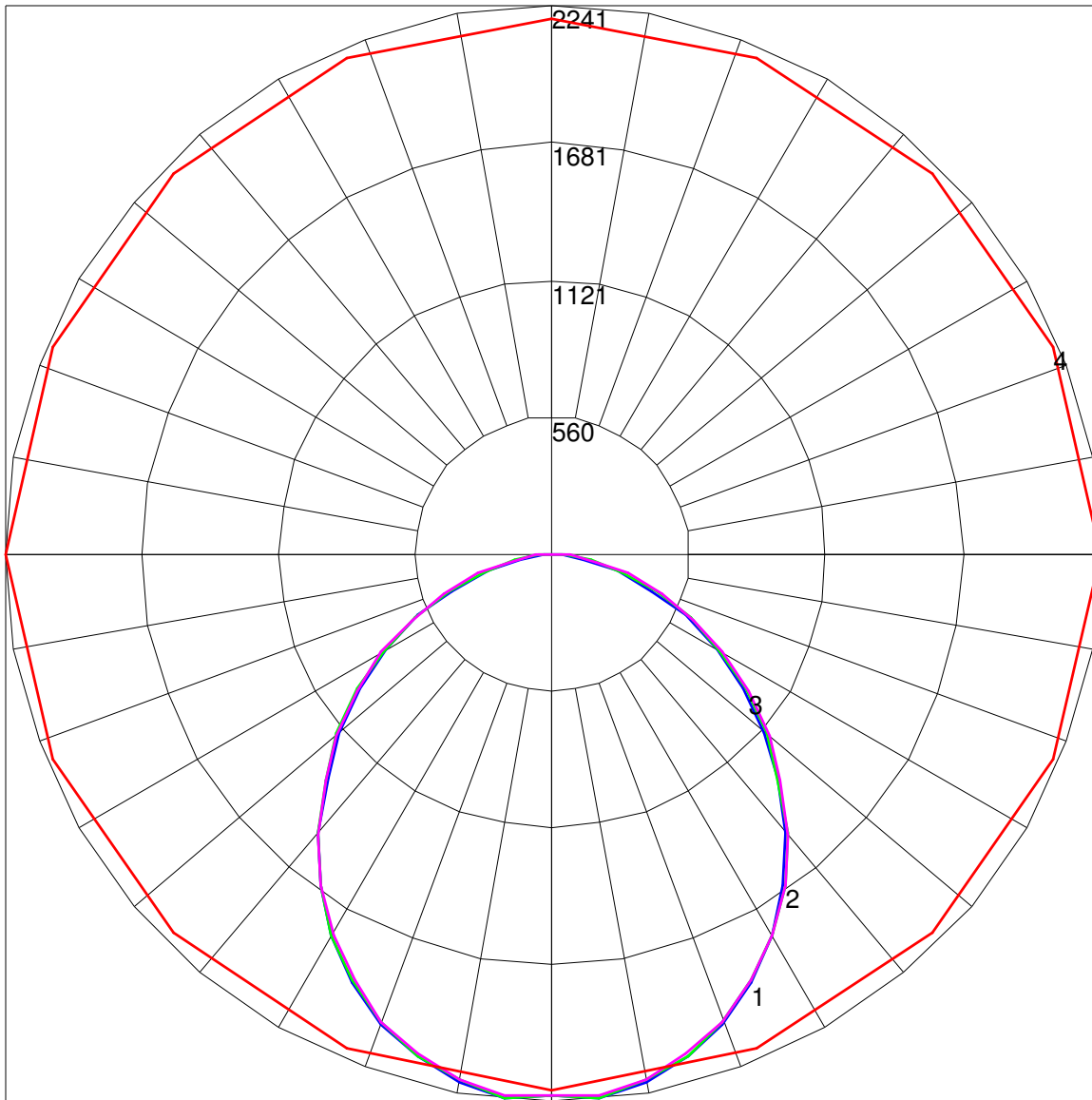
Reflectances

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	14.7	16.4	15.1	16.7	17.0	16.4	18.1	16.8	18.4	18.7
	3H	16.3	17.8	16.7	18.1	18.5	18.8	20.3	19.2	20.6	21.0
	4H	16.8	18.2	17.2	18.6	19.0	19.8	21.3	20.2	21.6	22.0
	6H	17.1	18.5	17.5	18.8	19.2	20.7	22.0	21.1	22.4	22.8
	8H	17.2	18.5	17.6	18.9	19.3	20.9	22.2	21.3	22.6	23.0
	12H	17.2	18.5	17.7	18.8	19.3	21.0	22.3	21.5	22.6	23.1
4H	2H	15.7	17.1	16.1	17.4	17.8	17.0	18.4	17.4	18.8	19.1
	3H	17.5	18.7	17.9	19.1	19.5	19.6	20.8	20.0	21.2	21.6
	4H	18.2	19.3	18.6	19.7	20.2	20.9	22.0	21.3	22.4	22.8
	6H	18.7	19.6	19.1	20.1	20.5	21.9	22.9	22.4	23.3	23.7
	8H	18.8	19.7	19.3	20.1	20.6	22.2	23.1	22.7	23.5	24.0
	12H	18.9	19.7	19.3	20.1	20.6	22.4	23.2	22.8	23.6	24.1
8H	4H	19.0	19.9	19.4	20.3	20.8	21.2	22.1	21.7	22.5	23.0
	6H	19.6	20.4	20.1	20.9	21.3	22.4	23.1	22.9	23.6	24.1
	8H	19.9	20.5	20.4	21.0	21.5	22.8	23.5	23.3	24.0	24.5
	12H	20.0	20.6	20.5	21.1	21.6	23.0	23.6	23.5	24.1	24.7
12H	4H	19.1	19.9	19.6	20.4	20.9	21.2	22.0	21.7	22.5	23.0
	6H	19.9	20.6	20.4	21.0	21.6	22.5	23.1	23.0	23.6	24.1
	8H	20.2	20.8	20.7	21.3	21.8	22.9	23.5	23.4	24.0	24.6

Maximum UGR = 24.7

POLAR GRAPH



Maximum Candela = 2241.371 Located At Horizontal Angle = 0, Vertical Angle = 5
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Vertical Plane Through Horizontal Angles (5 - 185)
3 - Vertical Plane Through Horizontal Angles (10 - 190)
4 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)