



IES INDOOR REPORT

PHOTOMETRIC FILENAME : LT-14-L28-840-AF-EM-10W-(L20)-DIM-UNV_EM MODE ONLY.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] GEN FROM BALLABS TEST NO. 20224.0
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
 [ISSUEDATE] 03-AUG-2023
 [MANUFAC] H.E. WILLIAMS, INC - CARTHAGE, MO
 [LUMINAIRE] 1x4 RECESSED LED LUMINAIRE
 [MORE] WHITE REFLECTOR w/FROSTED ACRYLIC CENTER LENS
 [MORE] 0-10V DIMMING DRIVER
 [LUMCAT] LT-14-L28-840-AF-EM-10W-(L20)-DIM-UNV EM MODE ONLY
 [LAMPCAT] HLMX 80 CRI 4000K CCT

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1369
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	137
Total Luminaire Watts	10
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.26
Spacing Criterion (90-270)	1.28
Spacing Criterion (Diagonal)	1.38
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	3.92 ft
Luminous Width (90-270)	0.92 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	1300	1341	1416
55	1195	1309	1417
65	1041	1280	1356
75	786	1142	1199
85	339	556	471

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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	476.162	476.162	476.162	476.162	476.162
5	483.563	474.517	472.050	470.679	469.583
10	475.340	467.116	465.745	464.923	463.552
15	464.100	457.247	455.876	457.247	455.328
20	445.734	439.977	439.977	442.444	442.444
25	424.626	420.240	422.433	426.545	426.819
30	400.776	396.390	401.051	407.630	407.630
35	373.912	370.622	375.557	385.425	386.248
40	342.387	341.839	347.321	359.383	362.124
45	307.024	307.573	316.619	331.148	334.437
50	268.920	271.936	284.546	299.075	304.283
55	228.898	236.573	250.828	264.534	271.388
60	189.149	200.936	217.110	228.349	234.654
65	146.933	160.365	180.651	188.327	191.342
70	108.555	124.729	141.725	145.837	149.949
75	67.984	88.818	98.686	97.864	103.621
80	35.363	50.988	56.196	52.359	56.196
85	9.869	17.544	16.174	13.706	13.706
90	0.000	0.000	0.000	0.000	0.000

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Zone	Lumens	%Lamp	%Fixt
0-20	173.92	N.A.	12.70
0-30	369.22	N.A.	27.00
0-40	605.60	N.A.	44.20
0-60	1075.73	N.A.	78.60
0-80	1347.04	N.A.	98.40
0-90	1369.07	N.A.	100.00
10-90	1324.08	N.A.	96.70
20-40	431.67	N.A.	31.50
20-50	677.75	N.A.	49.50
40-70	643.24	N.A.	47.00
60-80	271.31	N.A.	19.80
70-80	98.21	N.A.	7.20
80-90	22.02	N.A.	1.60
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	1369.07	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	44.99
10-20	128.93
20-30	195.30
30-40	236.38
40-50	246.07
50-60	224.06
60-70	173.11
70-80	98.21
80-90	22.02
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	109	104	100	96	106	102	98	94	97	94	91	93	91	88	90	88	86	84
2	99	90	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	69
3	90	79	71	64	87	78	70	64	75	68	63	72	66	62	69	65	61	58
4	82	70	61	54	80	69	60	54	66	59	53	64	58	53	62	56	52	50
5	76	63	54	47	73	61	53	47	59	52	46	57	51	46	55	50	45	43
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	39	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33
8	60	47	38	32	59	46	38	32	44	37	32	43	36	32	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	29	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	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	12.7	14.3	13.0	14.6	15.0	13.6	15.3	14.0	15.6	15.9
	3H	14.3	15.8	14.7	16.2	16.5	15.5	17.0	15.9	17.4	17.7
	4H	14.9	16.3	15.3	16.6	17.0	16.2	17.6	16.6	18.0	18.4
	6H	15.2	16.5	15.6	16.9	17.3	16.7	18.0	17.1	18.4	18.7
	8H	15.3	16.5	15.7	16.9	17.3	16.8	18.0	17.2	18.4	18.8
	12H	15.3	16.5	15.8	16.9	17.3	16.8	18.0	17.3	18.4	18.8

UGR Viewed Endwise

4H	2H	13.5	14.9	13.9	15.3	15.6	14.2	15.6	14.6	16.0	16.3
	3H	15.4	16.6	15.8	17.0	17.4	16.4	17.5	16.8	17.9	18.3
	4H	16.1	17.2	16.6	17.6	18.0	17.2	18.2	17.6	18.7	19.1
	6H	16.6	17.5	17.0	17.9	18.4	17.7	18.7	18.2	19.1	19.6
	8H	16.7	17.6	17.1	18.0	18.5	17.9	18.7	18.3	19.2	19.7
	12H	16.7	17.5	17.2	18.0	18.5	17.9	18.7	18.4	19.2	19.7

8H	4H	16.5	17.4	17.0	17.8	18.3	17.5	18.3	17.9	18.8	19.2
	6H	17.1	17.9	17.6	18.3	18.8	18.1	18.8	18.6	19.3	19.8
	8H	17.3	18.0	17.8	18.5	19.0	18.3	19.0	18.8	19.5	19.9
	12H	17.4	18.0	17.9	18.5	19.0	18.4	19.0	18.9	19.5	20.0

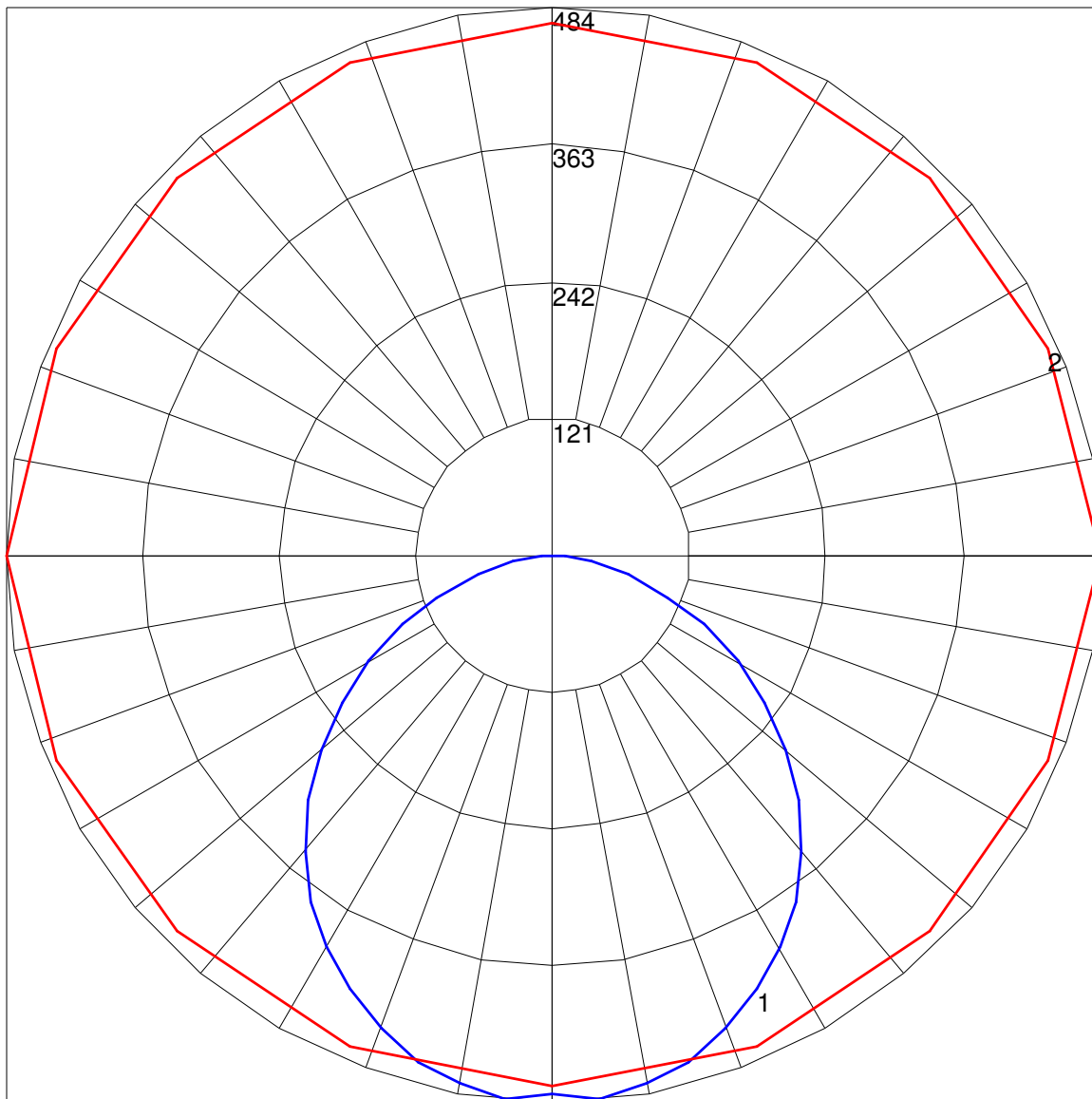
12H	4H	16.6	17.4	17.0	17.8	18.3	17.5	18.3	18.0	18.7	19.2
	6H	17.2	17.9	17.7	18.3	18.9	18.2	18.8	18.7	19.3	19.8
	8H	17.4	18.0	17.9	18.5	19.1	18.4	19.0	18.9	19.4	20.0

Maximum UGR = 20.0

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POLAR GRAPH



Maximum Candela = 483.563 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.)