



IES INDOOR REPORT

PHOTOMETRIC FILENAME : LT-14-L28-930-AF-DIM-UNV_.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] 2023-07-21
 [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-L28-930-AF-DIM-UNV_
 [LAMPCAT] 22 INCH LED ARRAYS
 [_SEARCH_SOURCETYPE] LED
 [_SEARCH_APPLICATION] INDOOR
 [_SEARCH_MOUNTING] RECESSED

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2308
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	108
Total Luminaire Watts	21.4
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	2191	2260	2387
55	2014	2207	2388
65	1754	2157	2285
75	1326	1924	2020
85	571	936	794

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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	802.582	802.582	802.582	802.582	802.582
5	815.057	799.809	795.651	793.341	791.493
10	801.196	787.334	785.024	783.638	781.327
15	782.251	770.700	768.390	770.700	767.466
20	751.294	741.591	741.591	745.750	745.750
25	715.716	708.323	712.020	718.951	719.413
30	675.518	668.125	675.980	687.069	687.069
35	630.237	624.692	633.009	649.643	651.029
40	577.101	576.177	585.418	605.748	610.369
45	517.497	518.421	533.668	558.157	563.702
50	453.272	458.354	479.608	504.097	512.876
55	385.812	398.750	422.776	445.879	457.430
60	318.815	338.683	365.944	384.888	395.515
65	247.659	270.300	304.491	317.429	322.511
70	182.972	210.233	238.880	245.811	252.742
75	114.589	149.704	166.338	164.952	174.655
80	59.605	85.941	94.720	88.252	94.720
85	16.634	29.571	27.261	23.103	23.103
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	293.15	N.A.	12.70
0-30	622.33	N.A.	27.00
0-40	1020.75	N.A.	44.20
0-60	1813.17	N.A.	78.60
0-80	2270.47	N.A.	98.40
0-90	2307.59	N.A.	100.00
10-90	2231.76	N.A.	96.70
20-40	727.60	N.A.	31.50
20-50	1142.36	N.A.	49.50
40-70	1084.2	N.A.	47.00
60-80	457.31	N.A.	19.80
70-80	165.53	N.A.	7.20
80-90	37.12	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	2307.59	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	75.83
10-20	217.32
20-30	329.18
30-40	398.42
40-50	414.76
50-60	377.66
60-70	291.78
70-80	165.53
80-90	37.12
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	88	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	53	47	73	61	53	47	59	52	46	57	51	45	55	50	45	43
6	70	56	47	41	68	55	47	41	53	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	46	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

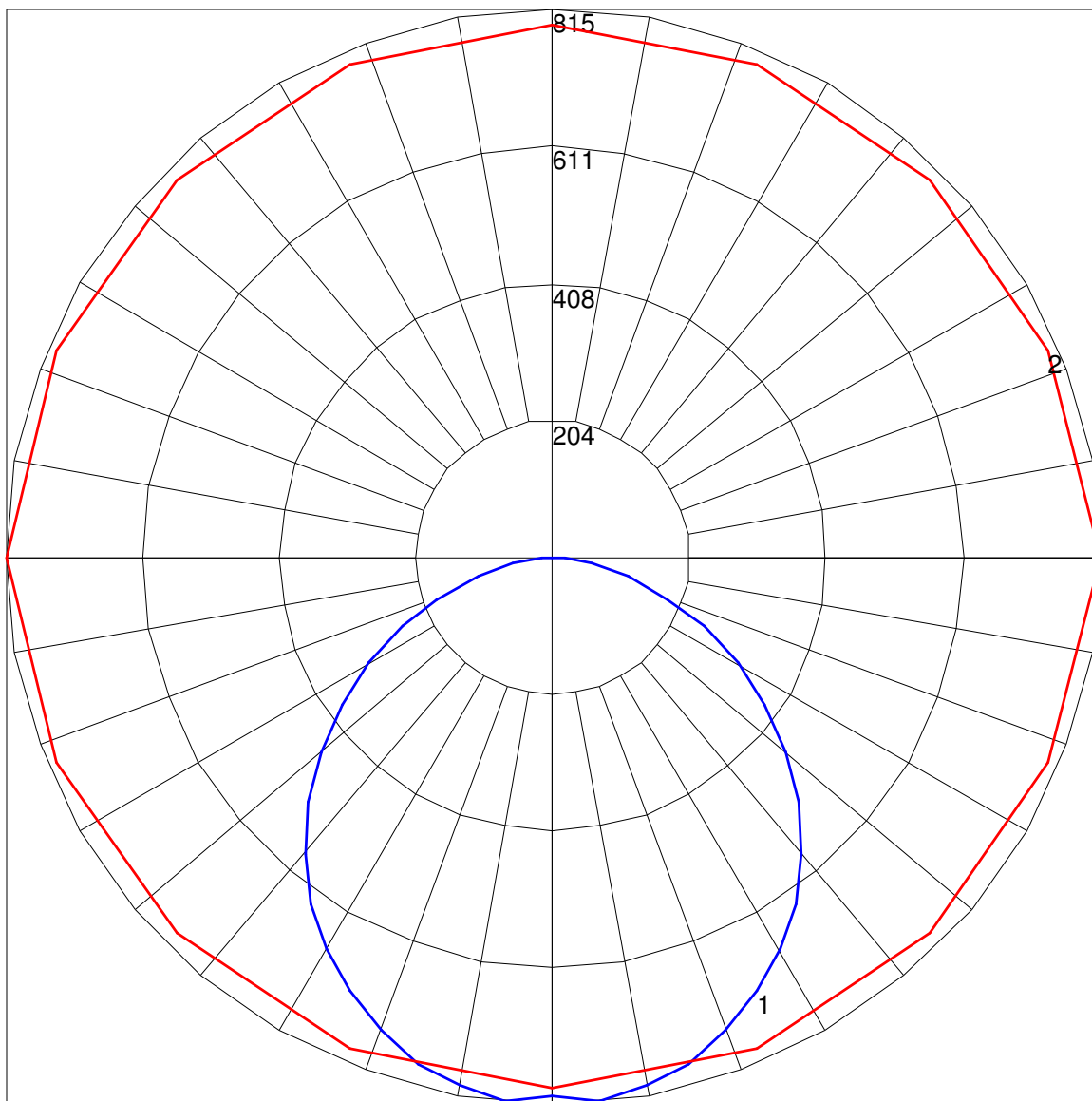
Reflectances

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					UGR Viewed Endwise				
X=2H	Y=2H	14.5	16.1	14.8	16.4	16.8	15.4	17.1	15.8	17.4	17.7
	3H	16.1	17.6	16.5	18.0	18.3	17.3	18.8	17.7	19.2	19.5
	4H	16.7	18.1	17.1	18.4	18.8	18.0	19.4	18.4	19.8	20.2
	6H	17.0	18.3	17.4	18.7	19.1	18.5	19.8	18.9	20.2	20.5
	8H	17.1	18.3	17.5	18.7	19.1	18.6	19.8	19.0	20.2	20.6
	12H	17.1	18.3	17.6	18.7	19.1	18.6	19.8	19.1	20.2	20.6
4H	2H	15.3	16.7	15.7	17.1	17.4	16.0	17.4	16.4	17.8	18.1
	3H	17.2	18.4	17.6	18.8	19.2	18.2	19.3	18.6	19.7	20.1
	4H	17.9	19.0	18.4	19.4	19.8	19.0	20.0	19.4	20.5	20.9
	6H	18.4	19.3	18.8	19.7	20.2	19.5	20.5	20.0	20.9	21.4
	8H	18.5	19.4	18.9	19.8	20.3	19.7	20.6	20.1	21.0	21.5
	12H	18.5	19.3	19.0	19.8	20.3	19.7	20.5	20.2	21.0	21.5
8H	4H	18.3	19.2	18.8	19.6	20.1	19.3	20.1	19.7	20.6	21.0
	6H	18.9	19.7	19.4	20.1	20.6	19.9	20.6	20.4	21.1	21.6
	8H	19.1	19.8	19.6	20.3	20.8	20.1	20.8	20.6	21.3	21.7
	12H	19.2	19.8	19.7	20.3	20.8	20.2	20.8	20.7	21.3	21.8
12H	4H	18.4	19.2	18.8	19.6	20.1	19.3	20.1	19.8	20.5	21.0
	6H	19.0	19.7	19.5	20.1	20.7	20.0	20.6	20.5	21.1	21.6
	8H	19.2	19.8	19.7	20.3	20.9	20.2	20.8	20.7	21.2	21.8

Maximum UGR = 21.8

POLAR GRAPH



Maximum Candela = 815.057 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.)