



IES INDOOR REPORT

PHOTOMETRIC FILENAME : LT-22-L27-840-AF-(L20)-EM14W-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] GEN FROM BALLABS TEST NO. 20203.0
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
 [ISSUEDATE] 01-09-2024
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
 [LUMINAIRE] 2x2 RECESSED LED LUMINAIRE
 [MORE] WHITE REFLECTOR w/FROSTED ACRYLIC CENTER LENS
 [MORE] 0-10V DIMMING DRIVER
 [LUMCAT] LT-22-L27-840-AF-(L20)-EM14W-DIM-UNV
 [LAMPCAT] 22 INCH LED ARRAY
 [_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	1680
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	120
Total Luminaire Watts	14
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.22
Spacing Criterion (90-270)	1.30
Spacing Criterion (Diagonal)	1.40
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	1.92 ft
Luminous Width (90-270)	1.92 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	1453	1560	1680
55	1317	1535	1732
65	1160	1520	1877
75	893	1611	2194
85	388	1310	1277

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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	559.037	559.037	559.037	559.037	559.037
5	558.555	556.148	555.666	553.740	555.185
10	548.925	546.518	548.444	546.518	547.962
15	534.480	533.517	536.406	537.369	538.813
20	511.367	514.738	519.071	523.886	524.849
25	484.884	491.625	497.885	505.589	507.515
30	456.475	464.179	473.328	484.884	488.736
35	425.176	431.917	442.992	460.327	464.179
40	389.544	396.285	411.694	429.991	436.251
45	351.023	357.283	377.025	396.285	405.916
50	305.761	313.947	338.985	358.727	372.691
55	258.091	269.647	300.946	322.614	339.467
60	212.829	225.830	261.943	289.389	305.761
65	167.567	181.531	219.570	256.647	271.092
70	123.267	138.194	180.567	221.015	235.942
75	78.968	97.266	142.528	182.494	194.050
80	39.003	61.152	98.229	134.342	130.490
85	11.556	23.594	39.003	65.967	38.040
90	0.000	0.000	0.000	0.000	0.000

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Zone	Lumens	%Lamp	%Fixt
0-20	204.00	N.A.	12.10
0-30	433.59	N.A.	25.80
0-40	711.98	N.A.	42.40
0-60	1269.73	N.A.	75.60
0-80	1633.3	N.A.	97.20
0-90	1679.93	N.A.	100.00
10-90	1627.14	N.A.	96.90
20-40	507.98	N.A.	30.20
20-50	798.73	N.A.	47.50
40-70	775.10	N.A.	46.10
60-80	363.57	N.A.	21.60
70-80	146.22	N.A.	8.70
80-90	46.63	N.A.	2.80
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	1679.93	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	52.79
10-20	151.21
20-30	229.59
30-40	278.39
40-50	290.75
50-60	267.00
60-70	217.35
70-80	146.22
80-90	46.63
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	98	94	105	101	96	93	96	93	90	92	89	87	89	86	84	82
2	98	89	82	76	95	87	81	75	84	78	73	80	76	71	77	73	70	68
3	89	78	69	63	86	76	68	62	73	66	61	70	65	60	68	63	59	56
4	81	69	60	53	79	67	59	52	65	57	52	62	56	51	60	55	50	48
5	75	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	45	39	51	44	38	49	43	38	36
7	64	50	41	35	62	49	41	35	48	40	34	46	39	34	45	38	34	32
8	59	46	37	31	58	45	37	31	43	36	31	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27	25
10	52	39	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

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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	14.4	13.1	14.7	15.0	14.3	16.0	14.7	16.3	16.6
	3H	14.3	15.9	14.7	16.2	16.5	16.9	18.4	17.2	18.7	19.1
	4H	14.9	16.3	15.3	16.7	17.0	18.0	19.5	18.4	19.8	20.2
	6H	15.2	16.6	15.6	16.9	17.3	19.0	20.3	19.4	20.7	21.1
	8H	15.3	16.6	15.7	17.0	17.4	19.3	20.6	19.7	21.0	21.4
	12H	15.3	16.6	15.8	16.9	17.4	19.4	20.7	19.9	21.1	21.5

UGR Viewed Endwise

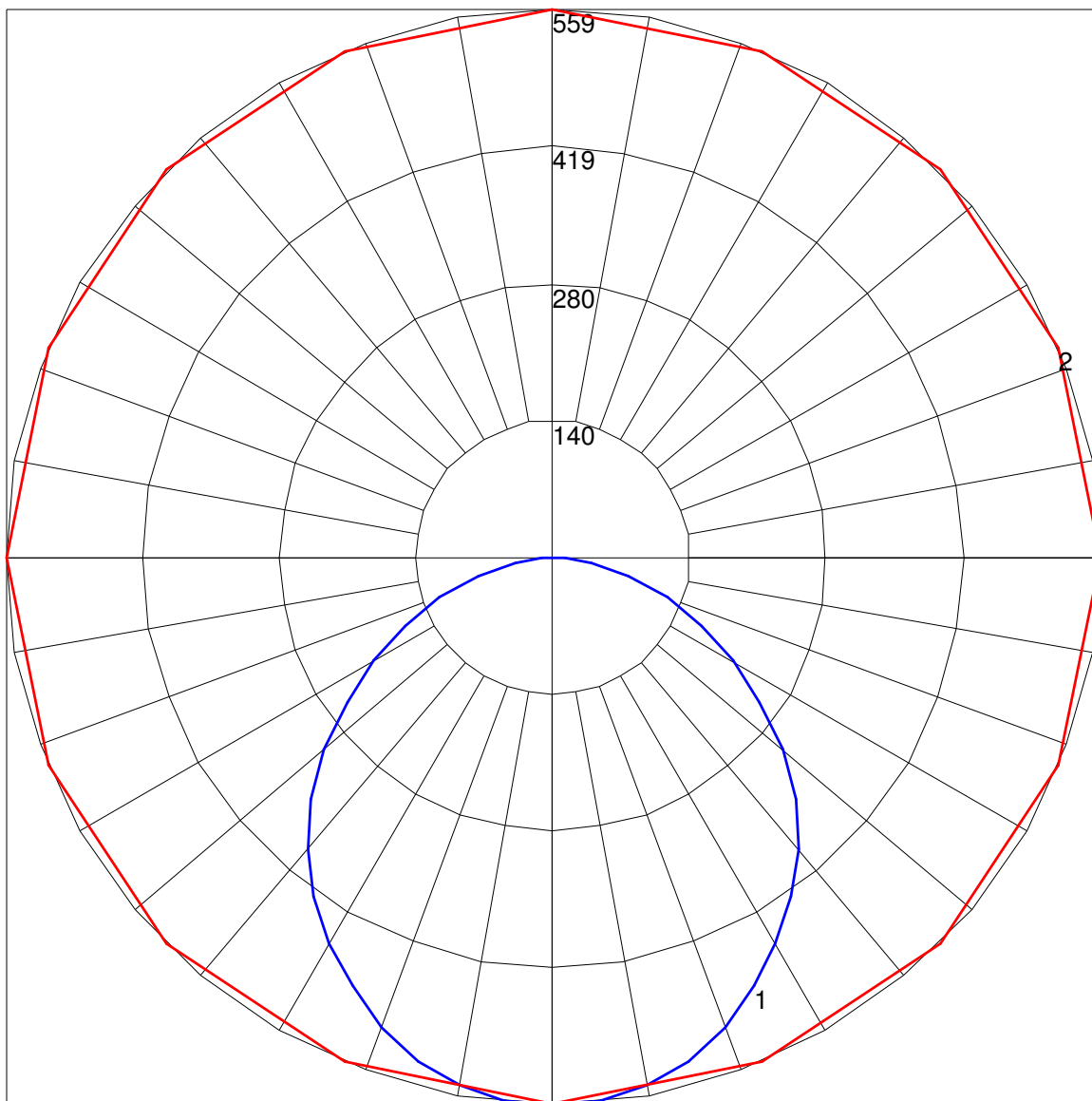
4H	2H	13.6	15.1	14.0	15.4	15.8	14.9	16.3	15.3	16.7	17.0
	3H	15.5	16.7	15.9	17.1	17.5	17.7	18.9	18.1	19.3	19.7
	4H	16.2	17.3	16.6	17.7	18.1	19.0	20.2	19.5	20.6	21.0
	6H	16.7	17.6	17.1	18.1	18.5	20.2	21.2	20.7	21.6	22.1
	8H	16.8	17.7	17.2	18.1	18.6	20.6	21.5	21.1	22.0	22.4
	12H	16.8	17.7	17.3	18.1	18.6	20.8	21.7	21.3	22.1	22.6

8H	4H	16.9	17.8	17.4	18.3	18.8	19.3	20.3	19.8	20.7	21.2
	6H	17.6	18.3	18.1	18.8	19.3	20.7	21.5	21.2	22.0	22.5
	8H	17.8	18.5	18.3	19.0	19.4	21.3	21.9	21.8	22.5	22.9
	12H	17.9	18.5	18.4	19.0	19.5	21.6	22.2	22.1	22.7	23.3

12H	4H	17.1	17.9	17.6	18.4	18.9	19.4	20.2	19.8	20.7	21.1
	6H	17.8	18.5	18.4	19.0	19.5	20.8	21.5	21.3	21.9	22.5
	8H	18.1	18.7	18.6	19.2	19.8	21.4	22.0	21.9	22.5	23.0

Maximum UGR = 23.3

POLAR GRAPH



Maximum Candela = 559.037 Located At Horizontal Angle = 0, Vertical Angle = 0
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)