



IES INDOOR REPORT

PHOTOMETRIC FILENAME : HETG-S22-L38-840-A-(L34)-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] GEN from BALLABS TEST NO. 20211.0
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
 [ISSUEDATE] 01-06-2021
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO 64836
 [LUMINAIRE] 2x2' RECESSED LED TROFFER
 [MORE] WITH FROSTED ACRYLIC LENS
 [LUMCAT] HETG-S22-L38-840-A-(L34)-DIM-UNV
 [LAMPCAT] HLM 80 CRI, 4000K CCT
 [_SEARCH_SOURCETYPE] LED
 [_SEARCH_APPLICATION] Indoor, Architectural, Classroom, Commercial, Direct
 [_SEARCH_MOUNTING] Recessed

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3423
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	121
Total Luminaire Watts	28.2
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.20
Spacing Criterion (90-270)	1.26
Spacing Criterion (Diagonal)	1.34
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	1.91 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	3243	3577	3783
55	2695	3147	3461
65	2119	2584	2453
75	1538	1681	1073
85	743	451	186

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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	1385.928	1385.928	1385.928	1385.928	1385.928
5	1380.456	1382.801	1382.020	1377.329	1378.893
10	1358.569	1362.477	1359.351	1357.006	1362.477
15	1320.266	1328.865	1326.520	1328.083	1334.337
20	1259.295	1278.055	1277.274	1287.436	1290.562
25	1188.162	1206.922	1222.556	1233.499	1235.844
30	1102.176	1120.937	1149.077	1161.584	1173.310
35	1004.466	1026.353	1060.747	1078.726	1096.704
40	896.593	920.825	963.818	984.923	1006.811
45	774.650	797.319	854.382	880.178	903.628
50	646.454	669.904	734.784	768.397	791.066
55	522.166	546.398	609.715	651.144	670.686
60	407.258	429.145	492.462	509.659	520.602
65	302.512	318.146	368.955	358.794	350.195
70	212.618	232.161	252.484	221.217	196.203
75	134.450	152.429	146.957	114.908	93.802
80	69.570	75.823	61.753	48.464	35.176
85	21.887	21.887	13.289	11.725	5.472
90	0.000	0.000	0.000	0.000	0.000

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Zone	Lumens	%Lamp	%Fixt
0-20	505.39	N.A.	14.80
0-30	1066.19	N.A.	31.10
0-40	1724.89	N.A.	50.40
0-60	2910.47	N.A.	85.00
0-80	3398.85	N.A.	99.30
0-90	3423.3	N.A.	100.00
10-90	3292.2	N.A.	96.20
20-40	1219.51	N.A.	35.60
20-50	1868.81	N.A.	54.60
40-70	1528.65	N.A.	44.70
60-80	488.38	N.A.	14.30
70-80	145.31	N.A.	4.20
80-90	24.46	N.A.	0.70
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	3423.3	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	131.10
10-20	374.29
20-30	560.81
30-40	658.70
40-50	649.30
50-60	536.27
60-70	343.07
70-80	145.31
80-90	24.46
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	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75	73
3	92	82	75	69	90	81	74	68	78	72	67	75	70	66	73	68	65	63
4	85	73	65	59	83	72	64	58	70	63	58	67	62	57	65	60	56	54
5	78	66	57	51	76	65	57	51	63	56	50	61	55	50	59	54	49	47
6	72	60	51	45	70	59	51	45	57	50	44	55	49	44	54	48	43	42
7	67	54	46	40	65	53	45	40	52	45	39	50	44	39	49	43	39	37
8	63	50	41	36	61	49	41	36	48	40	35	46	40	35	45	39	35	33
9	59	46	38	32	57	45	37	32	44	37	32	43	36	32	42	36	32	30
10	55	42	34	29	54	42	34	29	41	34	29	40	33	29	39	33	29	27

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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	15.1	16.7	15.5	17.0	17.3	UGR Viewed Endwise			
	3H	16.4	17.8	16.8	18.2	18.5	16.4	18.0	16.8	18.3
	4H	16.9	18.2	17.3	18.5	18.9	17.4	18.8	17.8	19.1
	6H	17.1	18.3	17.5	18.7	19.1	17.5	18.9	17.9	19.2
	8H	17.2	18.3	17.6	18.7	19.1	17.6	18.8	18.0	19.2
	12H	17.2	18.3	17.6	18.7	19.1	17.6	18.7	18.0	19.1

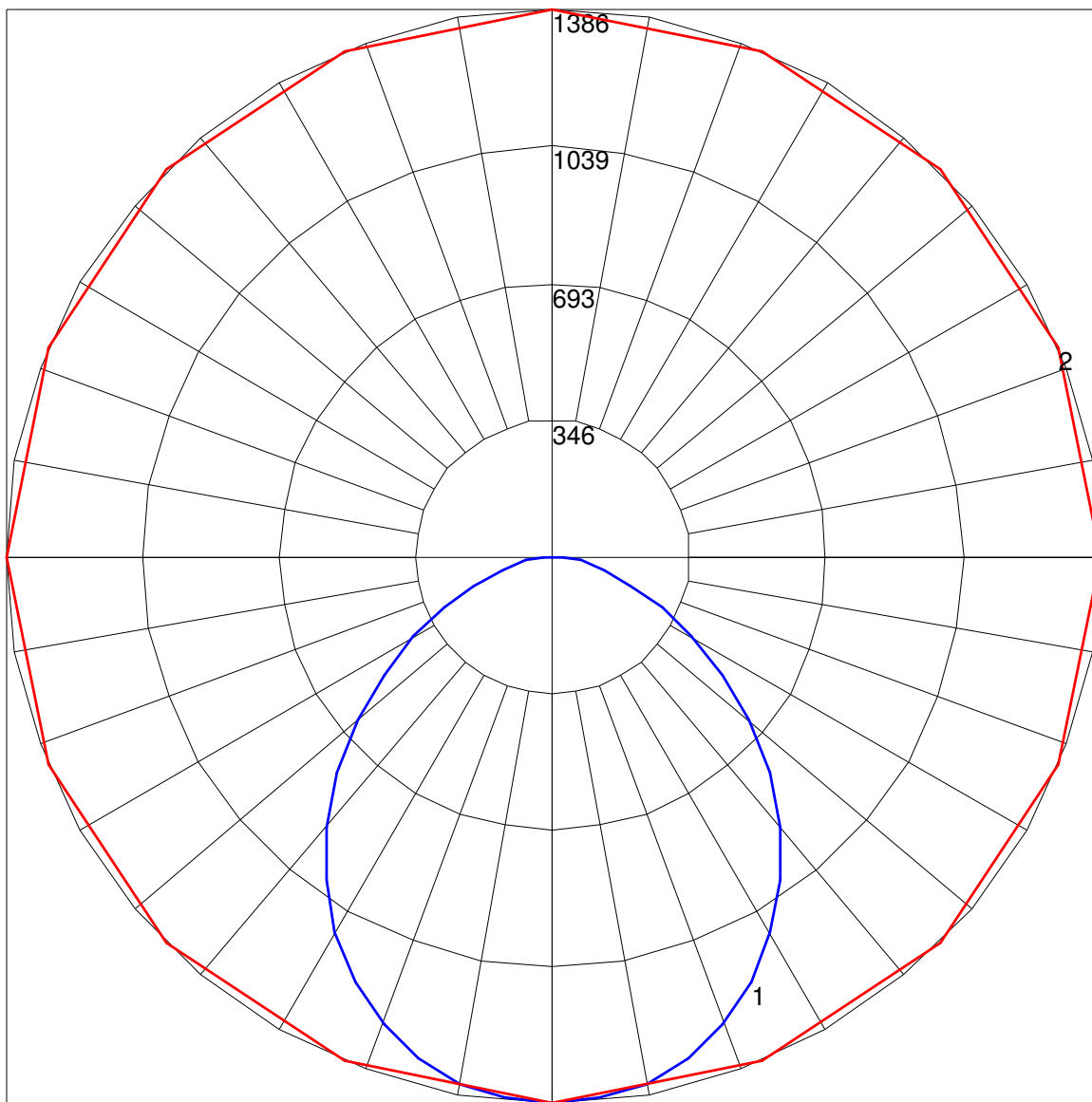
4H	2H	15.8	17.1	16.2	17.5	17.9	16.9	18.2	17.3	18.5
	3H	17.3	18.4	17.7	18.8	19.2	18.0	19.1	18.4	19.5
	4H	17.9	18.8	18.3	19.2	19.7	18.2	19.2	18.7	19.6
	6H	18.2	19.0	18.7	19.5	19.9	18.3	19.2	18.8	19.6
	8H	18.3	19.1	18.7	19.5	20.0	18.3	19.1	18.8	19.6
	12H	18.3	19.0	18.8	19.5	20.0	18.3	19.0	18.8	19.5

8H	4H	18.0	18.8	18.5	19.3	19.7	18.4	19.2	18.8	19.6
	6H	18.4	19.1	18.9	19.6	20.1	18.5	19.2	19.0	19.7
	8H	18.6	19.1	19.1	19.7	20.1	18.5	19.1	19.0	19.6
	12H	18.6	19.1	19.1	19.6	20.2	18.5	19.0	19.0	19.5

12H	4H	18.0	18.7	18.5	19.2	19.7	18.4	19.1	18.9	19.6
	6H	18.4	19.0	19.0	19.5	20.0	18.5	19.1	19.1	19.6
	8H	18.6	19.1	19.1	19.6	20.1	18.5	19.1	19.0	19.5

Maximum UGR = 20.2

POLAR GRAPH



Maximum Candela = 1385.928 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.)