



IES INDOOR REPORT

PHOTOMETRIC FILENAME : HETG-S22-L38-940-A-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] 21 APR 2022

[MANUFAC] WILLIAMS INDOOR

[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO

[LUMINAIRE] DUAL APERATURE 2x2' RECESSED LED LUMINAIRE

[MORE] WHITE REFLECTOR w/FROSTED ACRYLIC RIBBED LENSES

[LUMCAT] HETG-S22-L38-940-A-DIM-UNV

[LAMPCAT] HLM 90 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	3289
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	107
Total Luminaire Watts	30.7
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	3116	3437	3635
55	2589	3023	3326
65	2036	2483	2357
75	1478	1615	1031
85	714	434	179

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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	1331.673	1331.673	1331.673	1331.673	1331.673
5	1326.416	1328.669	1327.918	1323.411	1324.913
10	1305.385	1309.141	1306.136	1303.883	1309.141
15	1268.582	1276.844	1274.591	1276.093	1282.102
20	1209.997	1228.023	1227.272	1237.036	1240.041
25	1141.649	1159.675	1174.696	1185.212	1187.465
30	1059.029	1077.055	1104.094	1116.112	1127.378
35	965.144	986.174	1019.222	1036.497	1053.772
40	861.494	884.778	926.087	946.367	967.397
45	744.325	766.106	820.936	845.721	868.254
50	621.147	643.680	706.020	738.316	760.098
55	501.725	525.008	585.846	625.654	644.431
60	391.315	412.345	473.183	489.707	500.222
65	290.670	305.691	354.512	344.748	336.486
70	204.295	223.072	242.600	212.557	188.522
75	129.187	146.462	141.204	110.409	90.130
80	66.847	72.855	59.336	46.567	33.799
85	21.030	21.030	12.768	11.266	5.258
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	485.60	N.A.	14.80
0-30	1024.46	N.A.	31.10
0-40	1657.37	N.A.	50.40
0-60	2796.53	N.A.	85.00
0-80	3265.79	N.A.	99.30
0-90	3289.29	N.A.	100.00
10-90	3163.32	N.A.	96.20
20-40	1171.77	N.A.	35.60
20-50	1795.65	N.A.	54.60
40-70	1468.8	N.A.	44.70
60-80	469.26	N.A.	14.30
70-80	139.62	N.A.	4.20
80-90	23.50	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	3289.29	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	125.97
10-20	359.63
20-30	538.85
30-40	632.91
40-50	623.89
50-60	515.28
60-70	329.64
70-80	139.62
80-90	23.50
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

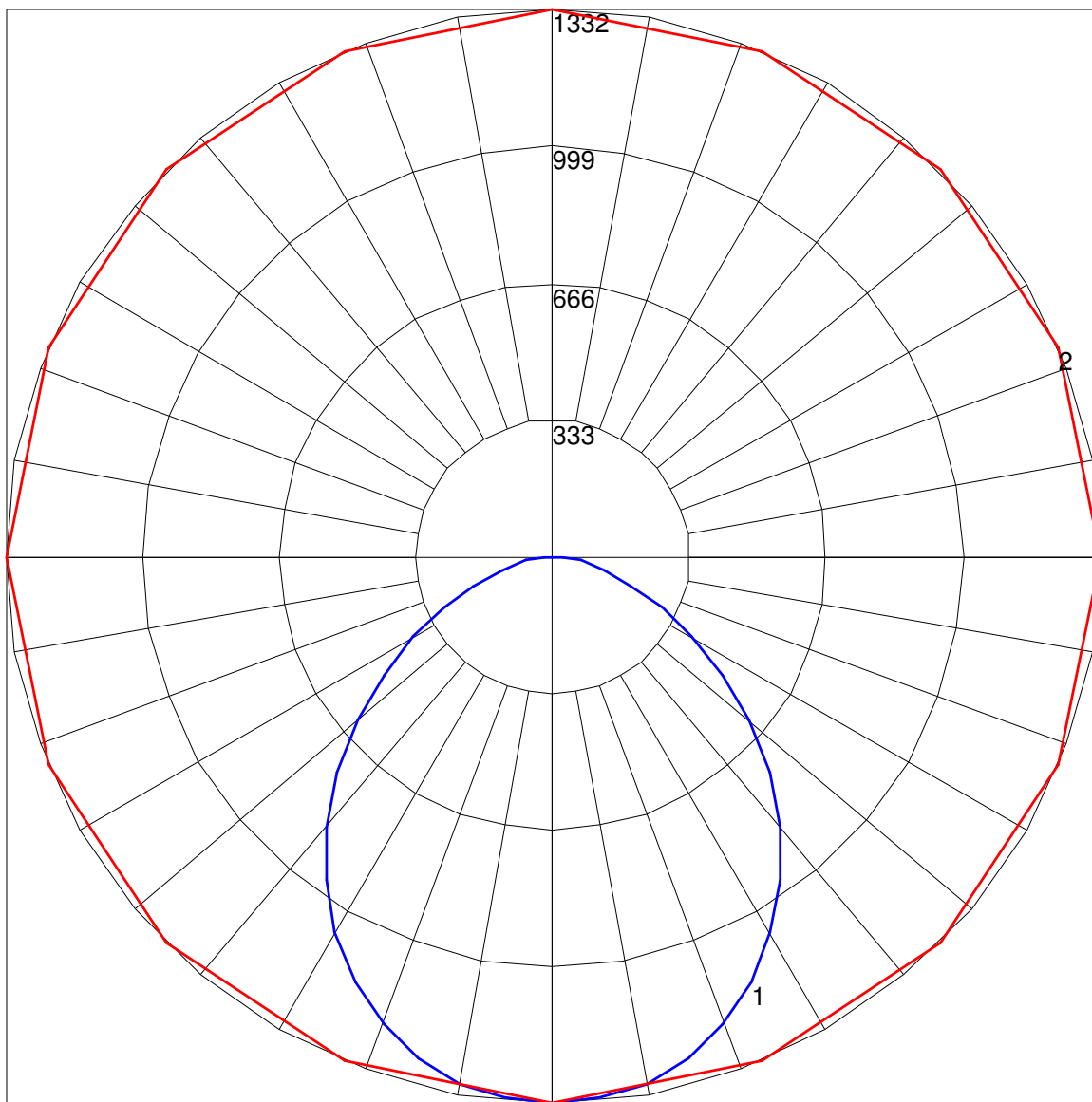
Reflectances

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					UGR Viewed Endwise				
X=2H	Y=2H	14.9	16.5	15.3	16.8	17.1	16.2	17.8	16.6	18.1	18.4
	3H	16.2	17.6	16.6	18.0	18.3	17.2	18.6	17.6	18.9	19.3
	4H	16.7	18.0	17.1	18.3	18.7	17.3	18.7	17.7	19.0	19.4
	6H	16.9	18.1	17.3	18.5	18.9	17.4	18.6	17.8	19.0	19.4
	8H	17.0	18.1	17.4	18.5	18.9	17.4	18.5	17.8	18.9	19.3
	12H	17.0	18.1	17.4	18.5	18.9	17.3	18.5	17.8	18.8	19.3
4H	2H	15.6	16.9	16.0	17.3	17.7	16.7	18.0	17.1	18.3	18.7
	3H	17.1	18.2	17.5	18.6	19.0	17.8	18.9	18.2	19.3	19.7
	4H	17.7	18.6	18.1	19.0	19.5	18.0	19.0	18.5	19.4	19.9
	6H	18.0	18.8	18.5	19.3	19.7	18.1	19.0	18.6	19.4	19.9
	8H	18.1	18.9	18.5	19.3	19.8	18.1	18.9	18.6	19.4	19.8
	12H	18.1	18.8	18.6	19.3	19.8	18.1	18.8	18.6	19.3	19.8
8H	4H	17.8	18.6	18.3	19.1	19.5	18.2	19.0	18.6	19.4	19.9
	6H	18.2	18.9	18.7	19.4	19.9	18.3	19.0	18.8	19.5	19.9
	8H	18.4	18.9	18.9	19.5	19.9	18.3	18.9	18.8	19.4	19.9
	12H	18.4	18.9	18.9	19.4	20.0	18.3	18.8	18.8	19.3	19.9
12H	4H	17.8	18.5	18.3	19.0	19.5	18.2	18.9	18.7	19.4	19.8
	6H	18.2	18.8	18.8	19.3	19.8	18.3	18.9	18.9	19.4	19.9
	8H	18.4	18.9	18.9	19.4	19.9	18.3	18.9	18.8	19.3	19.9

Maximum UGR = 20.0

POLAR GRAPH



Maximum Candela = 1331.673 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.)