



IES INDOOR REPORT

PHOTOMETRIC FILENAME : HETG-S22-L38-840-A-(L27)-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] 05-13-2021
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
 [LUMINAIRE] LED DUAL APERTURE 2x2'RECESSED LUMINAIRE
 [MORE] WHITE REFLECTOR w/FROSTED ACRYLIC RIBBED LENSES
 [LUMCAT] HETG-S22-L38-840-A-(L27)-DIM-UNV
 [LAMPCAT] HLM2256_5630 REV A 10560223
 [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	2871
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	131
Total Luminaire Watts	22
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	2720	3000	3173
55	2260	2639	2903
65	1777	2168	2057
75	1290	1410	900
85	624	379	156

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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	1162.431	1162.431	1162.431	1162.431	1162.431
5	1157.841	1159.808	1159.152	1155.219	1156.530
10	1139.484	1142.762	1140.139	1138.172	1142.762
15	1107.358	1114.570	1112.603	1113.914	1119.159
20	1056.219	1071.954	1071.298	1079.821	1082.444
25	996.556	1012.292	1025.404	1034.583	1036.550
30	924.437	940.172	963.775	974.265	984.099
35	842.484	860.841	889.689	904.768	919.848
40	752.007	772.331	808.391	826.093	844.450
45	649.729	668.742	716.603	738.238	757.907
50	542.205	561.874	616.291	644.484	663.497
55	437.960	458.285	511.391	546.139	562.530
60	341.583	359.940	413.046	427.470	436.649
65	253.729	266.841	309.457	300.934	293.722
70	178.331	194.722	211.768	185.543	164.563
75	112.768	127.848	123.258	96.377	78.676
80	58.351	63.596	51.795	40.649	29.503
85	18.358	18.358	11.146	9.834	4.589
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	423.89	N.A.	14.80
0-30	894.26	N.A.	31.10
0-40	1446.73	N.A.	50.40
0-60	2441.12	N.A.	85.00
0-80	2850.74	N.A.	99.30
0-90	2871.26	N.A.	100.00
10-90	2761.3	N.A.	96.20
20-40	1022.85	N.A.	35.60
20-50	1567.44	N.A.	54.60
40-70	1282.13	N.A.	44.70
60-80	409.62	N.A.	14.30
70-80	121.88	N.A.	4.20
80-90	20.51	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	2871.26	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	109.96
10-20	313.93
20-30	470.37
30-40	552.47
40-50	544.60
50-60	449.79
60-70	287.74
70-80	121.88
80-90	20.51
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

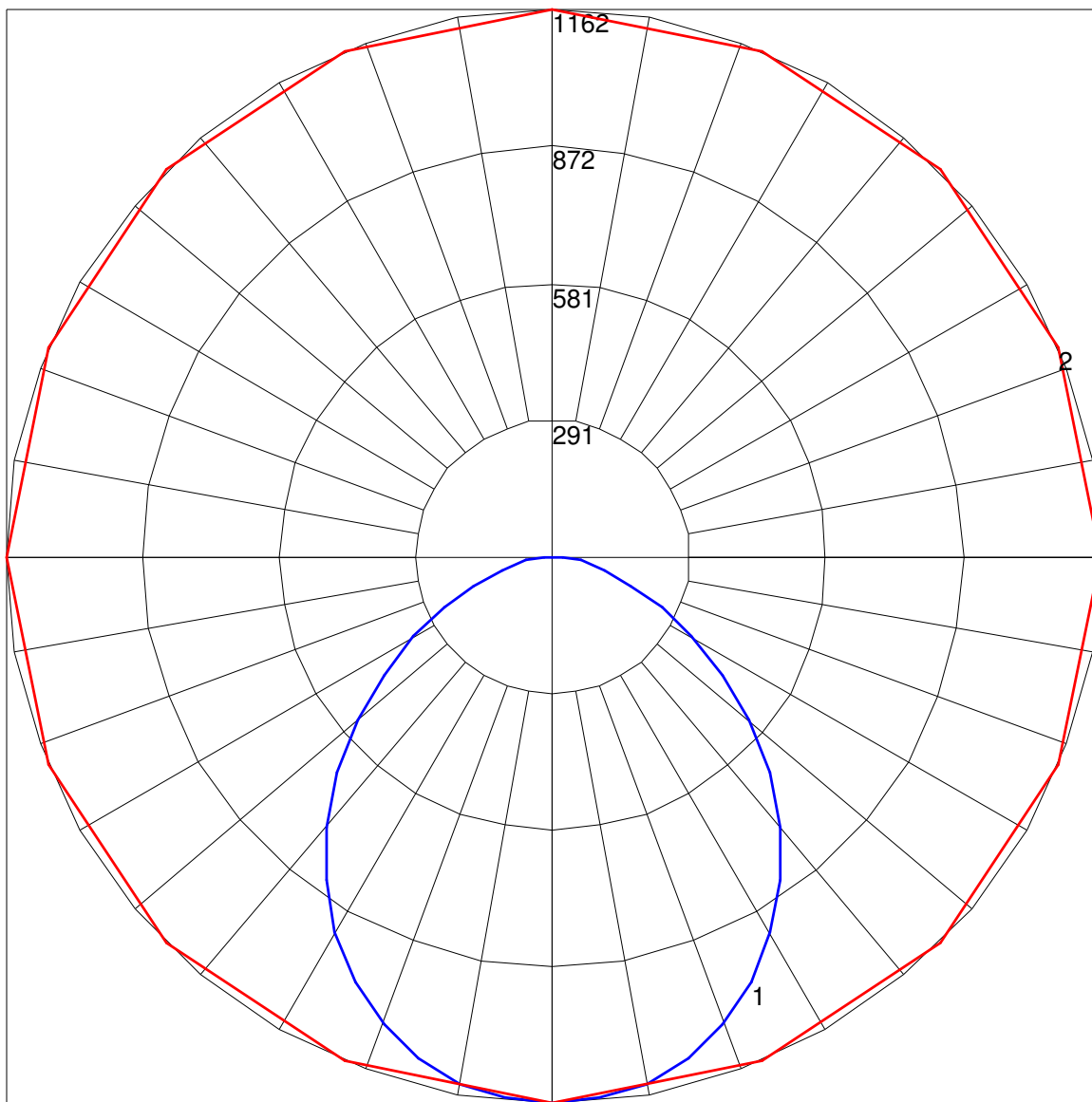
X=2H	Y=2H	14.5	16.1	14.9	16.4	16.7	15.8	17.4	16.2	17.7	18.0
	3H	15.8	17.2	16.2	17.6	17.9	16.8	18.2	17.2	18.5	18.9
	4H	16.3	17.6	16.7	17.9	18.3	16.9	18.3	17.3	18.6	19.0
	6H	16.5	17.7	16.9	18.1	18.5	17.0	18.2	17.4	18.6	19.0
	8H	16.6	17.7	17.0	18.1	18.5	17.0	18.1	17.4	18.5	18.9
	12H	16.6	17.7	17.0	18.1	18.5	16.9	18.1	17.4	18.4	18.9

UGR Viewed Endwise

4H	2H	15.2	16.5	15.6	16.9	17.3	16.3	17.6	16.7	17.9	18.3
	3H	16.7	17.8	17.1	18.2	18.6	17.4	18.5	17.8	18.9	19.3
	4H	17.3	18.2	17.7	18.6	19.1	17.6	18.6	18.1	19.0	19.5
	6H	17.6	18.4	18.1	18.9	19.3	17.7	18.6	18.2	19.0	19.5
	8H	17.7	18.5	18.1	18.9	19.4	17.7	18.5	18.2	19.0	19.4
	12H	17.7	18.4	18.2	18.9	19.4	17.7	18.4	18.2	18.9	19.4
8H	4H	17.4	18.2	17.9	18.7	19.1	17.8	18.6	18.2	19.0	19.5
	6H	17.8	18.5	18.3	19.0	19.5	17.9	18.6	18.4	19.1	19.5
	8H	18.0	18.5	18.5	19.0	19.5	17.9	18.5	18.4	19.0	19.5
	12H	18.0	18.5	18.5	19.0	19.6	17.9	18.4	18.4	18.9	19.5
12H	4H	17.4	18.1	17.9	18.6	19.1	17.8	18.5	18.3	19.0	19.4
	6H	17.8	18.4	18.4	18.9	19.4	17.9	18.5	18.5	19.0	19.5
	8H	18.0	18.5	18.5	19.0	19.5	17.9	18.5	18.4	18.9	19.5

Maximum UGR = 19.6

POLAR GRAPH



Maximum Candela = 1162.431 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.)