



IES INDOOR REPORT

PHOTOMETRIC FILENAME : HETG-S24-L50-835-A-(L30)-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] GEN FROM BALLABS TEST NO. 20210.0
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
 [ISSUEDATE] 12-23-2021
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
 [LUMINAIRE] DUAL APERATURE 2x4' RECESSED LED LUMINAIRE
 [MORE] WHITE REFLECTOR w/FROSTED ACRYLIC RIBBED LENSES
 [LUMCAT] HETG-S24-L50-835-A-(L30)-DIM-UNV
 [LAMPCAT] HLM 80 CRI 3500K 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	3069
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	138
Total Luminaire Watts	22.2
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.22
Spacing Criterion (90-270)	1.26
Spacing Criterion (Diagonal)	1.34
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	3.92 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	1439	1540	1602
55	1209	1402	1471
65	940	1199	1018
75	669	779	500
85	333	203	152

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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	1222.598	1222.598	1222.598	1222.598	1222.598
5	1216.018	1216.018	1210.754	1209.438	1211.193
10	1196.278	1195.839	1193.646	1192.330	1193.646
15	1165.570	1165.570	1169.518	1165.570	1167.764
20	1121.702	1122.580	1133.547	1127.844	1130.476
25	1062.919	1066.867	1080.905	1078.273	1084.415
30	994.924	1005.891	1012.910	1024.315	1026.509
35	916.400	930.000	935.264	955.882	957.198
40	820.330	836.561	850.599	868.146	877.358
45	706.273	725.575	755.844	769.882	786.551
50	591.339	611.519	657.141	676.443	693.113
55	481.231	501.849	558.438	585.636	585.636
60	376.387	395.688	462.806	483.863	449.646
65	275.929	298.302	351.821	348.750	298.740
70	191.264	211.443	241.712	216.269	173.278
75	120.198	133.797	139.939	110.986	89.929
80	61.854	67.118	60.976	46.500	37.726
85	20.179	16.670	12.283	10.967	9.212
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	444.34	N.A.	14.50
0-30	939.63	N.A.	30.60
0-40	1525.95	N.A.	49.70
0-60	2590.91	N.A.	84.40
0-80	3046.53	N.A.	99.30
0-90	3069.22	N.A.	100.00
10-90	2954.01	N.A.	96.20
20-40	1081.6	N.A.	35.20
20-50	1660.08	N.A.	54.10
40-70	1385.14	N.A.	45.10
60-80	455.62	N.A.	14.80
70-80	135.43	N.A.	4.40
80-90	22.69	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	3069.22	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	115.20
10-20	329.14
20-30	495.28
30-40	586.32
40-50	578.47
50-60	486.48
60-70	320.19
70-80	135.43
80-90	22.69
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	81	98	91	85	80	88	83	78	84	80	77	81	78	75	73
3	92	82	74	68	90	81	73	68	78	72	67	75	70	65	72	68	64	62
4	85	73	65	58	82	72	64	58	69	63	57	67	61	56	65	60	56	54
5	78	66	57	51	76	64	56	50	62	55	50	60	54	49	59	53	49	47
6	72	59	51	44	70	58	50	44	56	49	44	55	48	43	53	48	43	41
7	67	54	45	39	65	53	45	39	51	44	39	50	44	39	49	43	38	36
8	62	49	41	35	61	48	41	35	47	40	35	46	39	35	45	39	34	33
9	58	45	37	32	57	45	37	32	43	36	32	42	36	31	41	36	31	29
10	55	42	34	29	53	41	34	29	40	33	29	39	33	29	38	33	28	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

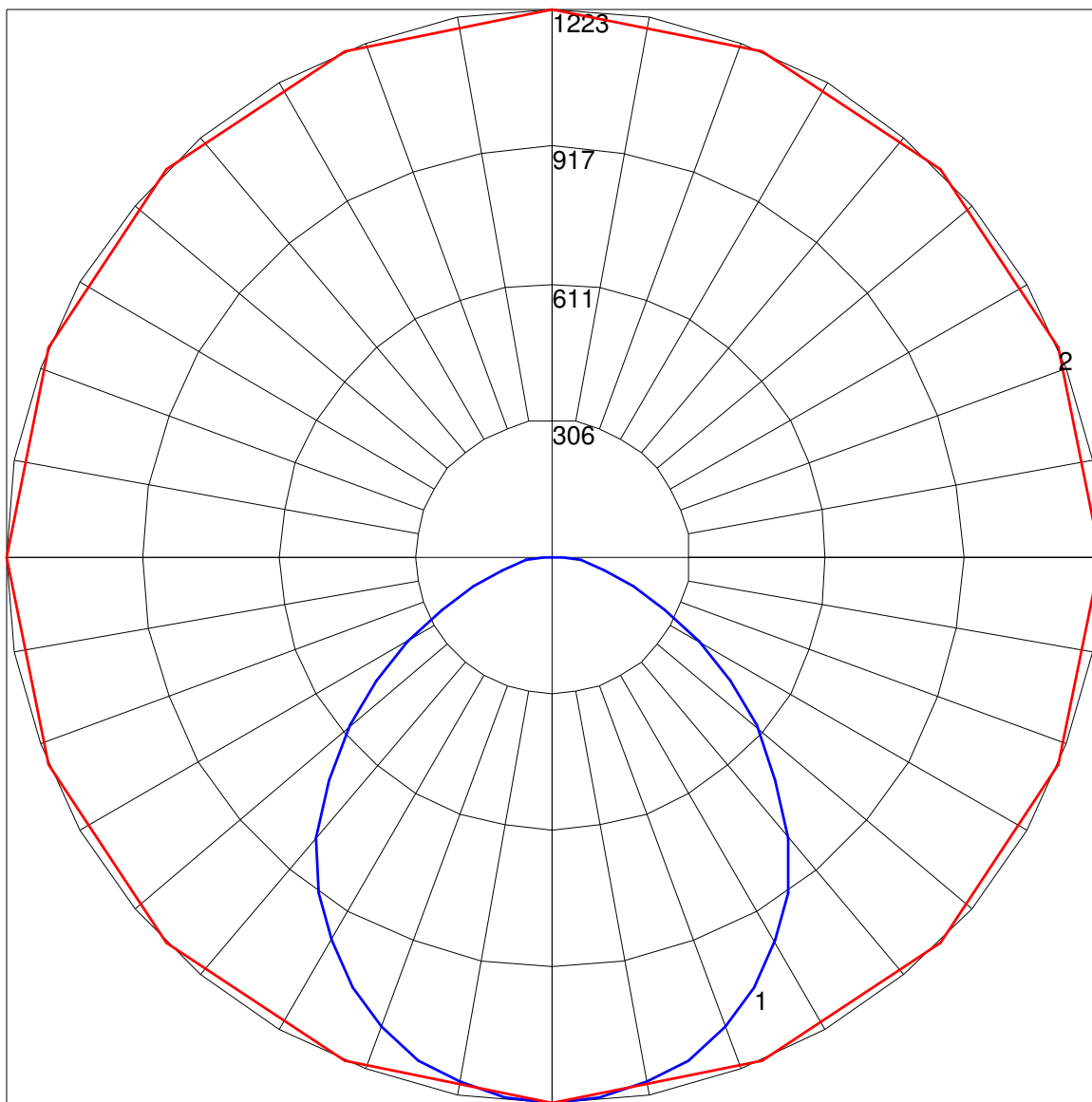
X=2H	Y=2H	12.4	14.0	12.8	14.3	14.6	13.7	15.2	14.0	15.5	15.9
	3H	13.7	15.1	14.1	15.4	15.8	14.6	16.0	15.0	16.4	16.7
	4H	14.1	15.4	14.5	15.8	16.2	14.8	16.1	15.2	16.5	16.9
	6H	14.3	15.6	14.8	15.9	16.3	14.9	16.1	15.3	16.5	16.8
	8H	14.4	15.5	14.8	15.9	16.3	14.8	16.0	15.3	16.4	16.8
	12H	14.4	15.5	14.8	15.9	16.3	14.8	15.9	15.3	16.3	16.8

UGR Viewed Endwise

4H	2H	13.2	14.5	13.6	14.8	15.2	14.1	15.5	14.5	15.8	16.2
	3H	14.6	15.7	15.0	16.1	16.5	15.3	16.4	15.7	16.8	17.2
	4H	15.1	16.1	15.6	16.5	17.0	15.6	16.6	16.0	17.0	17.4
	6H	15.4	16.3	15.9	16.7	17.2	15.7	16.5	16.1	17.0	17.4
	8H	15.5	16.3	16.0	16.7	17.2	15.7	16.5	16.1	16.9	17.4
	12H	15.5	16.2	16.0	16.7	17.2	15.7	16.4	16.2	16.9	17.3
8H	4H	15.3	16.1	15.8	16.6	17.0	15.7	16.5	16.2	17.0	17.4
	6H	15.7	16.3	16.2	16.8	17.3	15.9	16.5	16.4	17.0	17.5
	8H	15.8	16.4	16.3	16.9	17.4	15.9	16.5	16.4	17.0	17.5
	12H	15.9	16.4	16.4	16.9	17.4	15.9	16.4	16.4	16.9	17.5
12H	4H	15.3	16.0	15.8	16.5	17.0	15.7	16.4	16.2	16.9	17.4
	6H	15.7	16.3	16.2	16.7	17.3	15.9	16.5	16.4	16.9	17.5
	8H	15.8	16.3	16.3	16.8	17.4	15.9	16.4	16.4	16.9	17.5

Maximum UGR = 17.5

POLAR GRAPH



Maximum Candela = 1222.598 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.)