



IES INDOOR REPORT

PHOTOMETRIC FILENAME : HETG-S24-L76-840-A-(L58)-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] 01-06-2021
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO 64836
 [LUMINAIRE] 2x4' RECESSED LED TROFFER
 [MORE] WITH FROSTED ACRYLIC LENS
 [LUMCAT] HETG-S24-L76-840-A-(L58)-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	5991
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	136
Total Luminaire Watts	44
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	2809	3006	3128
55	2359	2738	2871
65	1836	2341	1988
75	1306	1520	977
85	651	396	297

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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	2386.638	2386.638	2386.638	2386.638	2386.638
5	2373.792	2373.792	2363.516	2360.947	2364.373
10	2335.257	2334.401	2330.119	2327.550	2330.119
15	2275.313	2275.313	2283.020	2275.313	2279.594
20	2189.678	2191.391	2212.799	2201.667	2206.805
25	2074.928	2082.635	2110.038	2104.900	2116.889
30	1942.194	1963.602	1977.304	1999.569	2003.851
35	1788.908	1815.455	1825.731	1865.979	1868.548
40	1601.368	1633.053	1660.456	1694.710	1712.693
45	1378.718	1416.397	1475.485	1502.888	1535.429
50	1154.355	1193.747	1282.807	1320.486	1353.027
55	939.412	979.660	1090.129	1143.223	1143.223
60	734.745	772.425	903.446	944.550	877.755
65	538.642	582.316	686.790	680.795	583.172
70	373.367	412.759	471.847	422.179	338.257
75	234.639	261.186	273.175	216.656	175.551
80	120.745	131.021	119.032	90.773	73.646
85	39.392	32.541	23.978	21.409	17.983
90	0.000	0.000	0.000	0.000	0.000

IES INDOOR REPORT**PHOTOMETRIC FILENAME : HETG-S24-L76-840-A-(L58)-DIM-UNV_.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	867.41	N.A.	14.50
0-30	1834.25	N.A.	30.60
0-40	2978.81	N.A.	49.70
0-60	5057.71	N.A.	84.40
0-80	5947.13	N.A.	99.30
0-90	5991.43	N.A.	100.00
10-90	5766.54	N.A.	96.20
20-40	2111.4	N.A.	35.20
20-50	3240.64	N.A.	54.10
40-70	2703.95	N.A.	45.10
60-80	889.42	N.A.	14.80
70-80	264.38	N.A.	4.40
80-90	44.30	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	5991.43	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	224.89
10-20	642.52
20-30	966.84
30-40	1144.56
40-50	1129.24
50-60	949.67
60-70	625.04
70-80	264.38
80-90	44.30
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	14.7	16.3	15.1	16.6	16.9	16.0	17.5	16.3	17.8	18.2
	3H	16.0	17.4	16.4	17.7	18.1	16.9	18.3	17.3	18.7	19.0
	4H	16.4	17.7	16.8	18.1	18.5	17.1	18.4	17.5	18.8	19.2
	6H	16.6	17.9	17.1	18.2	18.6	17.2	18.4	17.6	18.8	19.1
	8H	16.7	17.8	17.1	18.2	18.6	17.1	18.3	17.6	18.7	19.1
	12H	16.7	17.8	17.1	18.2	18.6	17.1	18.2	17.6	18.6	19.1

UGR Viewed Endwise

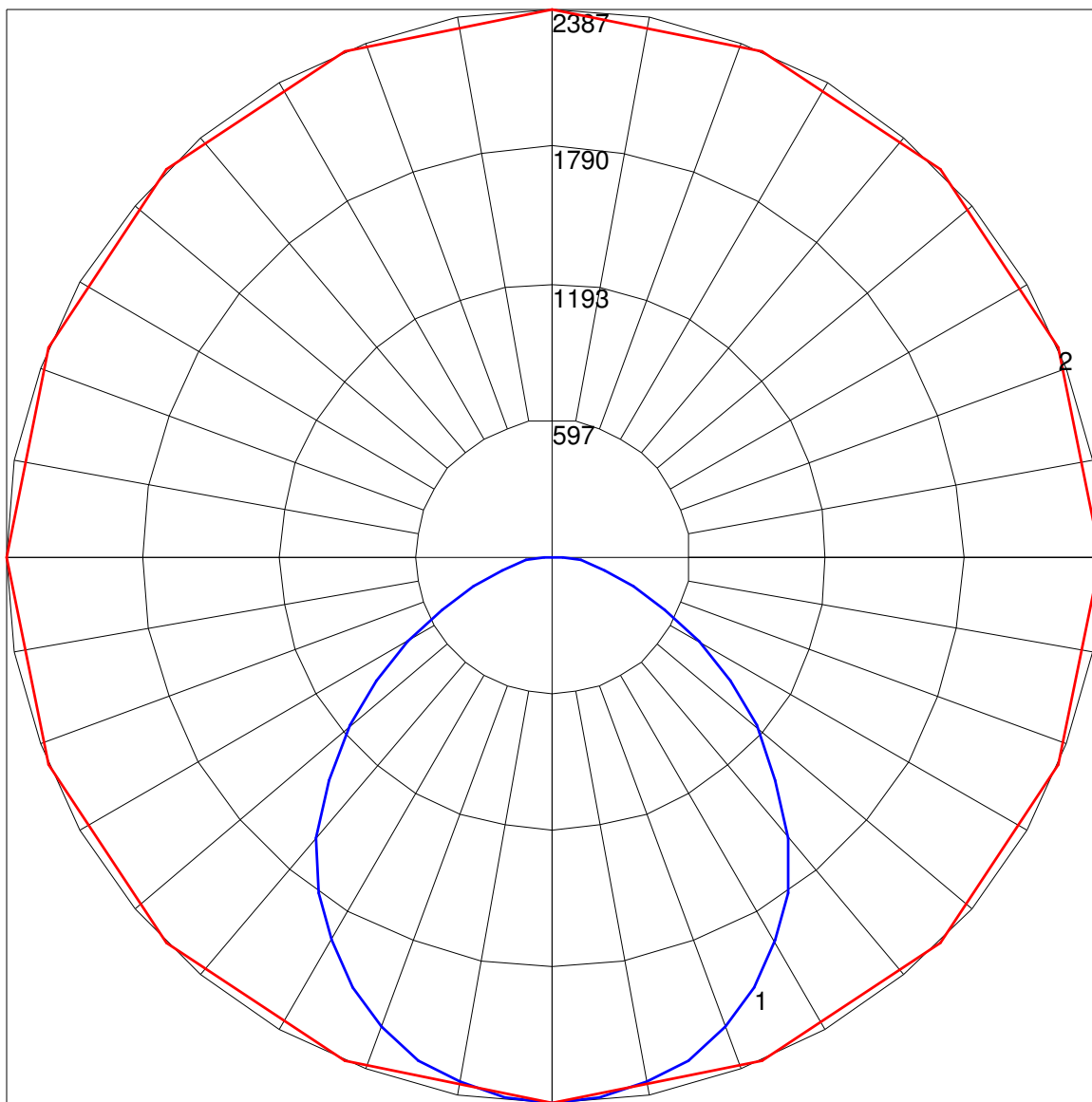
4H	2H	15.5	16.8	15.9	17.1	17.5	16.4	17.8	16.8	18.1	18.5
	3H	16.9	18.0	17.3	18.4	18.8	17.6	18.7	18.0	19.1	19.5
	4H	17.4	18.4	17.9	18.8	19.3	17.9	18.9	18.3	19.3	19.7
	6H	17.7	18.6	18.2	19.0	19.5	18.0	18.8	18.4	19.3	19.7
	8H	17.8	18.6	18.3	19.0	19.5	18.0	18.8	18.4	19.2	19.7
	12H	17.8	18.5	18.3	19.0	19.5	18.0	18.7	18.5	19.2	19.6

8H	4H	17.6	18.4	18.1	18.9	19.3	18.0	18.8	18.5	19.3	19.7
	6H	18.0	18.6	18.5	19.1	19.6	18.2	18.8	18.7	19.3	19.8
	8H	18.1	18.7	18.6	19.2	19.7	18.2	18.8	18.7	19.3	19.8
	12H	18.2	18.7	18.7	19.2	19.7	18.2	18.7	18.7	19.2	19.8

12H	4H	17.6	18.3	18.1	18.8	19.3	18.0	18.7	18.5	19.2	19.7
	6H	18.0	18.6	18.5	19.0	19.6	18.2	18.8	18.7	19.2	19.8
	8H	18.1	18.6	18.6	19.1	19.7	18.2	18.7	18.7	19.2	19.8

Maximum UGR = 19.8

POLAR GRAPH



Maximum Candela = 2386.638 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.)