



IES INDOOR REPORT

PHOTOMETRIC FILENAME : HETG-S24-L76-840-A-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] 08-24-2021
 [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-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	7928
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	133
Total Luminaire Watts	59.8
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	3716	3977	4138
55	3121	3622	3799
65	2429	3097	2630
75	1728	2012	1293
85	861	524	393

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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	3157.883	3157.883	3157.883	3157.883	3157.883
5	3140.887	3140.887	3127.290	3123.890	3128.423
10	3089.898	3088.765	3083.100	3079.700	3083.100
15	3010.583	3010.583	3020.780	3010.583	3016.248
20	2897.275	2899.541	2927.868	2913.138	2919.937
25	2745.443	2755.641	2791.899	2785.101	2800.964
30	2569.816	2598.143	2616.272	2645.732	2651.398
35	2366.996	2402.121	2415.718	2468.973	2472.372
40	2118.852	2160.776	2197.034	2242.357	2266.152
45	1824.252	1874.108	1952.290	1988.548	2031.605
50	1527.386	1579.508	1697.348	1747.203	1790.260
55	1242.984	1296.239	1442.406	1512.656	1512.656
60	972.179	1022.035	1195.395	1249.783	1161.403
65	712.705	770.492	908.727	900.795	771.625
70	494.021	546.143	624.325	558.606	447.565
75	310.463	345.588	361.451	286.668	232.281
80	159.764	173.361	157.498	120.106	97.445
85	52.121	43.057	31.726	28.327	23.795
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1147.71	N.A.	14.50
0-30	2426.99	N.A.	30.60
0-40	3941.41	N.A.	49.70
0-60	6692.12	N.A.	84.40
0-80	7868.95	N.A.	99.30
0-90	7927.56	N.A.	100.00
10-90	7630.00	N.A.	96.20
20-40	2793.7	N.A.	35.20
20-50	4287.86	N.A.	54.10
40-70	3577.73	N.A.	45.10
60-80	1176.83	N.A.	14.80
70-80	349.81	N.A.	4.40
80-90	58.61	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	7927.56	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	297.56
10-20	850.15
20-30	1279.28
30-40	1514.42
40-50	1494.16
50-60	1256.55
60-70	827.02
70-80	349.81
80-90	58.61
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

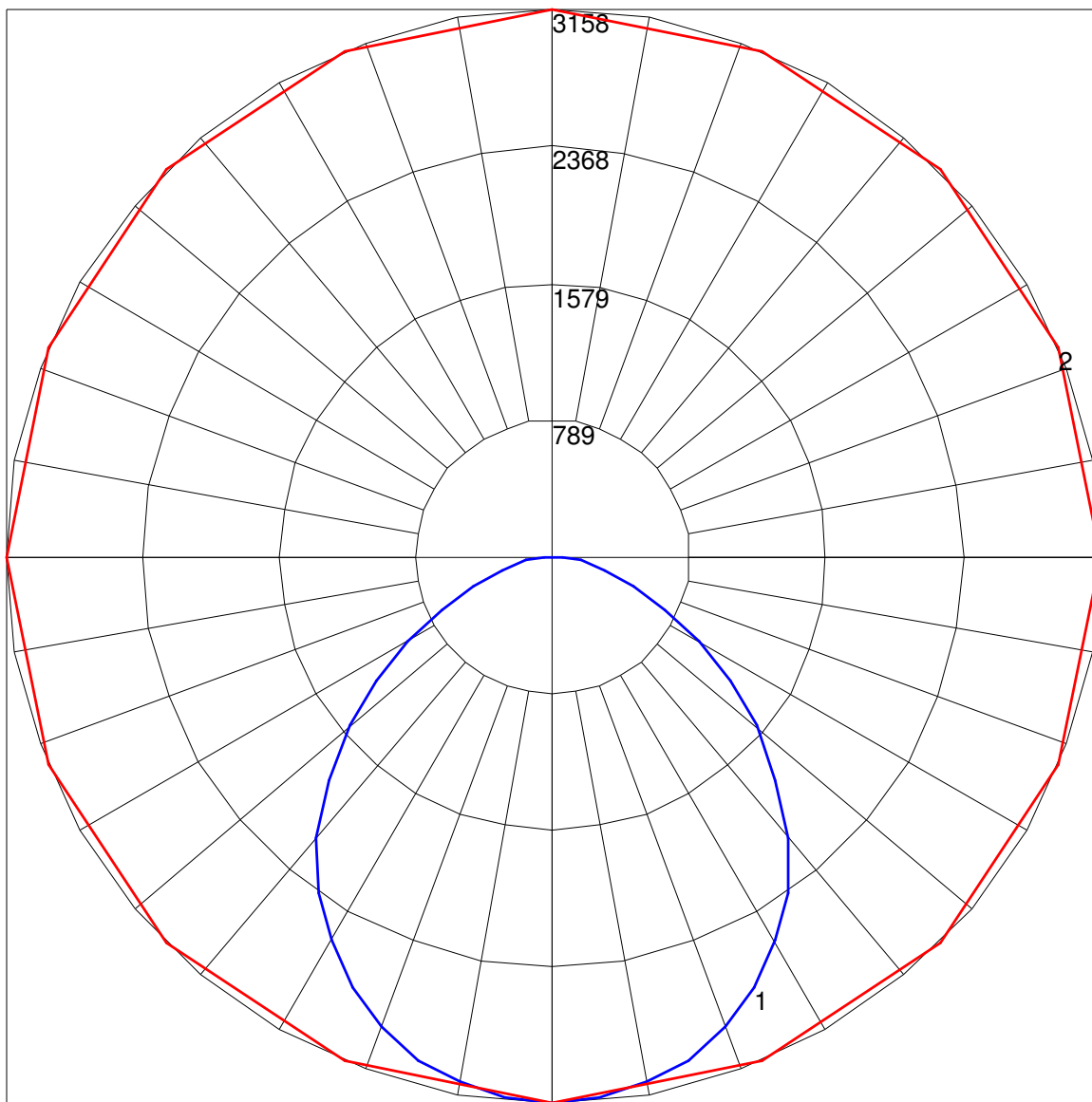
Reflectances

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					UGR Viewed Endwise				
X=2H	Y=2H	15.7	17.3	16.1	17.6	17.9	17.0	18.5	17.3	18.8	19.2
	3H	17.0	18.4	17.4	18.7	19.1	17.9	19.3	18.3	19.7	20.0
	4H	17.4	18.7	17.8	19.1	19.5	18.1	19.4	18.5	19.8	20.2
	6H	17.6	18.9	18.1	19.2	19.6	18.2	19.4	18.6	19.8	20.1
	8H	17.7	18.8	18.1	19.2	19.6	18.1	19.3	18.6	19.7	20.1
	12H	17.7	18.8	18.1	19.2	19.6	18.1	19.2	18.6	19.6	20.1
4H	2H	16.5	17.8	16.9	18.1	18.5	17.4	18.8	17.8	19.1	19.5
	3H	17.9	19.0	18.3	19.4	19.8	18.6	19.7	19.0	20.1	20.5
	4H	18.4	19.4	18.9	19.8	20.3	18.9	19.9	19.3	20.3	20.7
	6H	18.7	19.6	19.2	20.0	20.5	19.0	19.8	19.4	20.3	20.7
	8H	18.8	19.6	19.3	20.0	20.5	19.0	19.8	19.4	20.2	20.7
	12H	18.8	19.5	19.3	20.0	20.5	19.0	19.7	19.5	20.2	20.6
8H	4H	18.6	19.4	19.1	19.9	20.3	19.0	19.8	19.5	20.3	20.7
	6H	19.0	19.6	19.5	20.1	20.6	19.2	19.8	19.7	20.3	20.8
	8H	19.1	19.7	19.6	20.2	20.7	19.2	19.8	19.7	20.3	20.8
	12H	19.2	19.7	19.7	20.2	20.7	19.2	19.7	19.7	20.2	20.8
12H	4H	18.6	19.3	19.1	19.8	20.3	19.0	19.7	19.5	20.2	20.7
	6H	19.0	19.6	19.5	20.0	20.6	19.2	19.8	19.7	20.2	20.8
	8H	19.1	19.6	19.6	20.1	20.7	19.2	19.7	19.7	20.2	20.8

Maximum UGR = 20.8

POLAR GRAPH



Maximum Candela = 3157.883 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.)