



IES INDOOR REPORT

PHOTOMETRIC FILENAME : HETLG-S22-L46-840-FA-LDE5-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM BALLABS TEST NO. 18752.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUEDATE] 08/18/2020

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] LED 22"ARRAYS 2x2'RECESSED LUMINAIRE

[MORE] ARRAYS ON INTERNAL WHITE REFLS w/DUAL FROSTED ACRYLIC LENS

[MORE] CLEAR ACRYLIC LENS IN DOOR

[LUMCAT] HETLG-S22-L46-840-FA-LDE5-UNV

[LAMPCAT] HLM 80 CRI 4000K CCT

[_SEARCH_SOURCETYPE] LED

[_SEARCH_APPLICATION] Indoor, Architectural, Classroom, Commercial, Healthcare, Office, Direct

[_SEARCH_MOUNTING] Recessed

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4754
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	125
Total Luminaire Watts	38
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.18
Spacing Criterion (90-270)	1.22
Spacing Criterion (Diagonal)	1.32
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	1.89 ft
Luminous Width (90-270)	1.77 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	5215	5520	5711
55	4323	4780	4668
65	3317	3629	2800
75	1984	1780	1284
85	699	566	566

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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	2046.136	2046.136	2046.136	2046.136	2046.136
5	2023.088	2022.063	2022.063	2022.063	2019.503
10	2006.698	2006.698	2007.723	2007.723	2007.723
15	1911.434	1912.970	1916.043	1918.092	1920.653
20	1863.289	1866.363	1870.972	1878.655	1880.703
25	1716.296	1720.905	1734.222	1747.538	1750.611
30	1606.178	1614.885	1634.860	1650.225	1654.835
35	1436.648	1445.355	1474.037	1495.036	1502.719
40	1310.654	1326.019	1362.895	1387.992	1396.699
45	1147.782	1171.854	1214.877	1247.144	1256.875
50	951.620	980.301	1026.397	1057.127	1057.127
55	771.846	801.553	853.282	855.331	833.307
60	591.049	618.706	661.729	608.463	573.123
65	436.372	465.054	477.346	401.545	368.253
70	290.915	312.938	293.476	229.454	208.455
75	159.798	173.115	143.409	113.703	103.459
80	72.729	76.314	58.388	50.705	46.096
85	18.950	17.414	15.365	15.365	15.365
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	737.65	N.A.	15.50
0-30	1541.91	N.A.	32.40
0-40	2470.89	N.A.	52.00
0-60	4131.39	N.A.	86.90
0-80	4728.56	N.A.	99.50
0-90	4754.1	N.A.	100.00
10-90	4561.33	N.A.	95.90
20-40	1733.23	N.A.	36.50
20-50	2658.3	N.A.	55.90
40-70	2096.06	N.A.	44.10
60-80	597.18	N.A.	12.60
70-80	161.61	N.A.	3.40
80-90	25.54	N.A.	0.50
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	4754.1	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	192.77
10-20	544.88
20-30	804.26
30-40	928.98
40-50	925.06
50-60	735.44
60-70	435.56
70-80	161.61
80-90	25.54
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	99	108	104	101	97	100	97	94	96	94	92	92	90	89	87
2	101	94	88	83	99	92	86	82	89	84	80	85	81	78	82	79	76	74
3	93	83	76	70	91	82	75	69	79	73	68	76	71	67	74	70	66	64
4	86	74	66	60	83	73	66	60	71	64	59	68	63	58	66	61	57	55
5	79	67	59	52	77	66	58	52	64	57	51	62	56	51	60	55	50	48
6	73	61	52	46	71	60	52	46	58	51	45	56	50	45	55	49	45	43
7	68	55	47	41	66	54	46	41	53	46	40	51	45	40	50	44	40	38
8	63	50	42	37	62	50	42	37	48	41	36	47	41	36	46	40	36	34
9	59	46	38	33	58	46	38	33	45	38	33	44	37	33	43	37	33	31
10	56	43	35	30	54	42	35	30	41	35	30	40	34	30	40	34	30	28

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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	16.9	18.4	17.3	18.7	19.1	17.1	18.6	17.4	18.9	19.2
	3H	18.1	19.5	18.5	19.8	20.2	17.8	19.1	18.2	19.5	19.8
	4H	18.4	19.7	18.8	20.0	20.4	17.9	19.2	18.3	19.5	19.9
	6H	18.5	19.7	18.9	20.1	20.5	17.9	19.1	18.3	19.5	19.9
	8H	18.5	19.7	19.0	20.0	20.4	17.9	19.0	18.3	19.4	19.8
	12H	18.5	19.6	19.0	20.0	20.4	17.9	19.0	18.3	19.3	19.8

UGR Viewed Endwise

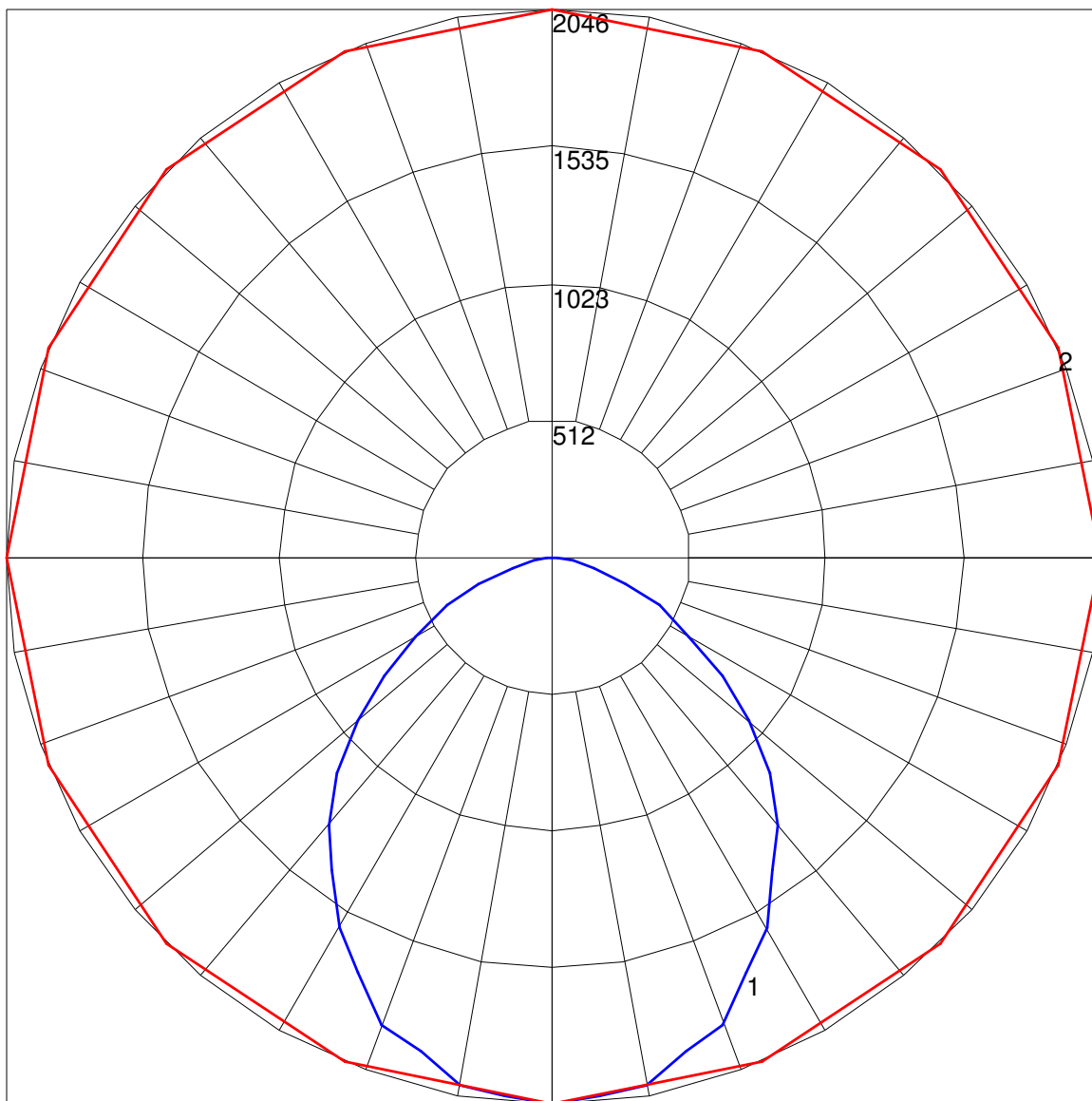
4H	2H	17.4	18.7	17.8	19.0	19.4	17.6	18.9	18.0	19.2	19.6
	3H	18.8	19.8	19.2	20.2	20.6	18.4	19.5	18.8	19.9	20.3
	4H	19.1	20.1	19.6	20.5	20.9	18.5	19.5	19.0	19.9	20.4
	6H	19.3	20.2	19.8	20.6	21.1	18.6	19.4	19.1	19.9	20.3
	8H	19.4	20.1	19.8	20.6	21.0	18.6	19.4	19.1	19.8	20.3
	12H	19.4	20.0	19.8	20.5	21.0	18.6	19.3	19.1	19.8	20.2

8H	4H	19.2	20.0	19.7	20.4	20.9	18.7	19.4	19.1	19.9	20.3
	6H	19.4	20.1	19.9	20.5	21.0	18.7	19.4	19.2	19.9	20.3
	8H	19.5	20.0	20.0	20.5	21.0	18.7	19.3	19.2	19.8	20.3
	12H	19.5	20.0	20.0	20.5	21.0	18.8	19.2	19.3	19.7	20.3

12H	4H	19.2	19.9	19.7	20.3	20.8	18.6	19.3	19.1	19.8	20.3
	6H	19.4	20.0	19.9	20.4	21.0	18.7	19.3	19.2	19.8	20.3
	8H	19.5	20.0	20.0	20.5	21.0	18.8	19.3	19.3	19.7	20.3

Maximum UGR = 21.1

POLAR GRAPH



Maximum Candela = 2046.136 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.)