



IES INDOOR REPORT
PHOTOMETRIC FILENAME : HZL-4-L197-840-HIAFR-XXXX-DRV-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] GEN from BALLABS TEST NO. 21052.0
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
[ISSUE DATE] 4-DEC-2024
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] FULLY SEALED & GASKETED LED LUMINAIRE
[MORE] WHITE REFLECTOR w/FROSTED ACRYLIC DROP LENS
[LUMCAT] HZL-4-L197-840-HIAFR-xxxx-DRV-UNV
[LAMPCAT] HLM 80 CRI, 4000K CCT
[SEARCH_SOURCETYPE] LED
[SEARCH_APPLICATION] INDOOR, OUTDOOR, COMMERCIAL, INDUSTRIAL
[SEARCH_MOUNTING] SURFACE, SUSPENDED

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	19974
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	154
Total Luminaire Watts	130
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.26
Spacing Criterion (90-270)	1.22
Spacing Criterion (Diagonal)	1.32
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	4.25 ft
Luminous Width (90-270)	1.10 ft
Luminous Height	0.23 ft



LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	13784	11731	11538
55	11778	9872	10871
65	9634	8581	9375
75	6679	6787	7793
85	2911	4932	6026

IES INDOOR REPORT
PHOTOMETRIC FILENAME : HZL-4-L197-840-HIAFR-XXXX-DRV-UNV_.IES

CANDELA TABULATION

	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>
0	7116.355	7116.355	7116.355	7116.355	7116.355
5	7205.381	7093.274	7044.639	7026.504	7019.909
10	7104.814	7001.774	6963.856	6948.193	6942.423
15	6922.640	6843.505	6821.248	6814.654	6805.586
20	6703.370	6630.006	6597.857	6602.803	6579.722
25	6407.440	6320.062	6296.981	6287.913	6281.319
30	6054.631	5982.915	5930.158	5903.780	5840.307
35	5611.146	5539.431	5490.796	5334.175	5257.513
40	5072.865	5020.109	4941.799	4751.381	4720.056
45	4481.828	4522.220	4288.113	4253.491	4298.005
50	3852.047	3819.899	3690.481	3866.885	3936.952
55	3174.456	3137.362	3122.524	3453.901	3526.441
60	2518.298	2555.392	2665.851	2971.674	3054.930
65	1981.665	1964.355	2209.178	2467.190	2497.690
70	1388.155	1463.992	1756.626	1968.476	2007.219
75	905.928	1009.792	1295.007	1493.668	1561.262
80	495.416	610.821	912.522	1093.048	1141.683
85	178.877	327.255	583.619	735.293	772.388
90	81.608	187.121	356.931	463.268	488.822
95	74.189	142.607	247.296	304.998	316.539
100	71.716	113.756	191.242	230.810	238.228
105	63.473	89.027	158.269	193.715	204.431
110	51.108	65.121	131.891	168.986	179.702
115	39.567	47.811	107.162	146.729	158.269
120	28.851	31.324	85.729	123.648	137.661
125	21.432	18.135	65.121	103.040	113.756
130	14.838	13.189	46.162	79.135	92.324
135	11.540	0.000	28.851	60.175	69.243
140	0.000	0.000	15.662	39.567	49.459
145	0.000	0.000	0.000	25.554	31.324
150	0.000	0.000	0.000	10.716	14.838
155	0.000	0.000	0.000	0.000	10.716
160	0.000	0.000	0.000	0.000	0.000
165	0.000	0.000	0.000	0.000	0.000
170	0.000	0.000	0.000	0.000	0.000
175	0.000	0.000	0.000	0.000	0.000
180	0.000	0.000	0.000	0.000	0.000

IES INDOOR REPORT
PHOTOMETRIC FILENAME : HZL-4-L197-840-HIAFR-XXXX-DRV-UNV_.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	2600.93	N.A.	13.00
0-30	5507.77	N.A.	27.60
0-40	8912.31	N.A.	44.60
0-60	15210.84	N.A.	76.20
0-80	18761.15	N.A.	93.90
0-90	19372.35	N.A.	97.00
10-90	18700.02	N.A.	93.60
20-40	6311.38	N.A.	31.60
20-50	9680.2	N.A.	48.50
40-70	8503.61	N.A.	42.60
60-80	3550.32	N.A.	17.80
70-80	1345.23	N.A.	6.70
80-90	611.19	N.A.	3.10
90-110	410.52	N.A.	2.10
90-120	510.39	N.A.	2.60
90-130	568.02	N.A.	2.80
90-150	601.19	N.A.	3.00
90-180	602.08	N.A.	3.00
110-180	191.56	N.A.	1.00
0-180	19974.42	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	672.33
10-20	1928.6
20-30	2906.84
30-40	3404.54
40-50	3368.82
50-60	2929.71
60-70	2205.09
70-80	1345.23
80-90	611.19
90-100	256.82
100-110	153.70
110-120	99.87
120-130	57.63
130-140	25.93
140-150	7.24
150-160	0.88
160-170	0.00
170-180	0.00

IES INDOOR REPORT
PHOTOMETRIC FILENAME : HZL-4-L197-840-HIAFR-XXXX-DRV-UNV_.IES

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	110	110	110	105	105	105	100	100	100	98
1	109	104	99	95	106	101	97	93	96	93	90	92	89	87	88	85	83	81
2	99	90	83	78	96	88	82	76	84	79	74	80	76	72	77	73	70	68
3	90	80	71	65	87	78	70	64	74	68	62	71	66	61	68	64	60	57
4	83	71	62	55	80	69	61	54	66	59	53	63	57	52	61	56	51	49
5	76	63	54	47	74	62	53	47	59	52	46	57	51	46	55	49	45	43
6	70	57	48	42	68	56	47	41	54	46	41	52	45	40	50	44	39	37
7	65	52	43	37	63	51	42	37	49	41	36	47	41	36	46	40	35	33
8	61	47	39	33	59	46	38	33	45	38	32	43	37	32	42	36	32	30
9	57	43	35	30	55	43	35	29	41	34	29	40	33	29	39	33	29	27
10	53	40	32	27	52	39	32	27	38	31	26	37	31	26	36	30	26	24

IES INDOOR REPORT

PHOTOMETRIC FILENAME : HZL-4-L197-840-HIAFR-XXXX-DRV-UNV_.IES

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	19.2	20.8	19.6	21.2	21.5	20.5	22.1	20.9	22.5	22.9
	3H	20.5	21.9	21.0	22.3	22.8	22.4	23.9	22.9	24.2	24.7
	4H	20.9	22.3	21.4	22.7	23.1	23.3	24.6	23.7	25.0	25.4
	6H	21.2	22.4	21.6	22.8	23.3	24.0	25.2	24.4	25.6	26.1
	8H	21.2	22.4	21.7	22.9	23.3	24.3	25.5	24.8	25.9	26.4
	12H	21.2	22.4	21.7	22.8	23.3	24.6	25.7	25.1	26.2	26.7

UGR Viewed Endwise

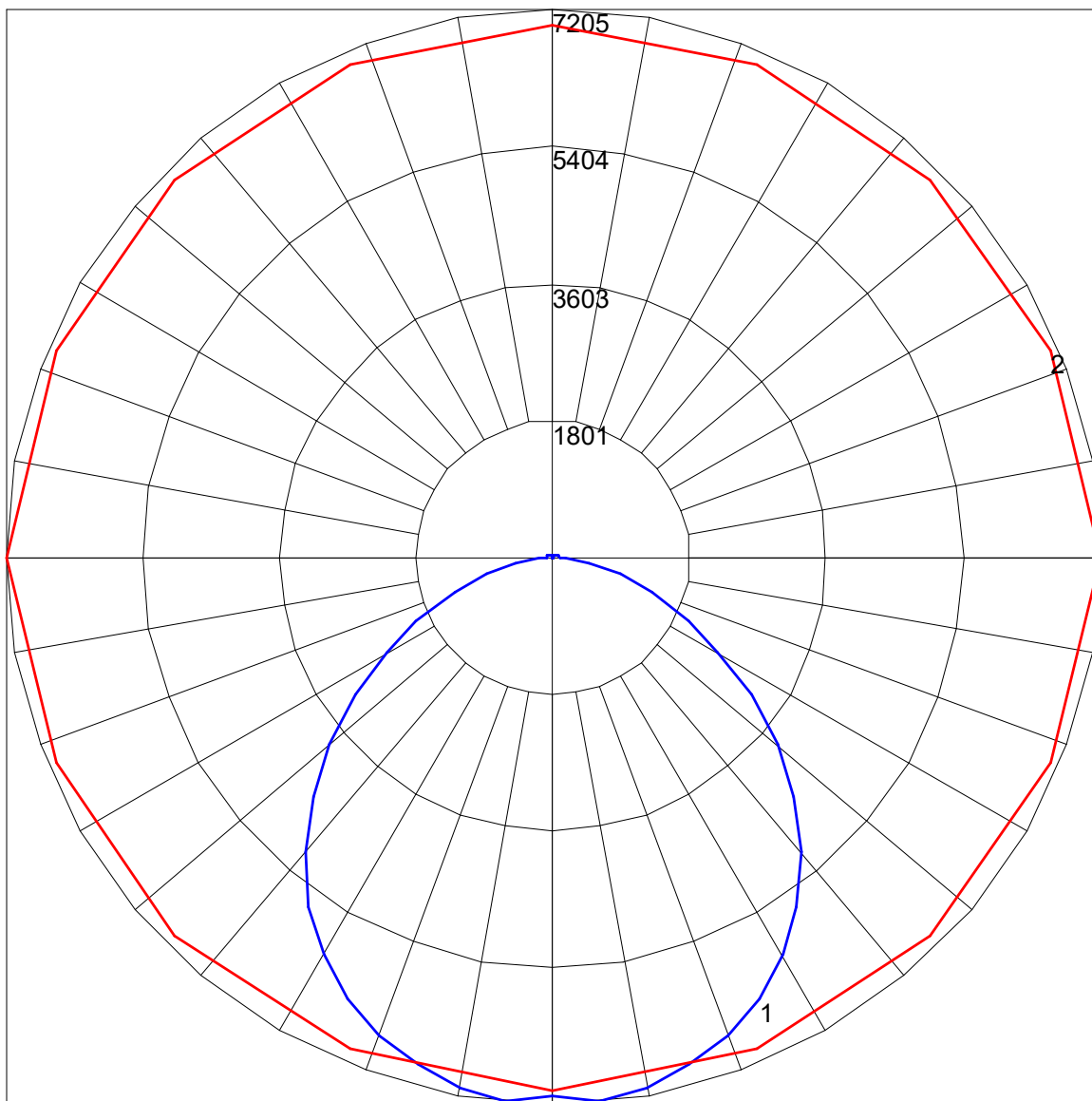
4H	2H	19.9	21.2	20.3	21.6	22.1	20.9	22.3	21.4	22.7	23.1
	3H	21.4	22.5	21.9	23.0	23.5	23.1	24.2	23.6	24.7	25.1
	4H	21.9	22.9	22.4	23.4	23.9	24.1	25.1	24.5	25.5	26.0
	6H	22.3	23.1	22.8	23.6	24.2	24.9	25.8	25.4	26.3	26.9
	8H	22.3	23.2	22.8	23.7	24.2	25.3	26.2	25.8	26.7	27.2
	12H	22.4	23.1	22.9	23.6	24.2	25.7	26.5	26.3	27.0	27.5

8H	4H	22.4	23.2	22.9	23.7	24.2	24.2	25.1	24.7	25.6	26.1
	6H	22.8	23.5	23.3	24.0	24.6	25.3	26.0	25.8	26.5	27.0
	8H	22.9	23.5	23.5	24.1	24.7	25.8	26.4	26.3	27.0	27.5
	12H	23.0	23.6	23.5	24.1	24.7	26.3	26.8	26.8	27.4	28.0

12H	4H	22.4	23.2	23.0	23.7	24.3	24.2	25.0	24.8	25.5	26.1
	6H	22.9	23.6	23.5	24.1	24.7	25.3	25.9	25.9	26.4	27.0
	8H	23.1	23.7	23.7	24.2	24.8	25.8	26.4	26.4	26.9	27.6

Maximum UGR = 28.0

POLAR GRAPH



Maximum Candela = 7205.381 Located At Horizontal Angle = 0, Vertical Angle = 5
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)