



IES INDOOR REPORT
PHOTOMETRIC FILENAME : HZL-4-L400-840-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
 [ISSUEDATE] 4-DEC-2024
 [MANUFAC] H.E. WILLIAMS, INC - CARTHAGE, MO
 [LUMINAIRE] FULLY SEALED & GASKETED HAZARDOUS LOCATION LED LUMINAIRE
 [MORE] WHITE REFLECTOR w/FROSTED ACRYLIC DROP LENS
 [LUMCAT] HZL-4-L400-840-HIAFR-xxxx-DRV-UNV
 [LAMPCAT] HLM 80 CRI 4000K CCT

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	39213
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	145
Total Luminaire Watts	270
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	27061	23031	22651
55	23123	19380	21341
65	18913	16845	18405
75	13112	13325	15299
85	5715	9682	11829

IES INDOOR REPORT
PHOTOMETRIC FILENAME : HZL-4-L400-840-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	13970.439	13970.439	13970.439	13970.439	13970.439
5	14145.211	13925.128	13829.650	13794.048	13781.102
10	13947.783	13745.501	13671.061	13640.314	13628.986
15	13590.148	13434.795	13391.102	13378.156	13360.355
20	13159.691	13015.665	12952.553	12962.263	12916.952
25	12578.735	12407.200	12361.888	12344.087	12331.141
30	11886.120	11745.331	11641.763	11589.978	11465.372
35	11015.496	10874.707	10779.230	10471.761	10321.262
40	9958.772	9855.204	9701.469	9327.651	9266.157
45	8798.480	8877.775	8418.189	8350.222	8437.608
50	7562.129	7499.017	7244.950	7591.258	7728.810
55	6231.919	6159.098	6129.969	6780.510	6922.916
60	4943.784	5016.606	5233.453	5833.827	5997.272
65	3890.297	3856.314	4336.937	4843.452	4903.328
70	2725.150	2874.030	3448.512	3864.405	3940.463
75	1778.468	1982.369	2542.287	2932.287	3064.984
80	972.574	1199.131	1791.414	2145.813	2241.290
85	351.162	642.449	1145.728	1443.488	1516.310
90	160.208	367.345	700.707	909.462	959.628
95	145.643	279.959	485.478	598.756	621.412
100	140.789	223.320	375.436	453.113	467.677
105	124.606	174.772	310.706	380.291	401.328
110	100.332	127.843	258.922	331.743	352.781
115	77.676	93.859	210.374	288.050	310.706
120	56.639	61.494	168.299	242.739	270.249
125	42.075	35.602	127.843	202.283	223.320
130	29.129	25.892	90.623	155.353	181.245
135	22.656	0.000	56.639	118.133	135.934
140	0.000	0.000	30.747	77.676	97.096
145	0.000	0.000	0.000	50.166	61.494
150	0.000	0.000	0.000	21.037	29.129
155	0.000	0.000	0.000	0.000	21.037
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-L400-840-HIAFR-XXXX-DRV-UNV_.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	5106.00	N.A.	13.00
0-30	10812.55	N.A.	27.60
0-40	17496.16	N.A.	44.60
0-60	29861.09	N.A.	76.20
0-80	36830.88	N.A.	93.90
0-90	38030.73	N.A.	97.00
10-90	36710.86	N.A.	93.60
20-40	12390.16	N.A.	31.60
20-50	19003.64	N.A.	48.50
40-70	16693.83	N.A.	42.60
60-80	6969.79	N.A.	17.80
70-80	2640.89	N.A.	6.70
80-90	1199.86	N.A.	3.10
90-110	805.91	N.A.	2.10
90-120	1001.97	N.A.	2.60
90-130	1115.11	N.A.	2.80
90-150	1180.23	N.A.	3.00
90-180	1181.96	N.A.	3.00
110-180	376.06	N.A.	1.00
0-180	39212.7	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	1319.88
10-20	3786.12
20-30	5706.55
30-40	6683.61
40-50	6613.48
50-60	5751.45
60-70	4328.9
70-80	2640.89
80-90	1199.86
90-100	504.17
100-110	301.73
110-120	196.06
120-130	113.14
130-140	50.91
140-150	14.21
150-160	1.73
160-170	0.00
170-180	0.00

IES INDOOR REPORT
PHOTOMETRIC FILENAME : HZL-4-L400-840-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	115	115	115	115	112	112	112	112	106	106	106	101	101	101	96	96	96	94
1	105	100	96	92	102	97	93	90	93	89	87	88	86	83	84	82	80	78
2	95	87	80	75	92	85	79	74	81	76	71	77	73	69	74	71	67	65
3	87	77	69	62	84	75	67	62	72	65	60	68	63	59	66	61	57	55
4	80	68	59	53	77	66	59	52	64	57	51	61	55	50	59	54	49	47
5	73	61	52	46	71	60	51	45	57	50	45	55	49	44	53	47	43	41
6	68	55	46	40	66	54	46	40	52	45	39	50	43	39	48	42	38	36
7	63	50	41	35	61	49	41	35	47	40	35	45	39	34	44	38	34	32
8	59	45	37	32	57	45	37	31	43	36	31	42	35	31	40	35	30	28
9	55	42	34	29	53	41	34	28	40	33	28	39	32	28	37	32	27	26
10	51	39	31	26	50	38	31	26	37	30	25	36	30	25	35	29	25	23

IES INDOOR REPORT

PHOTOMETRIC FILENAME : HZL-4-L400-840-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	21.6	23.2	22.0	23.6	23.9	22.9	24.5	23.3	24.9	25.3
	3H	22.9	24.3	23.4	24.7	25.2	24.8	26.3	25.3	26.6	27.1
	4H	23.3	24.7	23.8	25.1	25.5	25.7	27.0	26.1	27.4	27.8
	6H	23.6	24.8	24.0	25.2	25.7	26.4	27.6	26.8	28.0	28.5
	8H	23.6	24.8	24.1	25.3	25.7	26.7	27.9	27.2	28.3	28.8
	12H	23.6	24.8	24.1	25.2	25.7	27.0	28.1	27.5	28.6	29.1

UGR Viewed Endwise

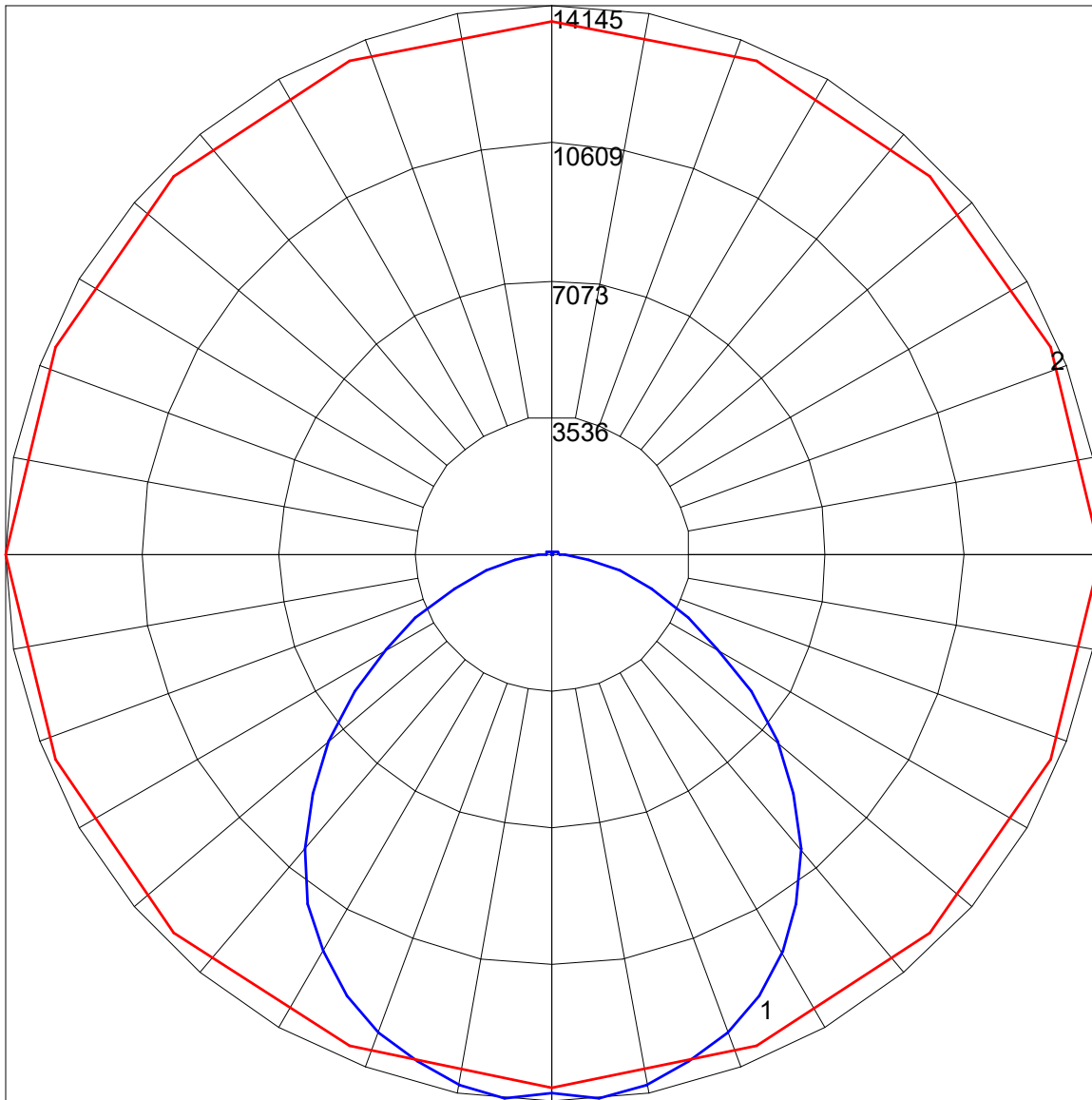
4H	2H	22.3	23.6	22.7	24.0	24.5	23.3	24.7	23.8	25.1	25.5
	3H	23.8	24.9	24.3	25.4	25.9	25.5	26.6	26.0	27.1	27.5
	4H	24.3	25.3	24.8	25.8	26.3	26.5	27.5	26.9	27.9	28.4
	6H	24.7	25.5	25.2	26.0	26.6	27.3	28.2	27.8	28.7	29.3
	8H	24.7	25.6	25.2	26.1	26.6	27.7	28.6	28.2	29.1	29.6
	12H	24.8	25.5	25.3	26.0	26.6	28.1	28.9	28.7	29.4	29.9

8H	4H	24.8	25.6	25.3	26.1	26.6	26.6	27.5	27.1	28.0	28.5
	6H	25.2	25.9	25.7	26.4	27.0	27.7	28.4	28.2	28.9	29.4
	8H	25.3	25.9	25.9	26.5	27.1	28.2	28.8	28.7	29.4	29.9
	12H	25.4	26.0	25.9	26.5	27.1	28.7	29.2	29.2	29.8	30.4

12H	4H	24.8	25.6	25.4	26.1	26.7	26.6	27.4	27.2	27.9	28.5
	6H	25.3	26.0	25.9	26.5	27.1	27.7	28.3	28.3	28.8	29.4
	8H	25.5	26.1	26.1	26.6	27.2	28.2	28.8	28.8	29.3	30.0

Maximum UGR = 30.4

POLAR GRAPH



Maximum Candela = 14145.211 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.)