



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 96-4-L110-840-HIAFR-EM10W-DIM-UNV_(EMER MODE).IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST]GEN FROM BALLABS TEST NO. 20008.0
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
 [ISSUE DATE] 10-25-2023
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO 64836
 [LUMINAIRE] 4' VAPORTITE LED LUMINAIRE
 [MORE] WHITE FLAT REFLECTOR w/FROSTED LENS
 [LUMCAT] 96-4-L110-840-HIAFR-EM10W-DIM-UNV
 [LAMPCAT] HLM 80 CRI 4000K CCT

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1260
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	126
Total Luminaire Watts	10
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.24
Spacing Criterion (90-270)	1.16
Spacing Criterion (Diagonal)	1.32
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	4.25 ft
Luminous Width (90-270)	0.50 ft
Luminous Height	0.17 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	1848	1529	1459
55	1543	1264	1242
65	1181	1041	1131
75	771	866	1021
85	298	710	852

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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	453.945	453.945	453.945	453.945	453.945
5	460.603	451.595	450.028	448.265	447.090
10	453.749	444.936	440.040	435.928	433.186
15	442.390	431.815	424.765	418.890	415.169
20	425.549	413.211	405.378	393.823	388.928
25	404.594	389.907	380.507	366.798	365.232
30	378.548	362.882	353.481	346.823	348.977
35	348.586	332.527	326.260	328.610	333.702
40	311.769	296.102	300.019	300.802	305.698
45	268.293	257.914	270.056	269.077	272.014
50	225.406	221.097	233.239	236.568	237.156
55	184.672	186.826	197.205	206.214	207.976
60	145.897	153.534	164.697	181.735	184.280
65	106.926	117.501	136.105	157.059	162.151
70	73.634	84.992	111.430	133.168	140.609
75	45.238	57.967	87.930	111.038	117.305
80	22.325	37.404	67.171	89.496	92.630
85	7.442	23.304	49.154	69.325	70.696
90	2.938	15.079	36.229	51.700	53.267
95	2.742	10.379	29.375	40.538	42.496
100	2.350	6.463	22.325	31.529	33.684
105	1.567	3.721	16.450	24.479	27.025
110	0.979	1.371	11.750	18.996	21.150
115	0.783	0.392	7.638	14.100	16.646
120	0.392	0.196	4.700	10.183	11.946
125	0.000	0.000	1.567	6.267	8.225
130	0.000	0.000	0.000	2.938	4.700
135	0.000	0.000	0.000	0.979	1.763
140	0.000	0.000	0.000	0.783	0.783
145	0.000	0.000	0.000	0.392	0.392
150	0.000	0.000	0.000	0.000	0.000
155	0.000	0.000	0.000	0.000	0.000
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 : 96-4-L110-840-HIAFR-EM10W-DIM-UNV_(EMER MODE).IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	162.65	N.A.	12.90
0-30	338.33	N.A.	26.90
0-40	545.48	N.A.	43.30
0-60	927.95	N.A.	73.60
0-80	1153.75	N.A.	91.60
0-90	1204.48	N.A.	95.60
10-90	1161.75	N.A.	92.20
20-40	382.82	N.A.	30.40
20-50	588.53	N.A.	46.70
40-70	518.19	N.A.	41.10
60-80	225.80	N.A.	17.90
70-80	90.09	N.A.	7.20
80-90	50.73	N.A.	4.00
90-110	44.19	N.A.	3.50
90-120	52.04	N.A.	4.10
90-130	54.90	N.A.	4.40
90-150	55.49	N.A.	4.40
90-180	55.49	N.A.	4.40
110-180	11.30	N.A.	0.90
0-180	1259.97	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	42.73
10-20	119.92
20-30	175.68
30-40	207.14
40-50	205.71
50-60	176.77
60-70	135.71
70-80	90.09
80-90	50.73
90-100	28.33
100-110	15.86
110-120	7.85
120-130	2.86
130-140	0.50
140-150	0.10
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	118	118	118	118	115	115	115	115	109	109	109	103	103	103	98	98	98	96
1	107	102	97	93	104	99	95	91	94	91	88	89	87	84	85	83	81	78
2	97	89	82	76	94	86	80	75	82	77	72	78	74	70	75	71	68	65
3	89	78	70	63	86	76	68	62	72	66	61	69	64	59	66	61	57	55
4	81	69	60	54	79	68	59	53	65	57	52	62	56	51	59	54	49	47
5	75	62	53	46	72	61	52	46	58	51	45	56	49	44	53	48	43	41
6	69	56	47	41	67	55	46	40	52	45	39	50	44	39	48	43	38	36
7	64	51	42	36	62	50	41	36	48	40	35	46	39	34	44	38	34	32
8	60	46	38	32	58	45	37	32	44	37	31	42	36	31	41	35	30	29
9	56	43	34	29	54	42	34	29	40	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	39	31	26	37	31	26	36	30	25	35	29	25	23

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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	11.5	13.0	11.9	13.4	13.8	13.2	14.7	13.6	15.1	15.6
	3H	12.6	14.0	13.0	14.4	14.9	15.5	16.9	15.9	17.3	17.8
	4H	12.9	14.2	13.3	14.6	15.1	16.6	17.9	17.0	18.3	18.8
	6H	13.0	14.3	13.5	14.7	15.2	17.6	18.9	18.1	19.3	19.8
	8H	13.1	14.2	13.5	14.7	15.2	18.1	19.3	18.6	19.8	20.3
	12H	13.0	14.2	13.5	14.6	15.2	18.6	19.8	19.1	20.2	20.8

UGR Viewed Endwise

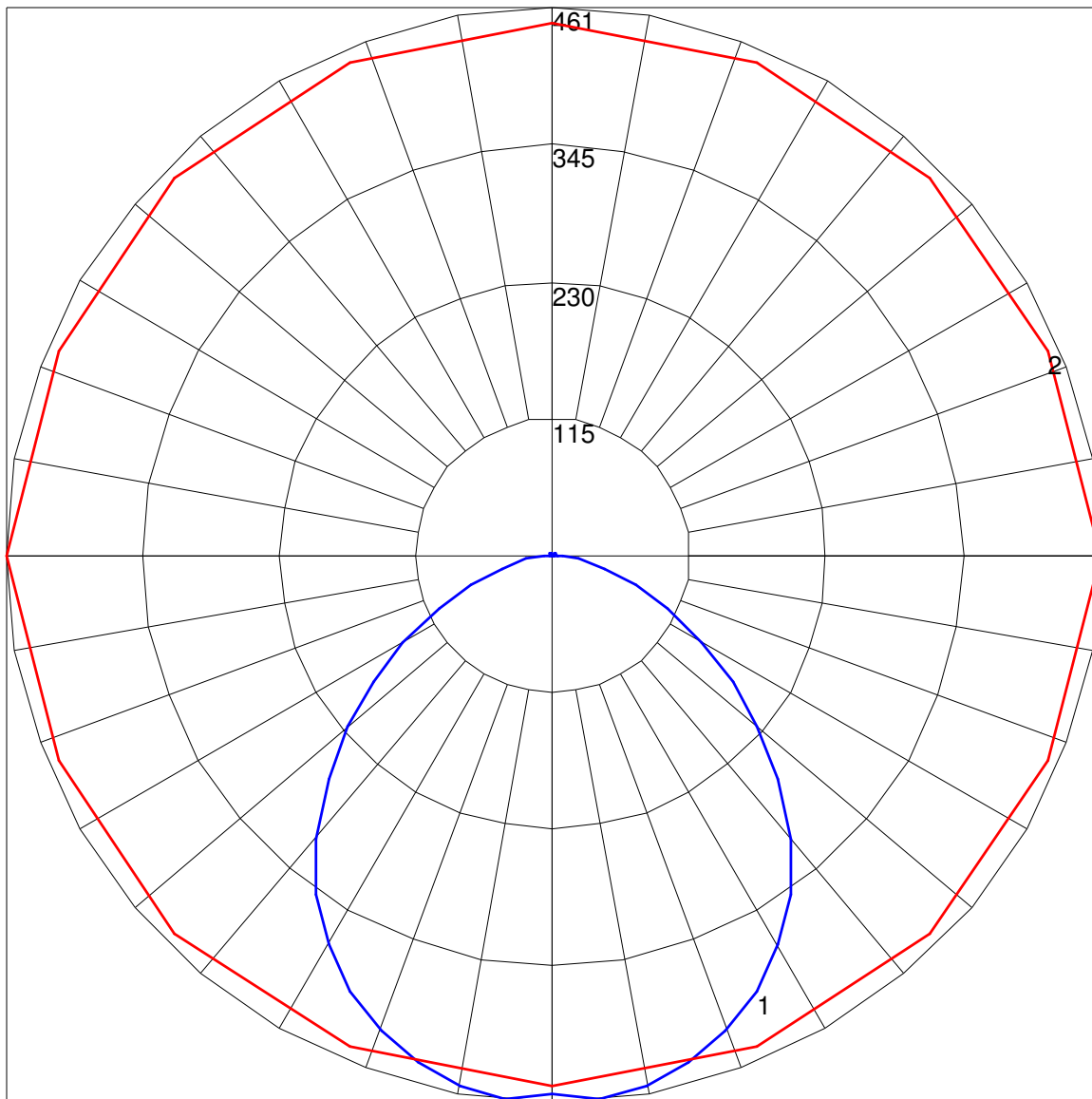
4H	2H	12.2	13.5	12.6	13.9	14.4	13.6	14.9	14.0	15.3	15.8
	3H	13.6	14.7	14.0	15.2	15.6	16.1	17.2	16.6	17.7	18.2
	4H	14.0	15.0	14.5	15.5	16.0	17.4	18.4	17.9	18.9	19.4
	6H	14.2	15.1	14.7	15.6	16.1	18.6	19.5	19.1	20.0	20.6
	8H	14.2	15.1	14.8	15.6	16.2	19.2	20.1	19.7	20.6	21.1
	12H	14.3	15.0	14.8	15.6	16.1	19.8	20.6	20.4	21.1	21.7

8H	4H	14.6	15.4	15.1	15.9	16.5	17.5	18.4	18.1	18.9	19.5
	6H	14.9	15.7	15.5	16.2	16.8	18.9	19.6	19.5	20.2	20.8
	8H	15.0	15.7	15.6	16.3	16.8	19.7	20.3	20.2	20.9	21.5
	12H	15.1	15.7	15.7	16.2	16.9	20.5	21.0	21.0	21.6	22.2

12H	4H	14.7	15.5	15.3	16.0	16.6	17.5	18.3	18.1	18.8	19.4
	6H	15.2	15.9	15.8	16.4	17.0	19.0	19.6	19.5	20.1	20.8
	8H	15.4	16.0	15.9	16.5	17.2	19.7	20.3	20.3	20.9	21.5

Maximum UGR = 22.2

POLAR GRAPH



Maximum Candela = 460.603 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.)