



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 96-4-L40-830-HIAFR-DIM-UNV\_.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] 06-15-2020  
 [MANUFAC] WILLIAMS INDOOR  
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO  
 [LUMINAIRE] 2-56 LED 22"ARRAYS 4'VAPORTITE LUMINAIRE  
 [MORE] WHITE FLAT REFLECTOR w/HIAFR LENS  
 [MORE] EVERLINE LED DRIVER #D15CC55UNVTW-C @ 1029mA  
 [LUMCAT] 96-4-L40-830-HIAFR-DIM-UNV  
 [LAMPCAT] HLM 80 CRI 3000K CCT

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3938
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	136
Total Luminaire Watts	28.9
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	5774	4779	4561
55	4822	3949	3883
65	3691	3253	3536
75	2411	2707	3191
85	932	2221	2663

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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	1418.757	1418.757	1418.757	1418.757	1418.757
5	1439.567	1411.412	1406.516	1401.007	1397.335
10	1418.145	1390.602	1375.301	1362.448	1353.879
15	1382.646	1349.594	1327.560	1309.198	1297.569
20	1330.008	1291.449	1266.966	1230.854	1215.553
25	1264.518	1218.613	1189.234	1146.390	1141.494
30	1183.114	1134.149	1104.770	1083.960	1090.693
35	1089.468	1039.279	1019.693	1027.038	1042.952
40	974.401	925.436	937.677	940.126	955.427
45	838.523	806.084	844.032	840.972	850.153
50	704.482	691.017	728.965	739.370	741.206
55	577.173	583.906	616.345	644.500	650.009
60	455.985	479.856	514.743	567.993	575.949
65	334.185	367.237	425.382	490.873	506.786
70	230.135	265.634	348.263	416.201	439.460
75	141.386	181.170	274.815	347.039	366.624
80	69.775	116.904	209.937	279.712	289.505
85	23.258	72.835	153.627	216.670	220.954
90	9.181	47.129	113.231	161.584	166.481
95	8.569	32.439	91.809	126.697	132.817
100	7.345	20.198	69.775	98.542	105.274
105	4.896	11.629	51.413	76.508	84.464
110	3.060	4.284	36.724	59.370	66.103
115	2.448	1.224	23.870	44.068	52.025
120	1.224	0.612	14.689	31.827	37.336
125	0.000	0.000	4.896	19.586	25.707
130	0.000	0.000	0.000	9.181	14.689
135	0.000	0.000	0.000	3.060	5.509
140	0.000	0.000	0.000	2.448	2.448
145	0.000	0.000	0.000	1.224	1.224
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

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	508.35	N.A.	12.90
0-30	1057.42	N.A.	26.90
0-40	1704.83	N.A.	43.30
0-60	2900.22	N.A.	73.60
0-80	3605.93	N.A.	91.60
0-90	3764.47	N.A.	95.60
10-90	3630.93	N.A.	92.20
20-40	1196.48	N.A.	30.40
20-50	1839.39	N.A.	46.70
40-70	1619.54	N.A.	41.10
60-80	705.71	N.A.	17.90
70-80	281.56	N.A.	7.10
80-90	158.55	N.A.	4.00
90-110	138.11	N.A.	3.50
90-120	162.65	N.A.	4.10
90-130	171.57	N.A.	4.40
90-150	173.43	N.A.	4.40
90-180	173.43	N.A.	4.40
110-180	35.33	N.A.	0.90
0-180	3937.91	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	133.54
10-20	374.81
20-30	549.07
30-40	647.41
40-50	642.91
50-60	552.48
60-70	424.15
70-80	281.56
80-90	158.55
90-100	88.55
100-110	49.56
110-120	24.54
120-130	8.92
130-140	1.57
140-150	0.30
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

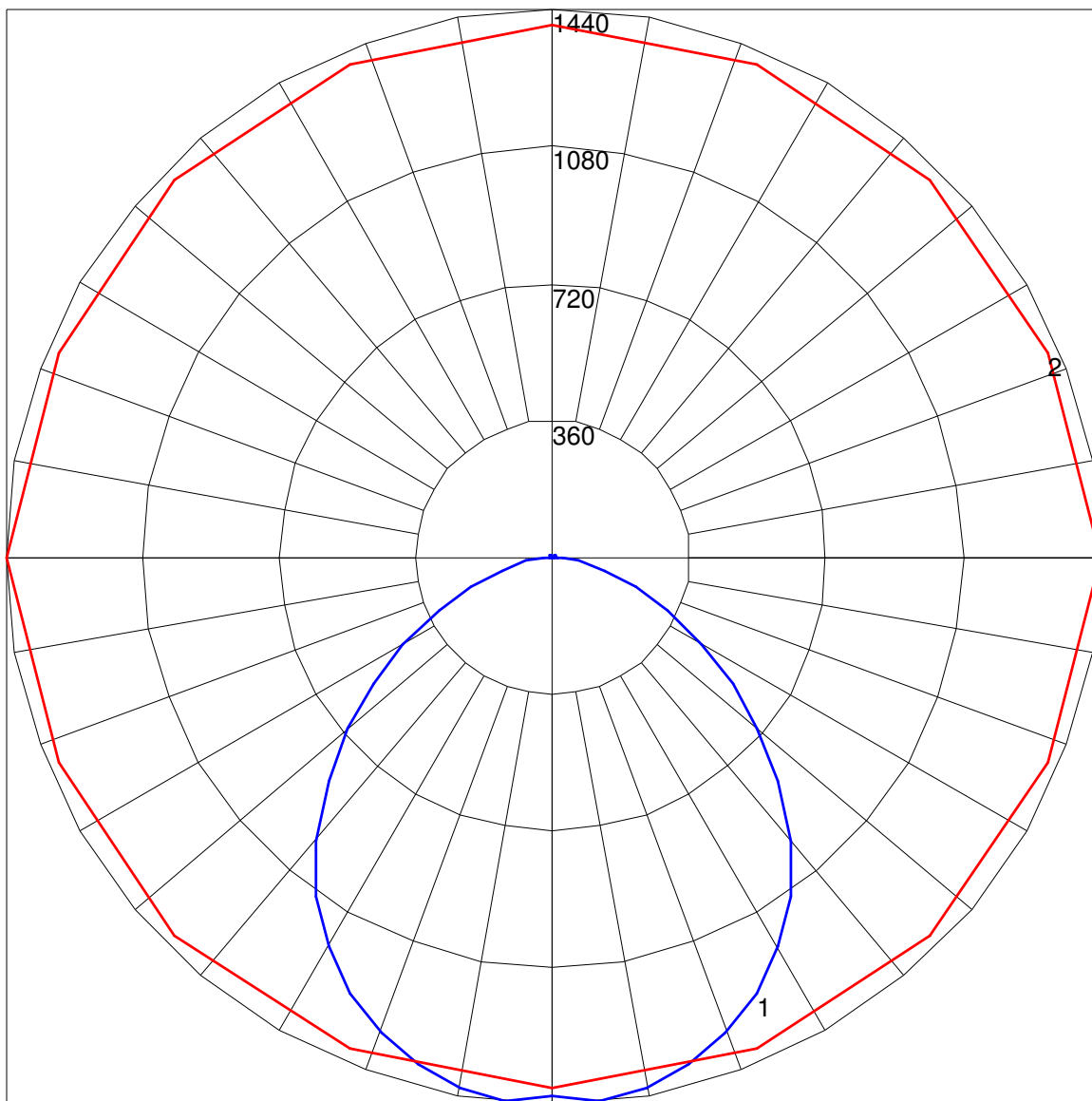
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**UGR TABLE - CORRECTED**

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					UGR Viewed Endwise				
X=2H	Y=2H	15.5	17.0	15.9	17.4	17.8	17.2	18.7	17.6	19.1	19.5
	3H	16.6	18.0	17.0	18.4	18.9	19.5	20.9	19.9	21.3	21.8
	4H	16.9	18.2	17.3	18.6	19.1	20.6	21.9	21.0	22.3	22.8
	6H	17.0	18.3	17.5	18.7	19.2	21.6	22.9	22.1	23.3	23.8
	8H	17.0	18.2	17.5	18.7	19.2	22.1	23.3	22.6	23.8	24.3
	12H	17.0	18.2	17.5	18.6	19.2	22.6	23.8	23.1	24.2	24.8
4H	2H	16.2	17.5	16.6	17.9	18.4	17.6	18.9	18.0	19.3	19.8
	3H	17.6	18.7	18.0	19.1	19.6	20.1	21.2	20.6	21.7	22.2
	4H	18.0	19.0	18.5	19.5	20.0	21.4	22.4	21.9	22.9	23.4
	6H	18.2	19.1	18.7	19.6	20.1	22.6	23.5	23.1	24.0	24.6
	8H	18.2	19.1	18.7	19.6	20.1	23.2	24.0	23.7	24.6	25.1
	12H	18.3	19.0	18.8	19.6	20.1	23.8	24.6	24.4	25.1	25.7
8H	4H	18.5	19.4	19.1	19.9	20.5	21.5	22.4	22.0	22.9	23.4
	6H	18.9	19.7	19.5	20.2	20.8	22.9	23.6	23.5	24.2	24.8
	8H	19.0	19.7	19.6	20.3	20.8	23.7	24.3	24.2	24.9	25.5
	12H	19.1	19.7	19.7	20.2	20.9	24.5	25.0	25.0	25.6	26.2
12H	4H	18.7	19.5	19.3	20.0	20.6	21.5	22.3	22.1	22.8	23.4
	6H	19.2	19.8	19.8	20.4	21.0	23.0	23.6	23.5	24.1	24.8
	8H	19.4	20.0	19.9	20.5	21.2	23.7	24.3	24.3	24.9	25.5

Maximum UGR = 26.2

POLAR GRAPH



Maximum Candela = 1439.567 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.)