



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 96-4-L40-835-HIAFR-LA40-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM BALLABS TEST NO. 20854.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUEDATE] 16-JUL-2019

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

[LUMINAIRE] 4-56 LED 22"ARRAYS 4'ENCLOSED AND GASKETED LUMINAIRE

[MORE] WHITE REFLECTOR w/ACYLIC RIBBED FROST DROP LENS

[MORE] EVERLINE #D15CC55UNV-PW-C @ 1025mA

[LUMCAT] 96-4-L40-835-HIAFR-LA40-DIM-UNV

[LAMPCAT] HEW HLM2256_5630 REV B 10560222

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3963
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	132
Total Luminaire Watts	30
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.24
Spacing Criterion (90-270)	1.16
Spacing Criterion (Diagonal)	1.30
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	4.29 ft
Luminous Width (90-270)	0.54 ft
Luminous Height	0.17 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	5300	4380	4225
55	4468	3694	3735
65	3431	3091	3430
75	2325	2614	3099
85	946	2223	2713

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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	1417.654	1417.654	1417.654	1417.654	1417.654
5	1439.124	1409.066	1396.797	1389.436	1385.142
10	1413.973	1380.848	1365.512	1358.151	1350.789
15	1375.940	1342.201	1323.185	1301.714	1291.899
20	1323.798	1287.605	1256.320	1232.396	1217.060
25	1256.320	1216.447	1183.321	1145.901	1134.859
30	1174.733	1133.632	1085.784	1075.969	1080.263
35	1079.037	1037.323	1005.424	1019.533	1021.987
40	963.710	930.585	918.929	935.492	934.265
45	842.250	817.099	834.275	837.956	845.317
50	715.882	705.453	729.991	742.873	755.142
55	585.219	594.421	618.958	650.244	667.420
60	453.944	481.548	516.514	571.724	591.967
65	339.844	375.424	431.247	497.498	520.808
70	237.400	280.341	350.886	422.658	445.969
75	149.065	200.594	280.341	349.659	372.970
80	76.680	132.502	218.384	282.181	296.290
85	25.764	82.814	159.494	214.703	231.266
90	9.815	51.529	116.553	163.174	174.216
95	7.975	36.193	94.469	132.502	141.091
100	7.361	22.697	72.999	105.511	112.872
105	6.134	13.496	55.209	84.654	92.016
110	3.681	4.294	37.420	64.411	71.159
115	2.454	2.454	23.311	48.462	55.209
120	1.227	1.227	12.269	33.126	40.487
125	0.613	0.613	2.454	19.630	26.991
130	0.000	0.000	0.000	8.588	14.722
135	0.000	0.000	0.000	0.613	4.294
140	0.000	0.000	0.000	0.000	0.613
145	0.000	0.000	0.000	0.000	0.000
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	506.11	N.A.	12.80
0-30	1052.69	N.A.	26.60
0-40	1694.22	N.A.	42.70
0-60	2895.48	N.A.	73.10
0-80	3616.59	N.A.	91.20
0-90	3781.09	N.A.	95.40
10-90	3648.17	N.A.	92.00
20-40	1188.11	N.A.	30.00
20-50	1830.81	N.A.	46.20
40-70	1632.00	N.A.	41.20
60-80	721.11	N.A.	18.20
70-80	290.37	N.A.	7.30
80-90	164.50	N.A.	4.20
90-110	146.41	N.A.	3.70
90-120	172.39	N.A.	4.30
90-130	181.25	N.A.	4.60
90-150	182.35	N.A.	4.60
90-180	182.35	N.A.	4.60
110-180	35.93	N.A.	0.90
0-180	3963.44	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	132.93
10-20	373.18
20-30	546.58
30-40	641.53
40-50	642.70
50-60	558.56
60-70	430.74
70-80	290.37
80-90	164.50
90-100	92.78
100-110	53.63
110-120	25.97
120-130	8.86
130-140	1.09
140-150	0.01
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	95
1	107	102	97	93	104	99	95	91	94	90	87	89	86	84	85	83	80	78
2	97	88	81	75	94	86	80	74	82	76	72	78	73	69	74	71	67	65
3	89	78	69	63	86	76	68	62	72	66	60	69	63	59	66	61	57	55
4	81	69	60	53	78	67	59	53	64	57	51	61	55	50	59	53	49	47
5	75	62	53	46	72	60	52	46	58	50	45	55	49	44	53	47	43	41
6	69	56	47	40	67	54	46	40	52	45	39	50	43	38	48	42	38	36
7	64	51	42	36	62	49	41	35	48	40	35	46	39	34	44	38	34	32
8	60	46	38	32	58	45	37	32	44	36	31	42	35	31	40	35	30	28
9	56	42	34	29	54	42	34	28	40	33	28	39	32	28	37	32	27	25
10	52	39	31	26	51	38	31	26	37	30	26	36	30	25	35	29	25	23

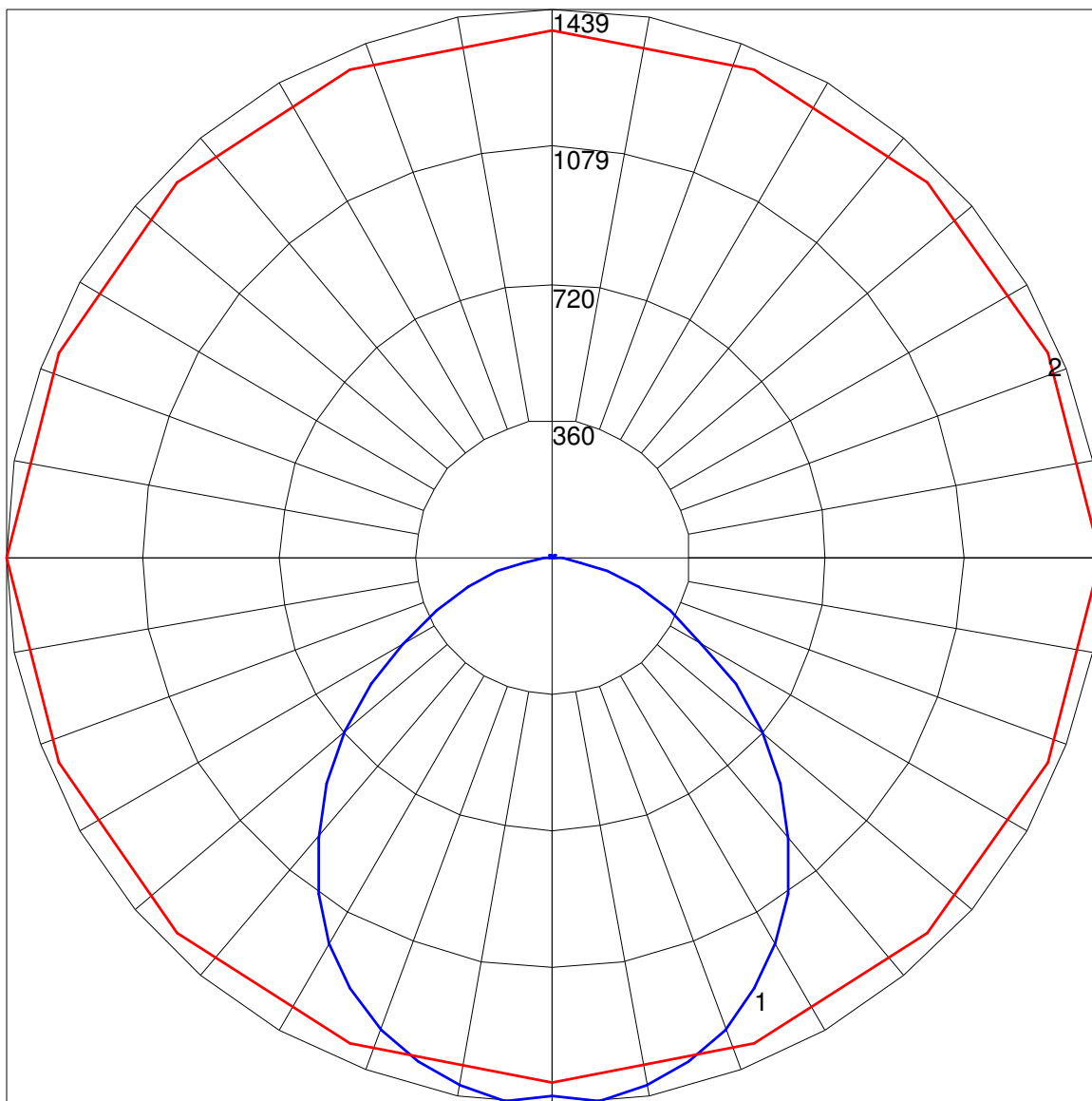
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UGR TABLE - CORRECTED

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	15.2	16.8	15.7	17.2	17.6	16.9	18.4	17.4	18.9	19.3
	3H	16.4	17.8	16.9	18.2	18.7	19.2	20.6	19.7	21.1	21.5
	4H	16.8	18.1	17.2	18.5	19.0	20.3	21.6	20.8	22.1	22.6
	6H	16.9	18.2	17.4	18.6	19.1	21.4	22.6	21.9	23.1	23.6
	8H	17.0	18.1	17.5	18.6	19.1	21.9	23.0	22.4	23.5	24.1
	12H	17.0	18.1	17.5	18.6	19.1	22.4	23.5	22.9	24.0	24.6
4H	2H	16.0	17.3	16.4	17.7	18.2	17.3	18.6	17.8	19.1	19.6
	3H	17.4	18.5	17.9	19.0	19.5	19.9	21.0	20.3	21.5	22.0
	4H	17.9	18.9	18.4	19.4	19.9	21.1	22.1	21.6	22.6	23.2
	6H	18.2	19.0	18.7	19.6	20.1	22.4	23.2	22.9	23.8	24.3
	8H	18.2	19.0	18.7	19.6	20.2	23.0	23.8	23.5	24.3	24.9
	12H	18.2	19.0	18.8	19.5	20.1	23.6	24.4	24.2	24.9	25.5
8H	4H	18.5	19.3	19.0	19.8	20.4	21.3	22.1	21.8	22.7	23.2
	6H	18.9	19.6	19.5	20.2	20.8	22.7	23.4	23.3	24.0	24.6
	8H	19.0	19.7	19.6	20.3	20.9	23.4	24.1	24.0	24.7	25.3
	12H	19.1	19.7	19.7	20.3	20.9	24.3	24.8	24.8	25.4	26.1
12H	4H	18.6	19.4	19.2	19.9	20.5	21.3	22.0	21.8	22.6	23.2
	6H	19.2	19.8	19.8	20.4	21.0	22.7	23.4	23.3	23.9	24.6
	8H	19.4	19.9	20.0	20.5	21.2	23.5	24.1	24.1	24.7	25.3

Maximum UGR = 26.1

POLAR GRAPH



Maximum Candela = 1439.124 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.)