



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 96-4-L40-835-PCFR-(L27)-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM BALLABS TEST NO. 20009.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUEDATE] 10/20/2022

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] 4' VAPORTITE LUMINAIRE

[MORE] WHITE FLAT REFLECTOR w/PCFR LENS

[LUMCAT] 96-4-L40-835-PCFR-(L27)-DIM-UNV

[LAMPCAT] HLM 80 CRI 3500K CCT

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2407
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	120
Total Luminaire Watts	20
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.20
Spacing Criterion (90-270)	1.18
Spacing Criterion (Diagonal)	1.30
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	3286	2742	2760
55	2803	2404	2552
65	2230	2070	2321
75	1537	1735	2057
85	492	1451	1807

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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	841.367	841.367	841.367	841.367	841.367
5	854.475	836.862	830.308	827.440	826.211
10	838.910	822.525	813.923	806.140	805.321
15	816.790	798.767	789.755	784.020	780.743
20	781.562	760.262	756.575	741.419	741.010
25	734.456	715.613	708.649	702.095	700.457
30	679.156	665.639	657.446	653.350	653.350
35	616.894	608.701	599.280	605.014	607.472
40	547.667	544.800	541.523	557.498	561.185
45	477.212	479.260	484.175	508.753	514.488
50	406.347	414.130	430.924	460.827	470.658
55	335.482	351.867	375.215	412.901	427.238
60	267.484	287.966	322.374	364.975	379.721
65	201.945	227.341	270.761	319.097	332.615
70	143.778	174.500	222.016	272.400	283.460
75	90.117	126.164	176.138	224.884	236.353
80	43.830	85.202	135.995	179.825	189.246
85	12.289	52.022	100.358	140.501	149.922
90	3.687	31.541	75.371	108.550	121.249
95	3.277	20.891	57.757	88.888	100.767
100	2.867	12.289	45.059	72.503	83.154
105	1.229	4.915	32.360	56.938	67.178
110	1.229	1.229	22.939	43.830	53.661
115	0.819	0.410	14.337	32.360	40.962
120	0.000	0.000	5.735	22.120	29.903
125	0.000	0.000	1.229	12.698	20.072
130	0.000	0.000	0.000	5.325	11.060
135	0.000	0.000	0.000	0.819	3.687
140	0.000	0.000	0.000	0.410	0.410
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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Zone	Lumens	%Lamp	%Fixt
0-20	302.05	N.A.	12.50
0-30	629.37	N.A.	26.10
0-40	1008.78	N.A.	41.90
0-60	1729.67	N.A.	71.90
0-80	2182.63	N.A.	90.70
0-90	2287.82	N.A.	95.00
10-90	2208.77	N.A.	91.80
20-40	706.74	N.A.	29.40
20-50	1087.13	N.A.	45.20
40-70	990.25	N.A.	41.10
60-80	452.96	N.A.	18.80
70-80	183.59	N.A.	7.60
80-90	105.19	N.A.	4.40
90-110	95.49	N.A.	4.00
90-120	112.57	N.A.	4.70
90-130	118.32	N.A.	4.90
90-150	119.18	N.A.	5.00
90-180	119.18	N.A.	5.00
110-180	23.69	N.A.	1.00
0-180	2407.00	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	79.05
10-20	223.00
20-30	327.32
30-40	379.42
40-50	380.39
50-60	340.49
60-70	269.37
70-80	183.59
80-90	105.19
90-100	60.71
100-110	34.78
110-120	17.08
120-130	5.75
130-140	0.83
140-150	0.03
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	108	108	108	103	103	103	97	97	97	95
1	107	101	97	92	103	99	94	90	93	90	87	89	86	83	84	82	80	77
2	97	88	81	75	94	86	79	74	81	76	71	77	73	69	74	70	66	64
3	88	77	69	62	85	75	68	61	72	65	60	68	63	58	65	60	56	54
4	81	68	60	53	78	67	58	52	64	56	51	61	55	50	58	53	48	46
5	74	61	52	45	72	60	51	45	57	50	44	55	48	43	52	47	42	40
6	69	55	46	40	66	54	46	39	52	44	39	50	43	38	47	42	37	35
7	64	50	41	35	62	49	41	35	47	40	34	45	39	34	43	38	33	31
8	59	46	37	31	57	45	37	31	43	36	31	41	35	30	40	34	30	28
9	55	42	34	28	54	41	33	28	40	33	28	38	32	27	37	31	27	25
10	52	39	31	26	50	38	31	26	37	30	25	36	29	25	34	29	24	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	13.6	15.1	14.0	15.5	16.0	15.8	17.4	16.3	17.8	18.2
	3H	14.8	16.2	15.3	16.6	17.1	18.2	19.6	18.6	20.0	20.5
	4H	15.2	16.5	15.6	16.9	17.4	19.2	20.6	19.7	21.0	21.5
	6H	15.3	16.6	15.8	17.0	17.5	20.3	21.5	20.8	22.0	22.5
	8H	15.4	16.5	15.9	17.0	17.5	20.8	22.0	21.3	22.5	23.0
	12H	15.4	16.5	15.9	17.0	17.5	21.3	22.5	21.8	22.9	23.5

UGR Viewed Endwise

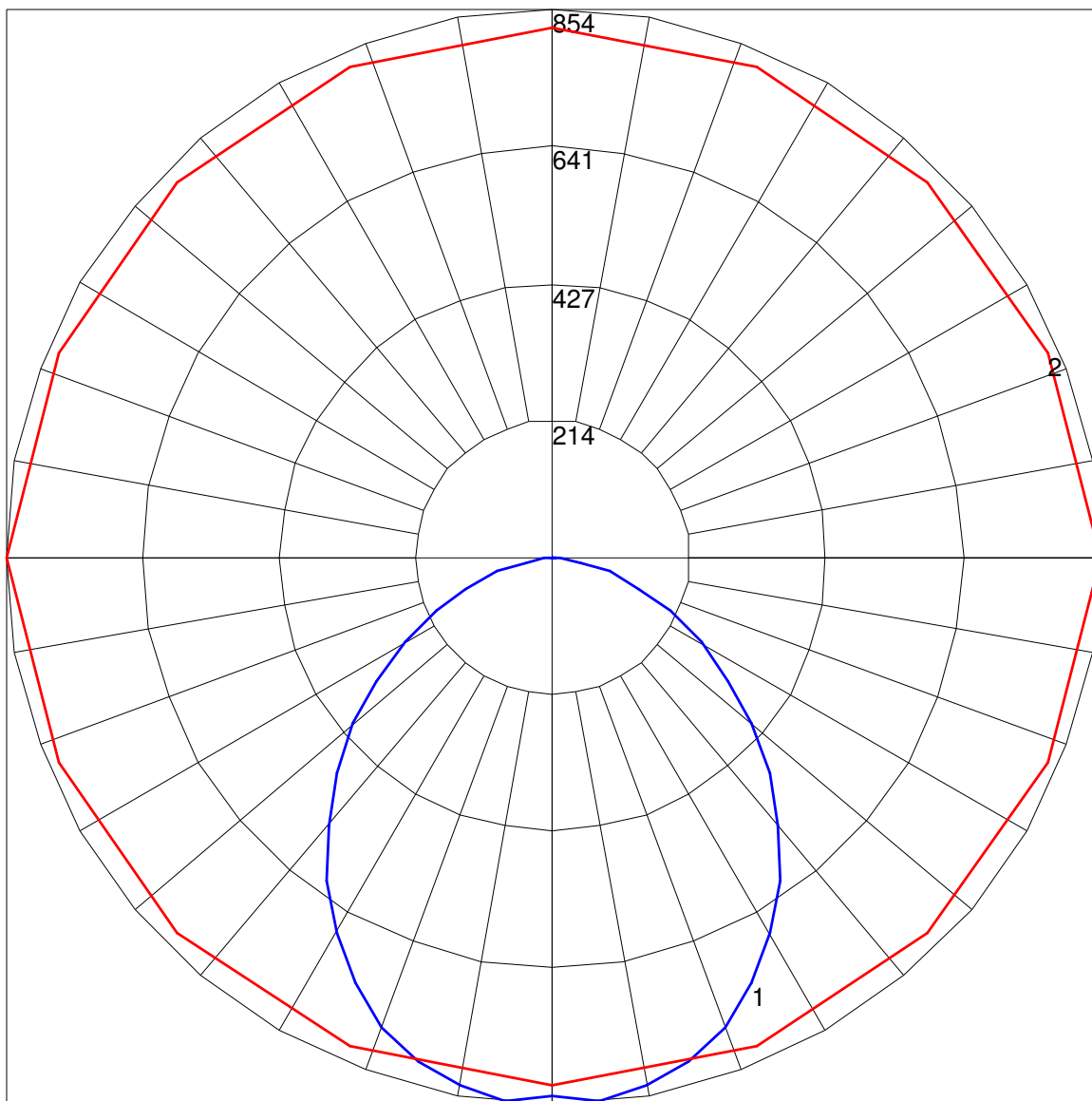
4H	2H	14.4	15.7	14.9	16.2	16.7	16.2	17.5	16.7	18.0	18.4
	3H	15.9	17.0	16.4	17.5	18.0	18.8	19.9	19.3	20.4	20.9
	4H	16.4	17.4	16.9	17.9	18.4	20.0	21.0	20.5	21.5	22.1
	6H	16.7	17.6	17.2	18.1	18.7	21.2	22.2	21.8	22.7	23.2
	8H	16.7	17.6	17.2	18.1	18.7	21.9	22.7	22.4	23.2	23.8
	12H	16.7	17.5	17.3	18.1	18.6	22.5	23.3	23.1	23.9	24.4

8H	4H	17.0	17.9	17.5	18.4	19.0	20.2	21.0	20.7	21.6	22.1
	6H	17.5	18.2	18.1	18.8	19.4	21.6	22.3	22.2	22.9	23.5
	8H	17.6	18.3	18.2	18.8	19.4	22.3	23.0	22.9	23.6	24.2
	12H	17.7	18.3	18.3	18.8	19.5	23.2	23.7	23.7	24.3	25.0

12H	4H	17.2	18.0	17.7	18.5	19.1	20.2	20.9	20.7	21.5	22.1
	6H	17.7	18.4	18.3	18.9	19.6	21.6	22.3	22.2	22.8	23.5
	8H	18.0	18.5	18.5	19.1	19.8	22.4	23.0	23.0	23.6	24.2

Maximum UGR = 25.0

POLAR GRAPH



Maximum Candela = 854.475 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.)