



IES INDOOR REPORT

PHOTOMETRIC FILENAME : NW-4-L74-835-RA-(L67)-EM10WLP-DIM-UNV_(EMER MODE).IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM BALLABS TEST NO. 20990.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUEDATE] 2024-04-12

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] 48 INCH LINEAR LED SURFACE LUMINAIRE

[MORE] WHITE REFLECTOR w/RADIAL RIBBED FROST ACRYLIC LENS

[MORE] 0-10V DIMMING DRIVER -EM10W EMER MODE

[LUMCAT] NW-4-L74-835-RA-(L67)DIM-UNV

[LAMPCAT] 22 INCH HLM LED ARRAYS

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1370
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	137
Total Luminaire Watts	10
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.20
Spacing Criterion (90-270)	1.28
Spacing Criterion (Diagonal)	1.36
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	3.98 ft
Luminous Width (90-270)	0.38 ft
Luminous Height	0.15 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	2397	2197	2254
55	2044	1904	2005
65	1644	1577	1736
75	1275	1337	1500
85	598	1205	1396

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	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>
0	442.400	442.400	442.400	442.400	442.400
5	446.109	440.260	439.119	439.119	437.835
10	437.978	432.984	433.270	434.411	432.984
15	423.283	419.431	422.570	425.994	425.566
20	404.309	402.740	407.876	414.153	414.438
25	378.059	379.771	389.044	397.318	399.458
30	350.382	353.378	366.646	377.345	381.483
35	315.857	322.848	340.396	354.377	359.227
40	282.902	290.463	311.578	331.122	335.688
45	243.812	254.797	280.477	301.591	307.298
50	207.290	220.843	248.948	272.202	278.480
55	171.196	184.464	216.706	240.816	248.235
60	136.957	151.937	185.035	207.290	215.708
65	104.002	119.838	152.222	180.612	186.747
70	76.753	90.734	124.688	152.222	159.498
75	52.072	67.623	102.005	126.685	132.107
80	28.961	47.935	81.604	104.002	111.706
85	10.272	32.385	64.769	85.598	92.018
90	0.000	21.400	50.503	70.904	75.041
95	0.000	13.696	39.803	58.064	64.341
100	0.000	9.130	30.530	48.078	53.071
105	0.000	6.135	24.110	38.805	44.368
110	0.000	2.853	19.117	31.814	37.093
115	0.000	1.855	15.265	26.821	30.530
120	0.000	0.000	12.126	21.970	25.822
125	0.000	0.000	9.416	17.548	20.544
130	0.000	0.000	7.419	13.838	16.406
135	0.000	0.000	5.992	10.700	13.125
140	0.000	0.000	3.139	8.132	9.986
145	0.000	0.000	1.141	6.277	7.276
150	0.000	0.000	0.000	5.421	6.135
155	0.000	0.000	0.000	5.136	5.421
160	0.000	0.000	0.000	2.996	4.993
165	0.000	0.000	0.000	0.999	1.712
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	161.21	N.A.	11.80
0-30	340.31	N.A.	24.80
0-40	552.42	N.A.	40.30
0-60	958.06	N.A.	69.90
0-80	1210.25	N.A.	88.30
0-90	1275.13	N.A.	93.10
10-90	1233.31	N.A.	90.00
20-40	391.21	N.A.	28.60
20-50	606.17	N.A.	44.20
40-70	554.39	N.A.	40.50
60-80	252.18	N.A.	18.40
70-80	103.43	N.A.	7.50
80-90	64.89	N.A.	4.70
90-110	64.14	N.A.	4.70
90-120	78.93	N.A.	5.80
90-130	87.42	N.A.	6.40
90-150	93.77	N.A.	6.80
90-180	94.82	N.A.	6.90
110-180	30.67	N.A.	2.20
0-180	1369.95	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	41.82
10-20	119.38
20-30	179.11
30-40	212.11
40-50	214.95
50-60	190.69
60-70	148.75
70-80	103.43
80-90	64.89
90-100	39.71
100-110	24.44
110-120	14.78
120-130	8.49
130-140	4.49
140-150	1.86
150-160	0.87
160-170	0.18
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	117	117	117	117	114	114	114	114	107	107	107	101	101	101	96	96	96	93
1	106	101	96	92	102	98	93	90	92	89	85	87	84	82	82	80	78	75
2	96	87	80	74	93	85	78	73	80	75	70	76	71	67	72	68	65	62
3	88	77	68	61	84	74	67	60	70	64	58	67	61	57	63	59	55	52
4	80	68	59	52	77	66	58	51	63	55	50	59	53	48	57	51	47	45
5	74	61	51	45	71	59	51	44	56	49	43	53	47	42	51	45	41	39
6	68	55	46	39	66	53	45	39	51	43	38	48	42	37	46	40	36	34
7	63	49	41	34	61	48	40	34	46	39	33	44	38	33	42	36	32	30
8	59	45	37	31	57	44	36	30	42	35	30	40	34	29	39	33	29	27
9	55	41	33	28	53	41	33	27	39	32	27	37	31	26	36	30	26	24
10	51	38	30	25	50	37	30	25	36	29	24	35	28	24	33	28	24	22

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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	12.0	13.5	12.4	13.9	14.4	15.0	16.5	15.5	16.9	17.4
	3H	13.2	14.5	13.7	15.0	15.5	17.2	18.6	17.7	19.1	19.6
	4H	13.6	14.9	14.1	15.3	15.9	18.3	19.6	18.8	20.1	20.6
	6H	13.8	15.0	14.3	15.5	16.0	19.4	20.6	19.9	21.1	21.6
	8H	13.8	15.0	14.4	15.5	16.1	20.0	21.1	20.5	21.6	22.2
	12H	13.8	14.9	14.4	15.5	16.1	20.6	21.7	21.1	22.2	22.8

UGR Viewed Endwise

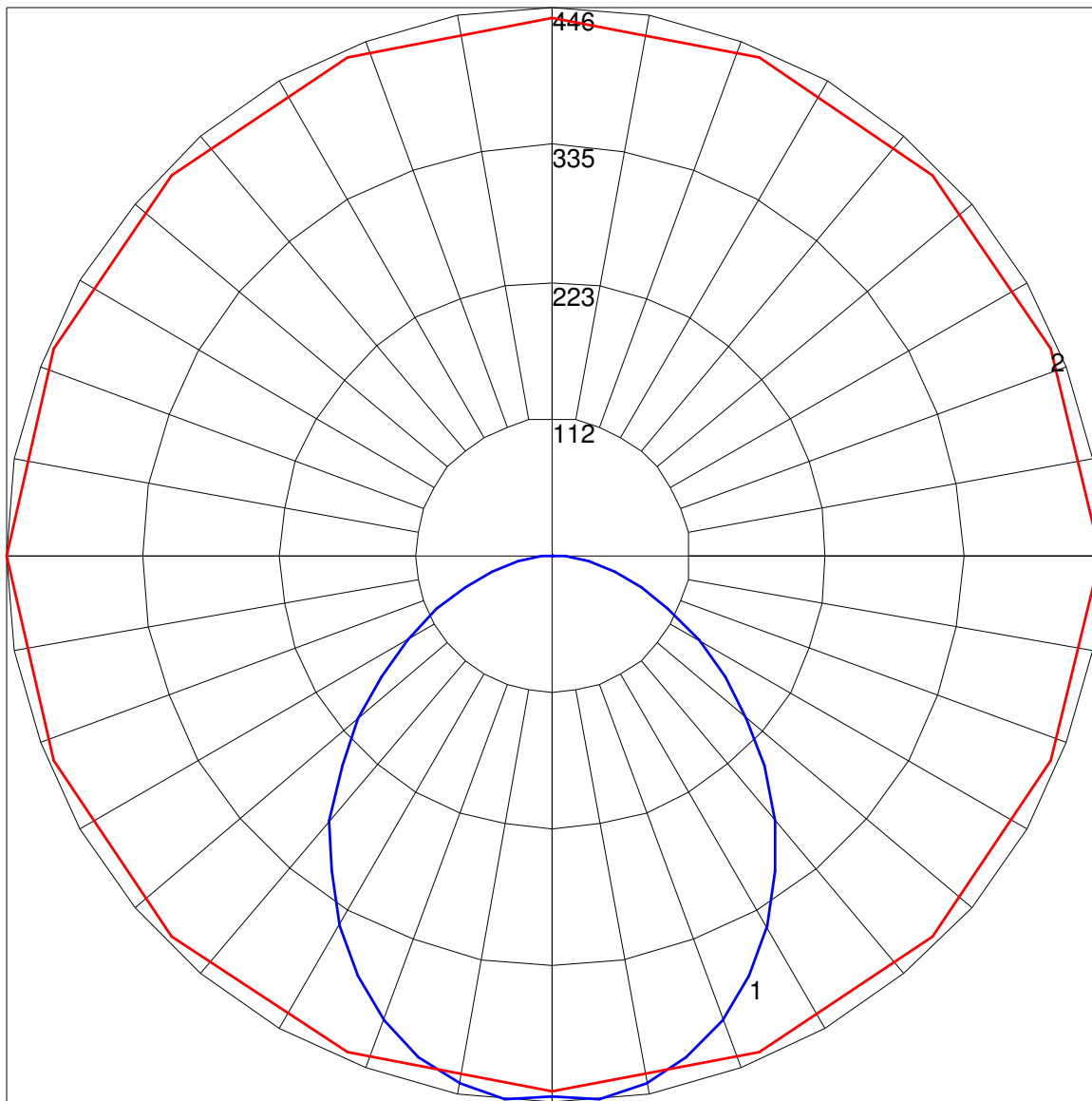
4H	2H	12.9	14.2	13.4	14.7	15.2	15.3	16.6	15.8	17.1	17.6
	3H	14.4	15.5	14.9	16.0	16.6	17.8	18.9	18.3	19.4	20.0
	4H	14.9	15.9	15.4	16.4	17.0	19.0	20.0	19.5	20.6	21.2
	6H	15.2	16.1	15.7	16.6	17.3	20.3	21.2	20.9	21.8	22.4
	8H	15.3	16.1	15.8	16.7	17.3	21.0	21.8	21.5	22.4	23.0
	12H	15.3	16.1	15.9	16.7	17.3	21.7	22.5	22.3	23.1	23.7
8H	4H	15.6	16.4	16.2	17.0	17.6	19.2	20.0	19.7	20.6	21.2
	6H	16.1	16.8	16.7	17.4	18.1	20.6	21.3	21.2	21.9	22.6
	8H	16.3	16.9	16.9	17.5	18.2	21.4	22.1	22.0	22.7	23.3
	12H	16.4	17.0	17.0	17.6	18.3	22.4	22.9	23.0	23.5	24.2
12H	4H	15.8	16.6	16.4	17.2	17.8	19.2	19.9	19.8	20.5	21.2
	6H	16.4	17.1	17.1	17.7	18.3	20.7	21.3	21.3	21.9	22.6
	8H	16.7	17.3	17.3	17.9	18.6	21.5	22.1	22.1	22.7	23.4

Maximum UGR = 24.2

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POLAR GRAPH



Maximum Candela = 446.109 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.)