



IES INDOOR REPORT
PHOTOMETRIC FILENAME : NW-4-L74-827-RA-DIM-UNV_.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] 2023-08-09
[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
[LUMCAT] NW-4-L74-827-RA-DIM-UNV
[LAMPCAT] 22 INCH HLM LED ARRAYS

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	7185
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	129
Total Luminaire Watts	55.6
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	12571	11521	11823
55	10719	9985	10513
65	8623	8271	9102
75	6688	7012	7865
85	3138	6322	7322

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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	2320.112	2320.112	2320.112	2320.112	2320.112
5	2339.565	2308.889	2302.904	2302.904	2296.170
10	2296.918	2270.732	2272.228	2278.214	2270.732
15	2219.855	2199.655	2216.115	2234.071	2231.826
20	2120.347	2112.117	2139.052	2171.972	2173.468
25	1982.682	1991.660	2040.292	2083.686	2094.909
30	1837.535	1853.246	1922.827	1978.941	2000.638
35	1656.475	1693.135	1785.162	1858.484	1883.922
40	1483.645	1523.298	1634.029	1736.530	1760.472
45	1278.643	1336.253	1470.925	1581.656	1611.584
50	1087.108	1158.185	1305.577	1427.531	1460.451
55	897.818	967.399	1136.488	1262.931	1301.836
60	718.255	796.814	970.392	1087.108	1131.251
65	545.425	628.473	798.310	947.198	979.370
70	402.522	475.844	653.911	798.310	836.467
75	273.086	354.638	534.950	664.385	692.816
80	151.881	251.389	427.960	545.425	585.826
85	53.869	169.837	339.675	448.909	482.577
90	0.000	112.227	264.856	371.846	393.544
95	0.000	71.825	208.743	304.510	337.430
100	0.000	47.884	160.111	252.137	278.324
105	0.000	32.172	126.443	203.505	232.685
110	0.000	14.964	100.256	166.845	194.527
115	0.000	9.726	80.055	140.658	160.111
120	0.000	0.000	63.595	115.220	135.421
125	0.000	0.000	49.380	92.026	107.738
130	0.000	0.000	38.905	72.574	86.041
135	0.000	0.000	31.424	56.114	68.833
140	0.000	0.000	16.460	42.646	52.373
145	0.000	0.000	5.985	32.920	38.157
150	0.000	0.000	0.000	28.431	32.172
155	0.000	0.000	0.000	26.935	28.431
160	0.000	0.000	0.000	15.712	26.186
165	0.000	0.000	0.000	5.237	8.978
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	845.42	N.A.	11.80
0-30	1784.72	N.A.	24.80
0-40	2897.1	N.A.	40.30
0-60	5024.45	N.A.	69.90
0-80	6346.98	N.A.	88.30
0-90	6687.26	N.A.	93.10
10-90	6467.94	N.A.	90.00
20-40	2051.67	N.A.	28.60
20-50	3178.97	N.A.	44.20
40-70	2907.45	N.A.	40.50
60-80	1322.53	N.A.	18.40
70-80	542.44	N.A.	7.60
80-90	340.29	N.A.	4.70
90-110	336.40	N.A.	4.70
90-120	413.92	N.A.	5.80
90-130	458.46	N.A.	6.40
90-150	491.77	N.A.	6.80
90-180	497.25	N.A.	6.90
110-180	160.85	N.A.	2.20
0-180	7184.52	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	219.33
10-20	626.09
20-30	939.30
30-40	1112.37
40-50	1127.3
50-60	1000.06
60-70	780.09
70-80	542.44
80-90	340.29
90-100	208.25
100-110	128.15
110-120	77.52
120-130	44.54
130-140	23.56
140-150	9.75
150-160	4.54
160-170	0.94
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	87	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

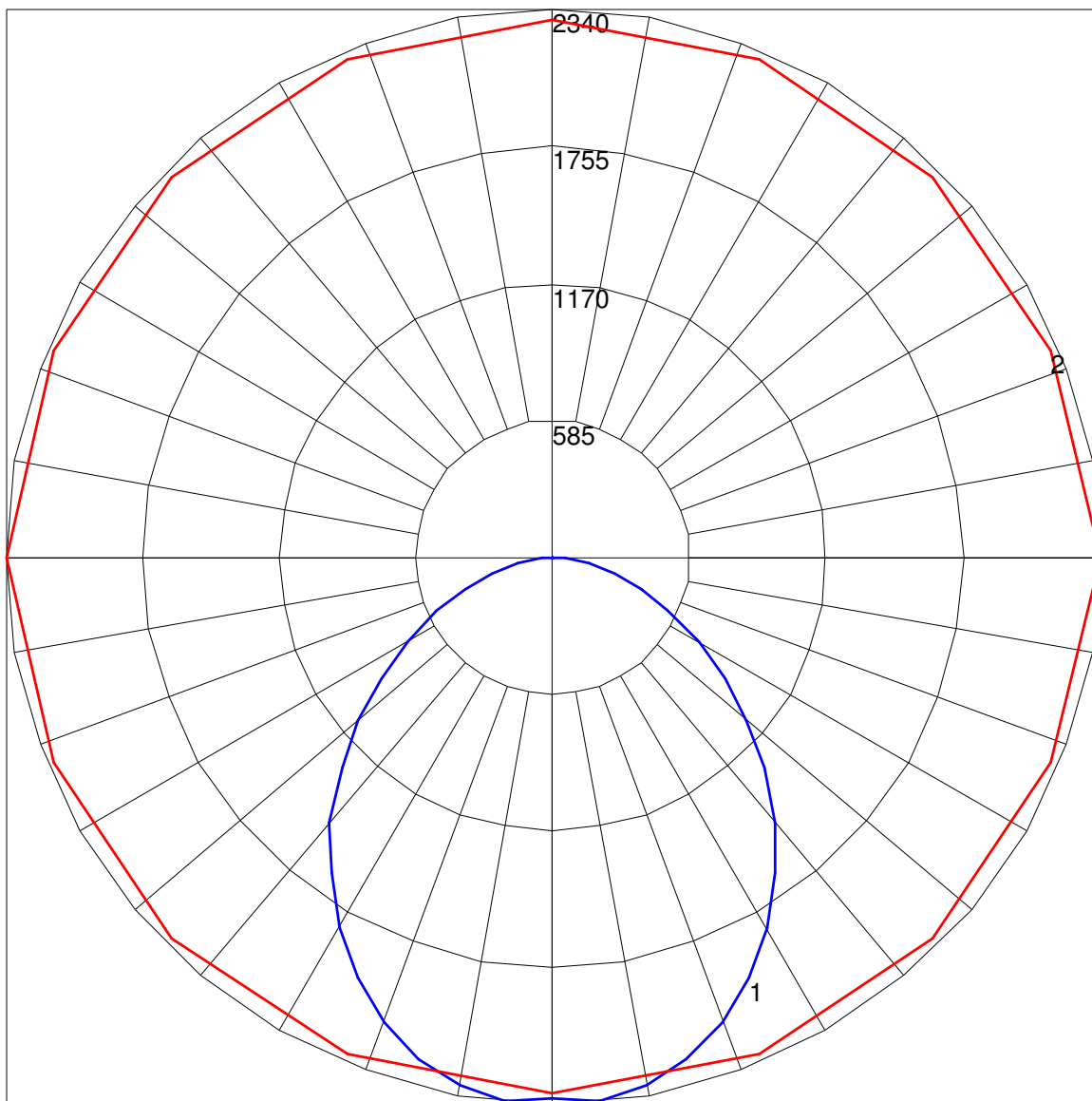
Reflectances

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					UGR Viewed Endwise				
X=2H	Y=2H	17.8	19.3	18.2	19.7	20.2	20.8	22.3	21.3	22.7	23.2
	3H	19.0	20.3	19.5	20.8	21.3	23.0	24.4	23.5	24.9	25.4
	4H	19.4	20.7	19.9	21.1	21.7	24.1	25.4	24.6	25.9	26.4
	6H	19.6	20.8	20.1	21.3	21.8	25.2	26.4	25.7	26.9	27.4
	8H	19.6	20.8	20.2	21.3	21.9	25.8	26.9	26.3	27.4	28.0
	12H	19.6	20.7	20.2	21.3	21.9	26.4	27.5	26.9	28.0	28.6
4H	2H	18.7	20.0	19.2	20.5	21.0	21.1	22.4	21.6	22.9	23.4
	3H	20.2	21.3	20.7	21.8	22.4	23.6	24.7	24.1	25.2	25.8
	4H	20.7	21.7	21.2	22.2	22.8	24.8	25.8	25.3	26.4	27.0
	6H	21.0	21.9	21.5	22.4	23.1	26.1	27.0	26.7	27.6	28.2
	8H	21.1	21.9	21.6	22.5	23.1	26.8	27.6	27.3	28.2	28.8
	12H	21.1	21.9	21.7	22.5	23.1	27.5	28.3	28.1	28.9	29.5
8H	4H	21.4	22.2	22.0	22.8	23.4	25.0	25.8	25.5	26.4	27.0
	6H	21.9	22.6	22.5	23.2	23.9	26.4	27.1	27.0	27.7	28.4
	8H	22.1	22.7	22.7	23.3	24.0	27.2	27.9	27.8	28.5	29.1
	12H	22.2	22.8	22.8	23.4	24.1	28.2	28.7	28.8	29.3	30.0
12H	4H	21.6	22.4	22.2	23.0	23.6	25.0	25.7	25.6	26.3	27.0
	6H	22.2	22.9	22.9	23.5	24.1	26.5	27.1	27.1	27.7	28.4
	8H	22.5	23.1	23.1	23.7	24.4	27.3	27.9	27.9	28.5	29.2

Maximum UGR = 30.0

POLAR GRAPH



Maximum Candela = 2339.565 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.)