



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : NW-4-L74-927-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-L74-927-RA-DIM-UNV

[LAMPCAT] 22 INCH HLM LED ARRAYS

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	5925
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	107
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	10368	9502	9751
55	8841	8235	8670
65	7112	6821	7507
75	5516	5783	6486
85	2588	5214	6039

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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	1913.494	1913.494	1913.494	1913.494	1913.494
5	1929.538	1904.238	1899.302	1899.302	1893.748
10	1894.365	1872.768	1874.002	1878.939	1872.768
15	1830.808	1814.148	1827.723	1842.532	1840.681
20	1748.740	1741.952	1764.166	1791.317	1792.551
25	1635.201	1642.606	1682.715	1718.504	1727.760
30	1515.492	1528.450	1585.837	1632.116	1650.011
35	1366.164	1396.400	1472.298	1532.770	1553.750
40	1223.624	1256.328	1347.653	1432.189	1451.935
45	1054.551	1102.064	1213.134	1304.459	1329.141
50	896.584	955.204	1076.765	1177.345	1204.495
55	740.469	797.855	937.310	1041.592	1073.679
60	592.375	657.166	800.323	896.584	932.990
65	449.835	518.328	658.400	781.194	807.728
70	331.977	392.448	539.308	658.400	689.870
75	225.226	292.485	441.196	547.947	571.395
80	125.263	207.331	352.957	449.835	483.156
85	44.428	140.072	280.144	370.234	398.002
90	0.000	92.559	218.438	306.677	324.572
95	0.000	59.237	172.159	251.142	278.293
100	0.000	39.492	132.050	207.948	229.545
105	0.000	26.533	104.283	167.840	191.905
110	0.000	12.341	82.686	137.604	160.435
115	0.000	8.022	66.025	116.007	132.050
120	0.000	0.000	52.450	95.027	111.687
125	0.000	0.000	40.726	75.898	88.856
130	0.000	0.000	32.087	59.855	70.962
135	0.000	0.000	25.916	46.279	56.769
140	0.000	0.000	13.575	35.172	43.194
145	0.000	0.000	4.936	27.151	31.470
150	0.000	0.000	0.000	23.448	26.533
155	0.000	0.000	0.000	22.214	23.448
160	0.000	0.000	0.000	12.958	21.597
165	0.000	0.000	0.000	4.319	7.405
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	697.25	N.A.	11.80
0-30	1471.94	N.A.	24.80
0-40	2389.36	N.A.	40.30
0-60	4143.88	N.A.	69.90
0-80	5234.62	N.A.	88.30
0-90	5515.27	N.A.	93.10
10-90	5334.38	N.A.	90.00
20-40	1692.1	N.A.	28.60
20-50	2621.83	N.A.	44.20
40-70	2397.89	N.A.	40.50
60-80	1090.74	N.A.	18.40
70-80	447.37	N.A.	7.60
80-90	280.65	N.A.	4.70
90-110	277.44	N.A.	4.70
90-120	341.38	N.A.	5.80
90-130	378.11	N.A.	6.40
90-150	405.58	N.A.	6.80
90-180	410.11	N.A.	6.90
110-180	132.66	N.A.	2.20
0-180	5925.37	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	180.89
10-20	516.37
20-30	774.68
30-40	917.42
40-50	929.73
50-60	824.79
60-70	643.37
70-80	447.37
80-90	280.65
90-100	171.75
100-110	105.69
110-120	63.93
120-130	36.74
130-140	19.43
140-150	8.04
150-160	3.75
160-170	0.77
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**

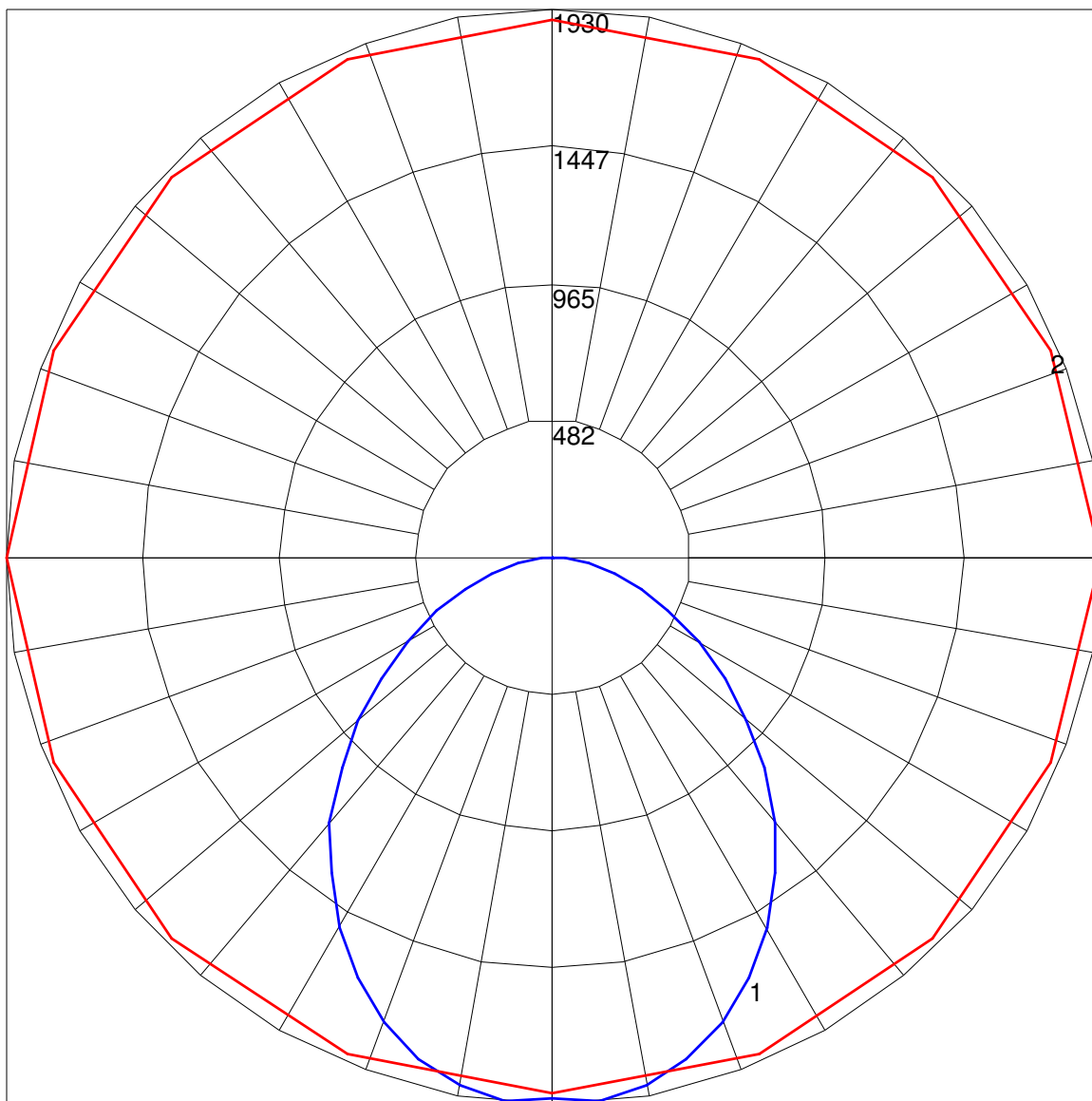
Reflectances

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					UGR Viewed Endwise				
X=2H	Y=2H	17.1	18.6	17.5	19.0	19.5	20.1	21.6	20.6	22.0	22.5
	3H	18.3	19.6	18.8	20.1	20.6	22.3	23.7	22.8	24.2	24.7
	4H	18.7	20.0	19.2	20.4	21.0	23.4	24.7	23.9	25.2	25.7
	6H	18.9	20.1	19.4	20.6	21.1	24.5	25.7	25.0	26.2	26.7
	8H	18.9	20.1	19.5	20.6	21.2	25.1	26.2	25.6	26.7	27.3
	12H	18.9	20.0	19.5	20.6	21.2	25.7	26.8	26.2	27.3	27.9
4H	2H	18.0	19.3	18.5	19.8	20.3	20.4	21.7	20.9	22.2	22.7
	3H	19.5	20.6	20.0	21.1	21.7	22.9	24.0	23.4	24.5	25.1
	4H	20.0	21.0	20.5	21.5	22.1	24.1	25.1	24.6	25.7	26.3
	6H	20.3	21.2	20.8	21.7	22.4	25.4	26.3	26.0	26.9	27.5
	8H	20.4	21.2	20.9	21.8	22.4	26.1	26.9	26.6	27.5	28.1
	12H	20.4	21.2	21.0	21.8	22.4	26.8	27.6	27.4	28.2	28.8
8H	4H	20.7	21.5	21.3	22.1	22.7	24.3	25.1	24.8	25.7	26.3
	6H	21.2	21.9	21.8	22.5	23.2	25.7	26.4	26.3	27.0	27.7
	8H	21.4	22.0	22.0	22.6	23.3	26.5	27.2	27.1	27.8	28.4
	12H	21.5	22.1	22.1	22.7	23.4	27.5	28.0	28.1	28.6	29.3
12H	4H	20.9	21.7	21.5	22.3	22.9	24.3	25.0	24.9	25.6	26.3
	6H	21.5	22.2	22.2	22.8	23.4	25.8	26.4	26.4	27.0	27.7
	8H	21.8	22.4	22.4	23.0	23.7	26.6	27.2	27.2	27.8	28.5

Maximum UGR = 29.3

POLAR GRAPH



Maximum Candela = 1929.538 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.)