



IES INDOOR REPORT
PHOTOMETRIC FILENAME : NW-4-L74-950-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-L74-950-RA-DIM-UNV
 [LAMPCAT] 22 INCH HLM LED ARRAYS

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	6592
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	119
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	11534	10571	10848
55	9835	9161	9645
65	7912	7589	8351
75	6137	6434	7216
85	2879	5800	6718

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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	2128.762	2128.762	2128.762	2128.762	2128.762
5	2146.611	2118.465	2112.973	2112.973	2106.795
10	2107.482	2083.455	2084.828	2090.320	2083.455
15	2036.775	2018.240	2033.342	2049.818	2047.758
20	1945.473	1937.922	1962.635	1992.840	1994.213
25	1819.162	1827.399	1872.020	1911.836	1922.133
30	1685.985	1700.401	1764.244	1815.729	1835.637
35	1519.858	1553.495	1637.932	1705.207	1728.547
40	1361.282	1397.665	1499.264	1593.311	1615.278
45	1173.188	1226.046	1349.612	1451.210	1478.670
50	997.450	1062.665	1197.901	1309.796	1340.001
55	823.771	887.614	1042.757	1158.772	1194.468
60	659.017	731.097	890.360	997.450	1037.952
65	500.441	576.640	732.470	869.079	898.597
70	369.324	436.599	599.980	732.470	767.480
75	250.564	325.390	490.830	609.591	635.677
80	139.355	230.656	392.664	500.441	537.511
85	49.426	155.830	311.660	411.886	442.777
90	0.000	102.971	243.013	341.179	361.086
95	0.000	65.902	191.527	279.396	309.601
100	0.000	43.934	146.906	231.342	255.369
105	0.000	29.518	116.014	186.722	213.494
110	0.000	13.730	91.988	153.084	178.484
115	0.000	8.924	73.453	129.058	146.906
120	0.000	0.000	58.350	105.717	124.252
125	0.000	0.000	45.307	84.437	98.853
130	0.000	0.000	35.697	66.588	78.945
135	0.000	0.000	28.832	51.486	63.156
140	0.000	0.000	15.102	39.129	48.053
145	0.000	0.000	5.492	30.205	35.010
150	0.000	0.000	0.000	26.086	29.518
155	0.000	0.000	0.000	24.713	26.086
160	0.000	0.000	0.000	14.416	24.027
165	0.000	0.000	0.000	4.805	8.238
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	775.70	N.A.	11.80
0-30	1637.53	N.A.	24.80
0-40	2658.16	N.A.	40.30
0-60	4610.06	N.A.	69.90
0-80	5823.52	N.A.	88.30
0-90	6135.74	N.A.	93.10
10-90	5934.5	N.A.	90.00
20-40	1882.46	N.A.	28.60
20-50	2916.79	N.A.	44.20
40-70	2667.66	N.A.	40.50
60-80	1213.45	N.A.	18.40
70-80	497.70	N.A.	7.60
80-90	312.22	N.A.	4.70
90-110	308.65	N.A.	4.70
90-120	379.78	N.A.	5.80
90-130	420.65	N.A.	6.40
90-150	451.21	N.A.	6.80
90-180	456.24	N.A.	6.90
110-180	147.59	N.A.	2.20
0-180	6591.98	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	201.24
10-20	574.46
20-30	861.83
30-40	1020.63
40-50	1034.32
50-60	917.58
60-70	715.75
70-80	497.70
80-90	312.22
90-100	191.08
100-110	117.58
110-120	71.13
120-130	40.87
130-140	21.62
140-150	8.95
150-160	4.17
160-170	0.86
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

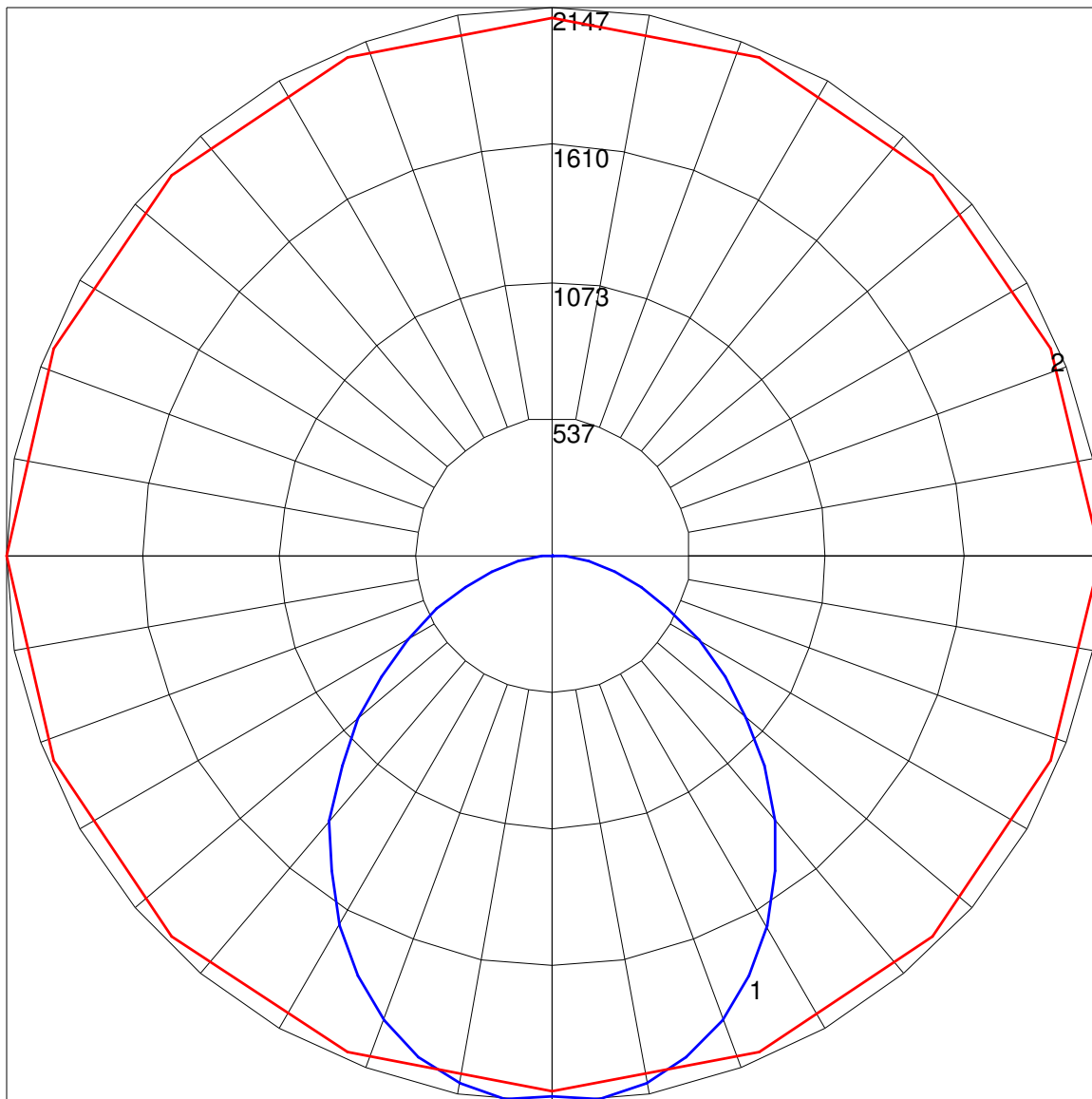
Reflectances

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	17.5	19.0	17.9	19.4	19.9	20.5	22.0	21.0	22.4	22.9
	3H	18.7	20.0	19.2	20.5	21.0	22.7	24.1	23.2	24.6	25.1
	4H	19.1	20.4	19.6	20.8	21.4	23.8	25.1	24.3	25.6	26.1
	6H	19.3	20.5	19.8	21.0	21.5	24.9	26.1	25.4	26.6	27.1
	8H	19.3	20.5	19.9	21.0	21.6	25.5	26.6	26.0	27.1	27.7
	12H	19.3	20.4	19.9	21.0	21.6	26.1	27.2	26.6	27.7	28.3
4H	2H	18.4	19.7	18.9	20.2	20.7	20.8	22.1	21.3	22.6	23.1
	3H	19.9	21.0	20.4	21.5	22.1	23.3	24.4	23.8	24.9	25.5
	4H	20.4	21.4	20.9	21.9	22.5	24.5	25.5	25.0	26.1	26.7
	6H	20.7	21.6	21.2	22.1	22.8	25.8	26.7	26.4	27.3	27.9
	8H	20.8	21.6	21.3	22.2	22.8	26.5	27.3	27.0	27.9	28.5
	12H	20.8	21.6	21.4	22.2	22.8	27.2	28.0	27.8	28.6	29.2
8H	4H	21.1	21.9	21.7	22.5	23.1	24.7	25.5	25.2	26.1	26.7
	6H	21.6	22.3	22.2	22.9	23.6	26.1	26.8	26.7	27.4	28.1
	8H	21.8	22.4	22.4	23.0	23.7	26.9	27.6	27.5	28.2	28.8
	12H	21.9	22.5	22.5	23.1	23.8	27.9	28.4	28.5	29.0	29.7
12H	4H	21.3	22.1	21.9	22.7	23.3	24.7	25.4	25.3	26.0	26.7
	6H	21.9	22.6	22.6	23.2	23.8	26.2	26.8	26.8	27.4	28.1
	8H	22.2	22.8	22.8	23.4	24.1	27.0	27.6	27.6	28.2	28.9

Maximum UGR = 29.7

POLAR GRAPH



Maximum Candela = 2146.611 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.)