



IES INDOOR REPORT
PHOTOMETRIC FILENAME : 80-4-L77-840-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] GEN FROM BALLABS TEST NO. 18635.0
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
[ISSUEDATE] 21-SEP-2020
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 4-32 LED 22" ARRAYS 4' INDUSTRIAL LUMINAIRE
[MORE] WHITE REFLECTOR w/OPEN BOTTOM
[LUMCAT] 80-4-L77-840-DIM-UNV
[LAMPCAT] 80 CRI 4000K CCT

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	7781
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	151
Total Luminaire Watts	51.4
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.26
Spacing Criterion (90-270)	1.22
Spacing Criterion (Diagonal)	1.36
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	4.00 ft
Luminous Width (90-270)	0.88 ft
Luminous Height	0.00 ft



LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	8441	8236	8214
55	8133	7954	7921
65	7747	7575	4049
75	6229	3461	663
85	2799	1224	918

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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	2923.703	2923.703	2923.703	2923.703	2923.703
5	2888.971	2879.047	2870.364	2881.528	2893.933
10	2830.671	2820.747	2865.403	2872.845	2844.315
15	2764.927	2793.457	2762.447	2740.119	2740.119
20	2681.818	2743.840	2655.769	2642.125	2642.125
25	2573.901	2587.545	2544.130	2536.688	2536.688
30	2436.212	2415.125	2398.999	2390.316	2387.836
35	2289.841	2268.754	2250.147	2247.666	2242.705
40	2128.585	2093.853	2083.929	2080.208	2077.727
45	1942.520	1902.826	1895.383	1892.902	1890.421
50	1725.444	1696.914	1688.231	1685.750	1685.750
55	1518.291	1487.280	1484.800	1478.597	1478.597
60	1282.609	1259.041	1256.560	1251.598	1247.877
65	1065.533	1044.445	1041.965	802.561	556.955
70	813.725	795.118	636.343	431.671	440.354
75	524.704	524.704	291.502	251.808	55.820
80	277.857	179.863	50.858	42.175	42.175
85	79.388	42.175	34.732	26.049	26.049
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1055.39	N.A.	13.60
0-30	2231.81	N.A.	28.70
0-40	3643.88	N.A.	46.80
0-60	6436.03	N.A.	82.70
0-80	7729.92	N.A.	99.30
0-90	7780.56	N.A.	100.00
10-90	7506.2	N.A.	96.50
20-40	2588.49	N.A.	33.30
20-50	4054.31	N.A.	52.10
40-70	3714.74	N.A.	47.70
60-80	1293.89	N.A.	16.60
70-80	371.30	N.A.	4.80
80-90	50.64	N.A.	0.70
90-110	0.00	N.A.	0.00
90-120	0.00	N.A.	0.00
90-130	0.00	N.A.	0.00
90-150	0.00	N.A.	0.00
90-180	0.00	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	7780.56	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	274.36
10-20	781.03
20-30	1176.42
30-40	1412.07
40-50	1465.81
50-60	1326.33
60-70	922.59
70-80	371.30
80-90	50.64
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
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	174	174	174	174	170	170	170	170	162	162	162	155	155	155	149	149	149	146
1	160	154	148	143	156	150	145	140	144	140	136	138	135	132	133	130	128	125
2	146	135	125	117	142	132	123	116	127	119	113	122	116	111	118	113	108	105
3	133	119	107	98	130	116	106	97	112	103	95	108	100	94	104	98	92	89
4	122	105	93	83	119	103	92	83	100	89	81	96	87	80	93	85	79	76
5	112	94	81	72	109	92	80	71	89	79	70	86	77	70	84	76	69	66
6	104	85	72	63	101	83	71	62	81	70	62	78	69	61	76	67	61	58
7	96	77	64	55	94	76	64	55	73	62	55	71	61	54	69	60	54	51
8	90	70	58	49	87	69	57	49	67	56	49	65	56	48	64	55	48	45
9	84	64	52	44	82	63	52	44	62	51	44	60	51	44	59	50	43	41
10	78	59	48	40	77	58	47	40	57	47	40	56	46	40	54	46	40	37

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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	18.3	19.9	18.7	20.2	20.5	UGR Viewed Endwise			
	3H	20.2	21.6	20.6	22.0	22.3	18.2	19.8	18.6	20.2
	4H	20.8	22.2	21.2	22.5	22.9	18.9	20.4	19.3	20.7
	6H	21.2	22.4	21.6	22.8	23.2	19.0	20.3	19.4	20.7
	8H	21.2	22.4	21.7	22.8	23.2	18.9	20.2	19.3	20.6
	12H	21.3	22.4	21.7	22.8	23.2	18.9	20.1	19.3	20.5

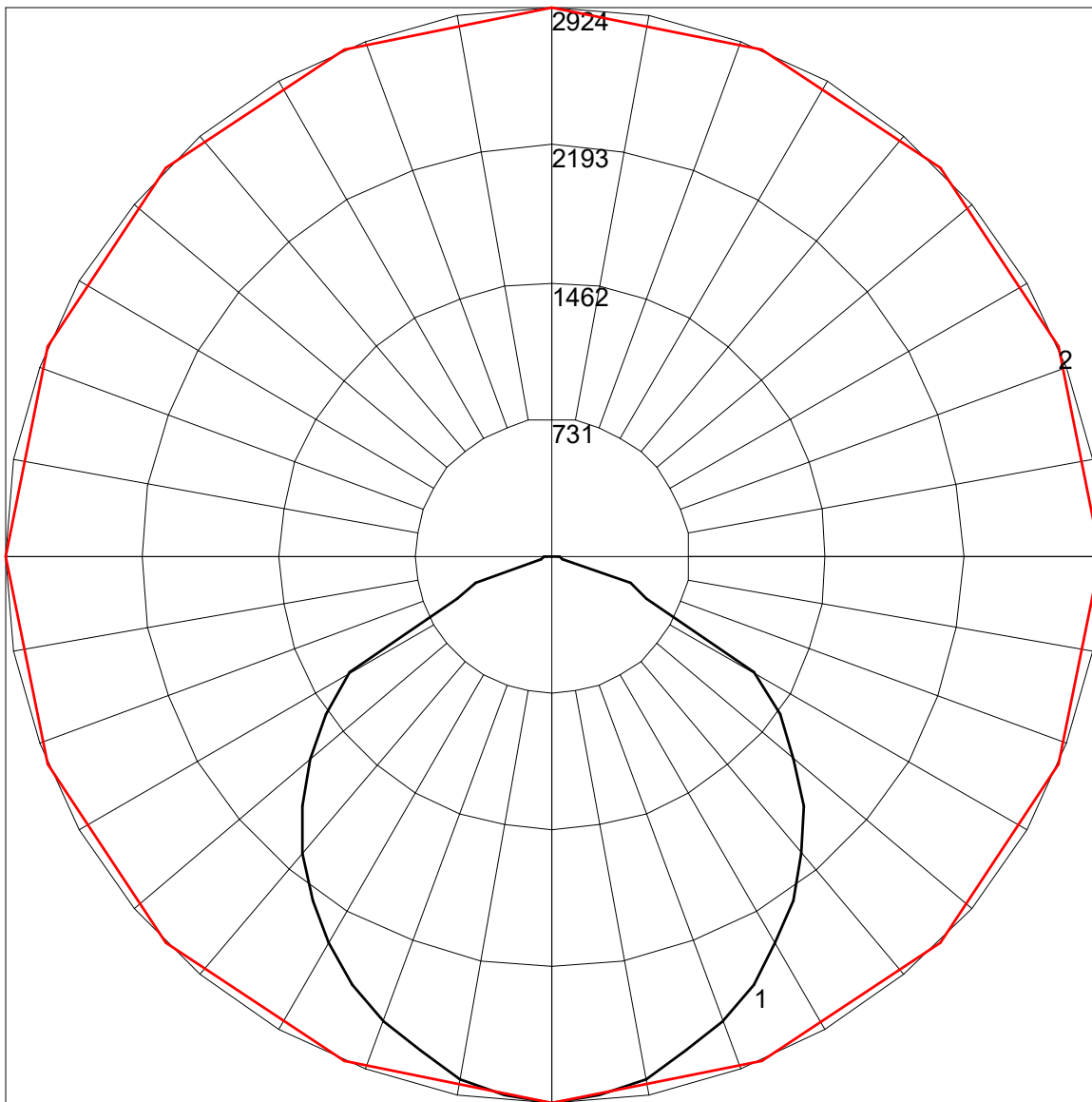
4H	2H	19.0	20.3	19.4	20.7	21.1	18.9	20.3	19.3	20.6	21.0
	3H	21.0	22.1	21.4	22.5	22.9	19.7	20.9	20.2	21.3	21.7
	4H	21.7	22.7	22.1	23.1	23.6	19.9	20.9	20.3	21.3	21.7
	6H	22.1	23.0	22.6	23.4	23.9	19.8	20.7	20.3	21.2	21.6
	8H	22.2	23.0	22.7	23.5	23.9	19.8	20.7	20.3	21.1	21.6
	12H	22.3	23.0	22.7	23.5	23.9	19.8	20.5	20.3	21.0	21.5

8H	4H	21.8	22.6	22.2	23.0	23.5	20.0	20.9	20.5	21.3	21.8
	6H	22.2	22.8	22.7	23.3	23.8	20.0	20.7	20.5	21.2	21.7
	8H	22.3	22.9	22.8	23.4	23.9	20.0	20.6	20.5	21.1	21.6
	12H	22.3	22.9	22.8	23.4	23.9	20.0	20.5	20.5	21.0	21.6

12H	4H	21.7	22.5	22.2	22.9	23.4	20.0	20.8	20.5	21.3	21.7
	6H	22.2	22.8	22.7	23.2	23.8	20.0	20.6	20.6	21.1	21.6
	8H	22.3	22.8	22.8	23.3	23.9	20.0	20.5	20.5	21.0	21.6

Maximum UGR = 23.9

POLAR GRAPH



Maximum Candela = 2923.703 Located At Horizontal Angle = 0, Vertical Angle = 0
1 - Vertical Plane Through Horizontal Angles (90 - 270)
2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)