



IES INDOOR REPORT
PHOTOMETRIC FILENAME : 80-4-L115-840-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-L115-840-DIM-UNV
[LAMPCAT] 80 CRI 4000K CCT

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	11513
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	157
Total Luminaire Watts	73.1
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	12490	12186	12155
55	12035	11769	11720
65	11463	11209	5992
75	9217	5120	981
85	4141	1812	1359

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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	4326.177	4326.177	4326.177	4326.177	4326.177
5	4274.784	4260.100	4247.252	4263.771	4282.126
10	4188.517	4173.834	4239.910	4250.923	4208.707
15	4091.238	4133.454	4087.567	4054.529	4054.529
20	3968.262	4060.035	3929.718	3909.528	3909.528
25	3808.577	3828.767	3764.526	3753.514	3753.514
30	3604.841	3573.639	3549.778	3536.929	3533.259
35	3388.257	3357.054	3329.523	3325.852	3318.510
40	3149.648	3098.255	3083.571	3078.065	3074.394
45	2874.329	2815.594	2804.581	2800.910	2797.240
50	2553.123	2510.908	2498.060	2494.389	2494.389
55	2246.602	2200.715	2197.044	2187.867	2187.867
60	1897.865	1862.991	1859.320	1851.978	1846.472
65	1576.659	1545.456	1541.786	1187.542	824.121
70	1204.061	1176.529	941.590	638.740	651.588
75	776.399	776.399	431.333	372.598	82.596
80	411.143	266.142	75.254	62.406	62.406
85	117.469	62.406	51.393	38.545	38.545
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1561.65	N.A.	13.60
0-30	3302.38	N.A.	28.70
0-40	5391.82	N.A.	46.80
0-60	9523.33	N.A.	82.70
0-80	11437.89	N.A.	99.30
0-90	11512.82	N.A.	100.00
10-90	11106.85	N.A.	96.50
20-40	3830.17	N.A.	33.30
20-50	5999.12	N.A.	52.10
40-70	5496.66	N.A.	47.70
60-80	1914.56	N.A.	16.60
70-80	549.41	N.A.	4.80
80-90	74.93	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	11512.82	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	405.97
10-20	1155.68
20-30	1740.74
30-40	2089.43
40-50	2168.95
50-60	1962.56
60-70	1365.15
70-80	549.41
80-90	74.93
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	257	257	257	257	251	251	251	251	240	240	240	230	230	230	221	221	221	216
1	237	227	219	211	231	222	215	208	213	207	201	205	200	195	197	193	189	185
2	216	199	185	173	211	195	182	171	188	177	167	181	171	164	174	167	160	155
3	197	175	158	145	192	172	156	143	166	152	141	160	148	139	154	144	136	132
4	181	156	137	123	176	153	135	122	147	132	120	142	129	119	138	126	117	113
5	166	139	120	106	162	137	119	105	132	116	104	128	114	103	124	112	102	97
6	154	125	106	93	149	123	105	92	119	103	91	116	101	90	112	100	90	85
7	142	114	95	82	139	112	94	81	108	92	81	105	91	80	102	89	80	75
8	132	104	85	73	129	102	85	73	99	83	72	97	82	72	94	81	71	67
9	124	95	77	66	121	94	77	65	91	76	65	89	75	65	87	74	64	60
10	116	88	71	59	113	87	70	59	84	69	59	82	69	59	80	68	58	55

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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

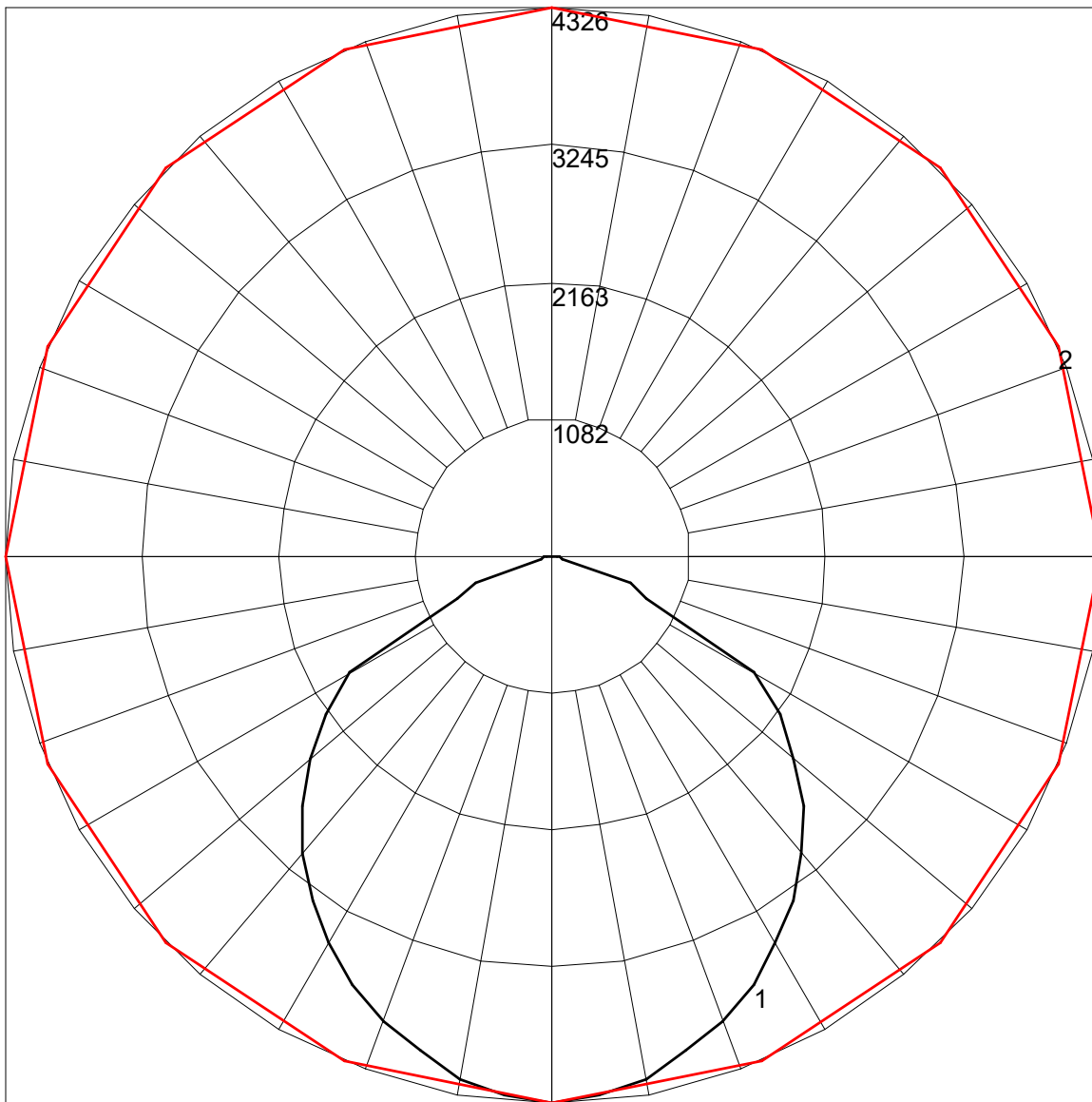
4H	2H	19.0	20.3	19.4	20.7	21.1	18.9	20.3	19.3	20.6	21.0
	3H	21.0	22.1	21.4	22.5	22.9	19.7	20.9	20.2	21.3	21.7
	4H	21.7	22.7	22.1	23.1	23.6	19.9	20.9	20.3	21.3	21.7
	6H	22.1	23.0	22.6	23.4	23.9	19.8	20.7	20.3	21.2	21.6
	8H	22.2	23.0	22.7	23.5	23.9	19.8	20.7	20.3	21.1	21.6
	12H	22.3	23.0	22.7	23.5	23.9	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 = 4326.177 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.)