



IES INDOOR REPORT
PHOTOMETRIC FILENAME : 80-4-L32-940-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] 2024-01-08
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 4'SUSPENDED INDUSTRIAL LED LUMINAIRE
[MORE] WHITE REFLECTOR w/OPEN BOTTOM
[MORE] 0-10V DIMMING DRIVER
[LUMCAT] 80-4-L32-940-DIM-UNV
[LAMPCAT] HLM 90 CRI 4000K CCT
[_SEARCH_SOURCETYPE] LED
[_SEARCH_APPLICATION] INDOOR
[_SEARCH_MOUNTING] SUSPENDED

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2765
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	136
Total Luminaire Watts	20.3
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	2999	2927	2919
55	2890	2826	2815
65	2753	2692	1439
75	2214	1230	235
85	995	435	326

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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	1038.978	1038.978	1038.978	1038.978	1038.978
5	1026.635	1023.109	1020.023	1023.990	1028.399
10	1005.917	1002.391	1018.260	1020.905	1010.766
15	982.555	992.693	981.673	973.739	973.739
20	953.021	975.061	943.764	938.915	938.915
25	914.671	919.520	904.091	901.447	901.447
30	865.741	858.248	852.517	849.432	848.550
35	813.726	806.233	799.621	798.739	796.976
40	756.422	744.079	740.553	739.230	738.349
45	690.301	676.195	673.550	672.669	671.787
50	613.160	603.022	599.936	599.054	599.054
55	539.546	528.525	527.644	525.440	525.440
60	455.793	447.417	446.536	444.772	443.450
65	378.652	371.158	370.276	285.201	197.922
70	289.168	282.556	226.133	153.400	156.486
75	186.461	186.461	103.589	89.483	19.836
80	98.740	63.917	18.073	14.987	14.987
85	28.212	14.987	12.343	9.257	9.257
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	375.05	N.A.	13.60
0-30	793.10	N.A.	28.70
0-40	1294.9	N.A.	46.80
0-60	2287.13	N.A.	82.70
0-80	2746.93	N.A.	99.30
0-90	2764.93	N.A.	100.00
10-90	2667.43	N.A.	96.50
20-40	919.86	N.A.	33.30
20-50	1440.75	N.A.	52.10
40-70	1320.08	N.A.	47.70
60-80	459.80	N.A.	16.60
70-80	131.95	N.A.	4.80
80-90	18.00	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	2764.93	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	97.50
10-20	277.55
20-30	418.06
30-40	501.80
40-50	520.90
50-60	471.33
60-70	327.86
70-80	131.95
80-90	18.00
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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	105	101	98	107	103	99	96	99	96	93	95	92	90	91	89	88	85
2	100	92	86	80	97	90	84	79	87	82	77	84	79	76	81	77	74	72
3	91	81	73	67	89	80	72	66	77	70	65	74	69	64	71	67	63	61
4	84	72	63	57	81	71	63	56	68	61	56	66	60	55	64	59	54	52
5	77	64	56	49	75	63	55	49	61	54	48	59	53	48	57	52	47	45
6	71	58	49	43	69	57	49	43	55	48	42	54	47	42	52	46	41	39
7	66	53	44	38	64	52	43	38	50	43	37	49	42	37	47	41	37	35
8	61	48	39	34	60	47	39	34	46	39	33	45	38	33	43	37	33	31
9	57	44	36	30	56	43	36	30	42	35	30	41	35	30	40	34	30	28
10	54	41	33	27	52	40	33	27	39	32	27	38	32	27	37	31	27	25

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UGR TABLE - CORRECTED

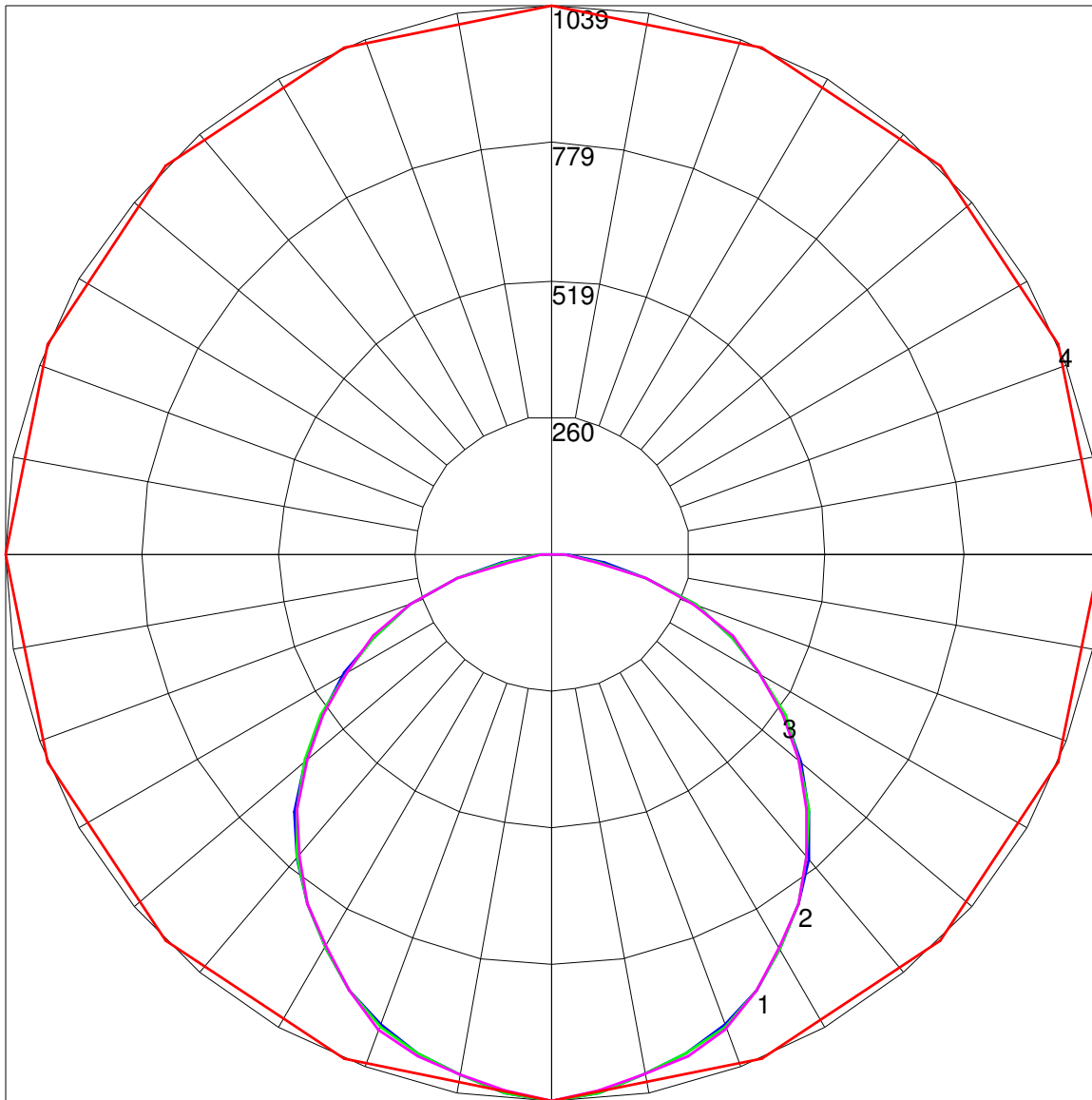
Reflectances

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	16.0	17.6	16.4	17.9	18.2	15.9	17.5	16.3	17.9	18.2
	3H	17.9	19.3	18.3	19.7	20.0	16.6	18.1	17.0	18.4	18.8
	4H	18.5	19.9	18.9	20.2	20.6	16.7	18.0	17.1	18.4	18.8
	6H	18.9	20.1	19.3	20.5	20.9	16.6	17.9	17.1	18.3	18.6
	8H	18.9	20.1	19.4	20.5	20.9	16.6	17.8	17.0	18.2	18.6
	12H	19.0	20.1	19.4	20.5	20.9	16.6	17.7	17.0	18.1	18.5
4H	2H	16.7	18.0	17.1	18.4	18.8	16.6	18.0	17.0	18.3	18.7
	3H	18.7	19.8	19.1	20.2	20.6	17.4	18.6	17.9	19.0	19.4
	4H	19.4	20.4	19.8	20.8	21.3	17.6	18.6	18.0	19.0	19.4
	6H	19.8	20.7	20.3	21.1	21.6	17.5	18.4	18.0	18.9	19.3
	8H	19.9	20.7	20.4	21.2	21.6	17.5	18.4	18.0	18.8	19.3
	12H	20.0	20.7	20.4	21.2	21.6	17.5	18.2	18.0	18.7	19.2
8H	4H	19.5	20.3	19.9	20.7	21.2	17.8	18.6	18.2	19.0	19.5
	6H	19.9	20.5	20.4	21.0	21.5	17.7	18.4	18.2	18.9	19.4
	8H	20.0	20.6	20.5	21.1	21.6	17.7	18.3	18.2	18.8	19.3
	12H	20.0	20.6	20.6	21.1	21.6	17.7	18.2	18.2	18.7	19.3
12H	4H	19.4	20.2	19.9	20.6	21.1	17.7	18.5	18.2	19.0	19.4
	6H	19.9	20.5	20.4	20.9	21.5	17.7	18.3	18.3	18.8	19.3
	8H	20.0	20.5	20.5	21.0	21.6	17.7	18.2	18.2	18.7	19.3

Maximum UGR = 21.6

POLAR GRAPH



Maximum Candela = 1038.978 Located At Horizontal Angle = 0, Vertical Angle = 0
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Vertical Plane Through Horizontal Angles (5 - 185)
3 - Vertical Plane Through Horizontal Angles (10 - 190)
4 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)