



IES INDOOR REPORT

PHOTOMETRIC FILENAME : DIG-S24-L50-835-AD-EM10W-DIM-UNV(EM MODE).IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST]GEN FROM BALLABS TEST NO. 19231.0
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
 [ISSUE DATE] 05-19-2020
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO 64836
 [LUMINAIRE] 2x4'RECESSED LED TROFFER
 [MORE] WITH FROST ACRYLIC DIFFUSER
 [LUMCAT] DIG-S24-L50-835-AD-EM10W-DIM-UNV(EM MODE)
 [LAMPCAT] HLM 80 CRI, 3500K CCT
 [SEARCH_SOURCETYPE] LED
 [SEARCH_APPLICATION] Indoor, Architectural, Classroom, Commercial, Educational, Office, Direct, Indirect
 [SEARCH_MOUNTING] Ceiling, Recessed

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1354
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	135
Total Luminaire Watts	10
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.10
Spacing Criterion (90-270)	1.18
Spacing Criterion (Diagonal)	1.38
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	3.91 ft
Luminous Width (90-270)	1.88 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	614	680	721
55	534	625	681
65	481	624	747
75	394	535	481
85	330	365	400

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	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>
0	492.282	492.282	492.282	492.282	492.282
5	486.451	486.312	486.312	486.590	486.590
10	481.870	482.148	482.842	484.091	484.646
15	462.851	463.545	466.182	468.265	468.959
20	453.966	454.382	458.963	462.851	464.100
25	408.291	411.207	417.593	422.729	425.089
30	346.791	371.780	400.795	391.771	382.053
35	347.346	354.149	366.366	376.639	380.248
40	316.943	325.411	341.793	354.149	358.314
45	295.841	307.086	327.494	342.487	347.207
50	251.694	263.494	285.290	300.284	304.865
55	208.519	221.430	244.059	260.579	266.132
60	167.981	181.309	203.799	223.929	230.870
65	138.411	153.127	179.643	205.187	215.044
70	103.565	118.836	147.712	157.430	145.491
75	69.414	83.713	94.264	85.518	84.824
80	43.036	54.420	53.865	50.533	49.978
85	19.575	22.490	21.657	22.490	23.739
90	0.000	0.000	0.000	0.000	0.000

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Zone	Lumens	%Lamp	%Fixt
0-20	178.90	N.A.	13.20
0-30	371.90	N.A.	27.50
0-40	599.59	N.A.	44.30
0-60	1061.19	N.A.	78.40
0-80	1328.35	N.A.	98.10
0-90	1354.34	N.A.	100.00
10-90	1307.95	N.A.	96.60
20-40	420.69	N.A.	31.10
20-50	666.26	N.A.	49.20
40-70	634.14	N.A.	46.80
60-80	267.15	N.A.	19.70
70-80	94.62	N.A.	7.00
80-90	25.99	N.A.	1.90
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	1354.34	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	46.38
10-20	132.51
20-30	193.01
30-40	227.69
40-50	245.57
50-60	216.04
60-70	172.53
70-80	94.62
80-90	25.99
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	109	104	100	96	106	102	98	94	97	94	91	93	91	88	90	88	86	84
2	99	90	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	69
3	90	79	71	65	87	78	70	64	75	68	63	72	66	62	69	65	61	58
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	50
5	76	63	54	47	74	62	53	47	59	52	46	57	51	46	56	50	45	43
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	38
7	65	51	42	36	63	50	42	36	49	41	36	47	41	36	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	32	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	29	27
10	53	40	32	26	52	39	31	26	38	31	26	37	31	26	36	30	26	24

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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	9.7	11.3	10.0	11.6	12.0	11.1	12.7	11.4	13.0	13.4
	3H	11.4	12.9	11.8	13.3	13.6	13.2	14.7	13.6	15.1	15.4
	4H	12.0	13.5	12.4	13.8	14.2	13.8	15.2	14.2	15.5	15.9
	6H	12.5	13.8	12.9	14.2	14.6	14.1	15.4	14.5	15.8	16.2
	8H	12.7	13.9	13.1	14.3	14.7	14.2	15.5	14.6	15.9	16.3
	12H	12.8	14.0	13.2	14.3	14.8	14.3	15.5	14.7	15.9	16.3

UGR Viewed Endwise

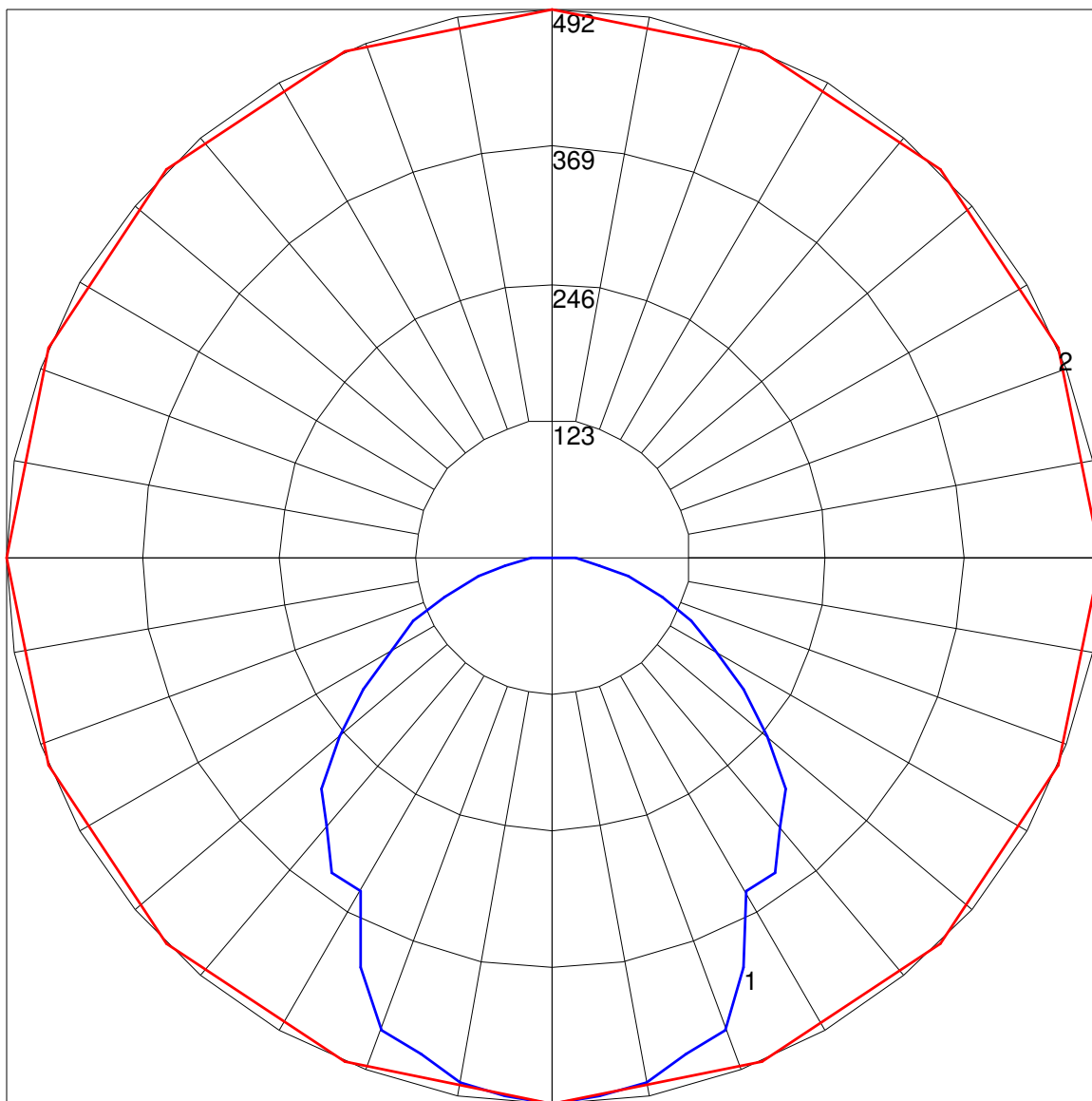
4H	2H	10.6	12.0	11.0	12.4	12.8	11.7	13.1	12.1	13.5	13.8
	3H	12.6	13.8	13.0	14.2	14.6	14.1	15.3	14.5	15.7	16.1
	4H	13.4	14.4	13.8	14.8	15.3	14.7	15.7	15.1	16.2	16.6
	6H	14.0	14.9	14.4	15.3	15.8	15.1	16.1	15.6	16.5	17.0
	8H	14.1	15.0	14.6	15.5	15.9	15.3	16.2	15.8	16.6	17.1
	12H	14.3	15.1	14.8	15.5	16.0	15.4	16.2	15.9	16.7	17.2

8H	4H	13.8	14.7	14.3	15.1	15.6	14.9	15.8	15.4	16.3	16.7
	6H	14.5	15.3	15.0	15.7	16.2	15.5	16.2	16.0	16.7	17.2
	8H	14.8	15.5	15.3	16.0	16.5	15.7	16.4	16.3	16.9	17.4
	12H	15.0	15.6	15.5	16.1	16.7	15.9	16.5	16.4	17.0	17.5

12H	4H	13.8	14.6	14.3	15.1	15.6	15.0	15.8	15.4	16.2	16.7
	6H	14.6	15.3	15.1	15.7	16.3	15.6	16.2	16.1	16.7	17.2
	8H	14.9	15.5	15.4	16.0	16.6	15.8	16.4	16.3	16.9	17.5

Maximum UGR = 17.5

POLAR GRAPH



Maximum Candela = 492.282 Located At Horizontal Angle = 0, Vertical Angle = 0

1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)

2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)