



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : DIG-S22-L48-930-AD-EM10W-(L45)-DIM-UNV\_(EMER 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

[ISSUEDATE] 10-04-2022

[MANUFAC] WILLIAMS INDOOR

[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO 64836

[LUMINAIRE] 2x2' RECESSED LED TROFFER

[MORE] WITH FROST ACRYLIC DIFFUSER

[LUMCAT] DIG-S22-L48-930-AD-EM10W-(L45)-DIM-UNV

[LAMPCAT] HLM 90 CRI, 3000K 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	1090
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	109
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)	1.92 ft
Luminous Width (90-270)	1.92 ft
Luminous Height	0.00 ft

### LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	982	1087	1153
55	853	999	1089
65	769	998	1195
75	630	855	769
85	527	583	639

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	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>
<b>0</b>	396.181	396.181	396.181	396.181	396.181
<b>5</b>	391.488	391.377	391.377	391.600	391.600
<b>10</b>	387.801	388.025	388.583	389.589	390.036
<b>15</b>	372.495	373.053	375.176	376.852	377.411
<b>20</b>	365.344	365.680	369.366	372.495	373.500
<b>25</b>	328.586	330.933	336.072	340.206	342.105
<b>30</b>	279.092	299.202	322.553	315.291	307.470
<b>35</b>	279.539	285.013	294.845	303.113	306.018
<b>40</b>	255.071	261.886	275.070	285.013	288.365
<b>45</b>	238.088	247.138	263.562	275.628	279.427
<b>50</b>	202.559	212.056	229.597	241.664	245.351
<b>55</b>	167.813	178.203	196.414	209.710	214.179
<b>60</b>	135.189	145.914	164.014	180.214	185.801
<b>65</b>	111.391	123.234	144.574	165.131	173.064
<b>70</b>	83.348	95.638	118.877	126.697	117.089
<b>75</b>	55.863	67.371	75.862	68.823	68.265
<b>80</b>	34.635	43.797	43.350	40.668	40.221
<b>85</b>	15.753	18.100	17.429	18.100	19.105
<b>90</b>	0.000	0.000	0.000	0.000	0.000

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Zone	Lumens	%Lamp	%Fixt
0-20	143.97	N.A.	13.20
0-30	299.30	N.A.	27.50
0-40	482.54	N.A.	44.30
0-60	854.03	N.A.	78.40
0-80	1069.03	N.A.	98.10
0-90	1089.95	N.A.	100.00
10-90	1052.62	N.A.	96.60
20-40	338.57	N.A.	31.10
20-50	536.19	N.A.	49.20
40-70	510.34	N.A.	46.80
60-80	215.00	N.A.	19.70
70-80	76.15	N.A.	7.00
80-90	20.92	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	1089.95	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	37.33
10-20	106.64
20-30	155.33
30-40	183.24
40-50	197.63
50-60	173.86
60-70	138.85
70-80	76.15
80-90	20.92
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	83	78	96	88	82	77	85	80	75	82	77	73	79	75	72	69
3	90	79	71	64	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	35	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

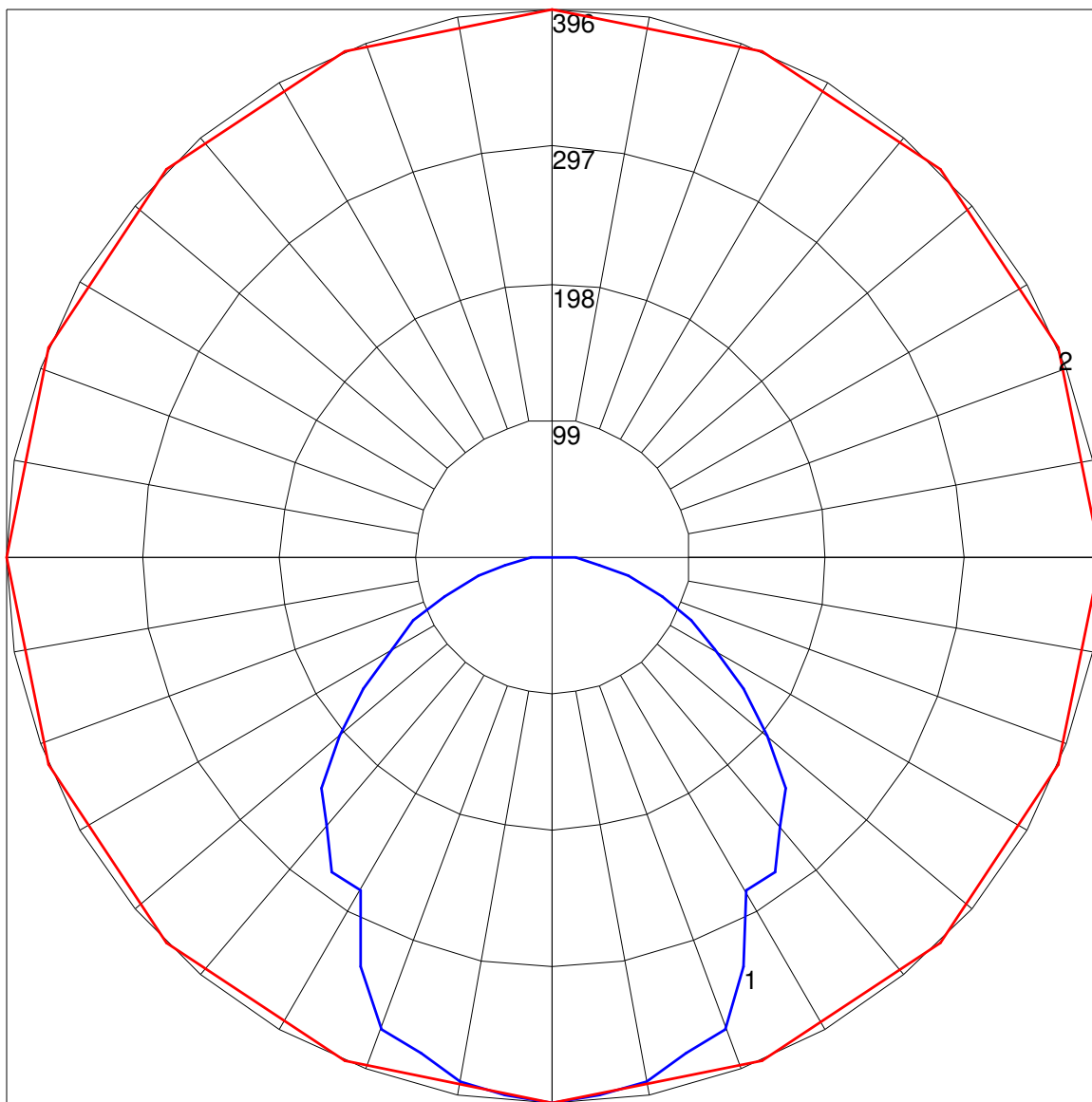
Room Size		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H	Y=2H	11.3	12.9	11.6	13.2	13.5	12.7	14.3	13.0	14.6	14.9
	3H	13.0	14.5	13.4	14.8	15.2	14.8	16.3	15.2	16.6	17.0
	4H	13.6	15.0	14.0	15.4	15.8	15.3	16.7	15.7	17.1	17.5
	6H	14.1	15.4	14.5	15.8	16.1	15.7	17.0	16.1	17.4	17.7
	8H	14.2	15.5	14.7	15.9	16.3	15.8	17.0	16.2	17.4	17.8
	12H	14.4	15.5	14.8	15.9	16.4	15.9	17.1	16.3	17.5	17.9
4H	2H	12.2	13.6	12.6	14.0	14.4	13.3	14.7	13.7	15.0	15.4
	3H	14.2	15.4	14.6	15.8	16.2	15.7	16.8	16.1	17.2	17.6
	4H	14.9	16.0	15.4	16.4	16.9	16.3	17.3	16.7	17.7	18.2
	6H	15.5	16.5	16.0	16.9	17.4	16.7	17.7	17.2	18.1	18.5
	8H	15.7	16.6	16.2	17.0	17.5	16.9	17.8	17.3	18.2	18.7
	12H	15.9	16.7	16.3	17.1	17.6	17.0	17.8	17.5	18.3	18.7
8H	4H	15.4	16.3	15.8	16.7	17.2	16.5	17.4	17.0	17.8	18.3
	6H	16.1	16.8	16.6	17.3	17.8	17.1	17.8	17.6	18.3	18.8
	8H	16.4	17.0	16.9	17.6	18.0	17.3	18.0	17.8	18.5	19.0
	12H	16.6	17.2	17.1	17.7	18.2	17.5	18.1	18.0	18.6	19.1
12H	4H	15.4	16.2	15.9	16.7	17.2	16.5	17.3	17.0	17.8	18.3
	6H	16.2	16.9	16.7	17.3	17.9	17.1	17.8	17.7	18.3	18.8
	8H	16.5	17.1	17.0	17.6	18.2	17.4	18.0	17.9	18.5	19.0

Maximum UGR = 19.1

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## POLAR GRAPH



Maximum Candela = 396.181 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.)