

## IES INDOOR REPORT

PHOTOMETRIC FILENAME : DIG-AR24-L50-840-WPR-(L40)-DIM-UNV\_.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] 03-6-2026

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] 2x4' RECESSED LED TROFFER

[MORE] WITH FROST ACRYLIC DIFFUSER

[LUMCAT] DIG-AR24-L50-835-WPR-(L40)-DIM-UNV

[LAMPCAT] HLM 80 CRI, 4000K CCT

[\_SEARCH\_SOURCE TYPE] 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	3305
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	102
Total Luminaire Watts	32.4
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	1499	1659	1759
55	1303	1525	1662
65	1173	1523	1823
75	961	1305	1174
85	805	890	976

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : DIG-AR24-L50-840-WPR-(L40)-DIM-UNV\_.IES****CANDELA TABULATION**

	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>
<b>0</b>	1201.264	1201.264	1201.264	1201.264	1201.264
<b>5</b>	1187.036	1186.697	1186.697	1187.374	1187.374
<b>10</b>	1175.856	1176.534	1178.228	1181.277	1182.632
<b>15</b>	1129.445	1131.139	1137.576	1142.657	1144.351
<b>20</b>	1107.764	1108.781	1119.960	1129.445	1132.494
<b>25</b>	996.310	1003.425	1019.008	1031.542	1037.301
<b>30</b>	846.237	907.215	978.017	955.997	932.284
<b>35</b>	847.592	864.192	894.003	919.072	927.880
<b>40</b>	773.403	794.067	834.042	864.192	874.355
<b>45</b>	721.910	749.350	799.149	835.735	847.253
<b>50</b>	614.183	642.978	696.164	732.751	743.930
<b>55</b>	508.826	540.332	595.550	635.864	649.414
<b>60</b>	409.907	442.428	497.308	546.429	563.368
<b>65</b>	337.750	373.659	438.363	500.696	524.748
<b>70</b>	252.719	289.984	360.447	384.161	355.027
<b>75</b>	169.383	204.276	230.022	208.680	206.986
<b>80</b>	105.017	132.796	131.441	123.311	121.956
<b>85</b>	47.766	54.880	52.847	54.880	57.929
<b>90</b>	0.000	0.000	0.000	0.000	0.000

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Zone	Lumens	%Lamp	%Fixt
0-20	436.54	N.A.	13.20
0-30	907.51	N.A.	27.50
0-40	1463.11	N.A.	44.30
0-60	2589.52	N.A.	78.40
0-80	3241.42	N.A.	98.10
0-90	3304.84	N.A.	100.00
10-90	3191.66	N.A.	96.60
20-40	1026.57	N.A.	31.10
20-50	1625.8	N.A.	49.20
40-70	1547.42	N.A.	46.80
60-80	651.90	N.A.	19.70
70-80	230.89	N.A.	7.00
80-90	63.42	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	3304.84	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	113.18
10-20	323.36
20-30	470.97
30-40	555.60
40-50	599.23
50-60	527.18
60-70	421.01
70-80	230.89
80-90	63.42
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

X=2H	Y=2H	12.8	14.4	13.1	14.7	15.1	14.2	15.8	14.5	16.1	16.5
	3H	14.5	16.0	14.9	16.4	16.7	16.3	17.8	16.7	18.2	18.5
	4H	15.1	16.6	15.5	16.9	17.3	16.9	18.3	17.3	18.6	19.0
	6H	15.6	16.9	16.0	17.3	17.7	17.2	18.5	17.6	18.9	19.3
	8H	15.8	17.0	16.2	17.4	17.8	17.3	18.6	17.7	19.0	19.4
	12H	15.9	17.1	16.3	17.4	17.9	17.4	18.6	17.8	19.0	19.4

### UGR Viewed Endwise

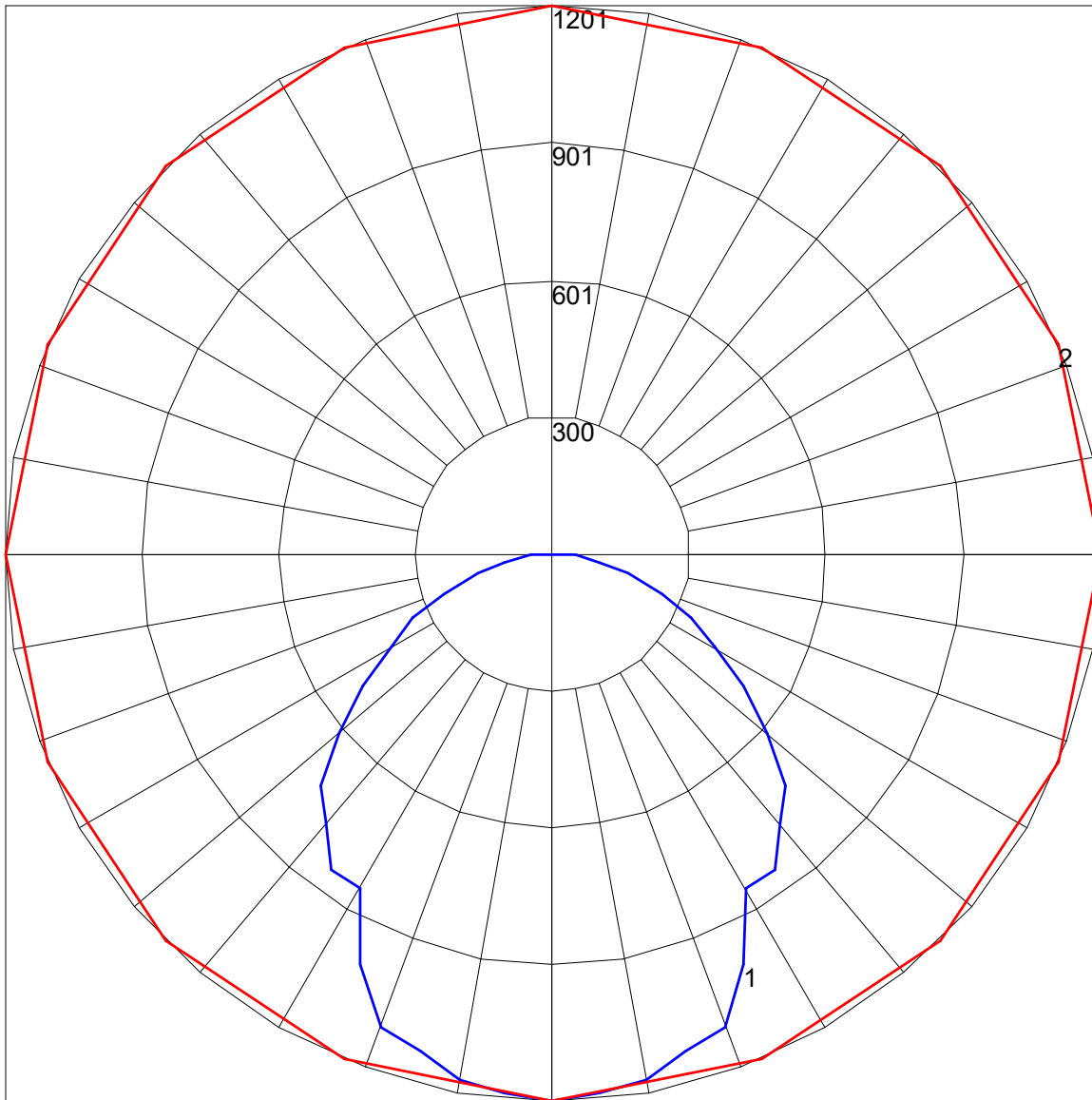
4H	2H	13.7	15.1	14.1	15.5	15.9	14.8	16.2	15.2	16.6	16.9
	3H	15.7	16.9	16.1	17.3	17.7	17.2	18.4	17.6	18.8	19.2
	4H	16.5	17.5	16.9	17.9	18.4	17.8	18.8	18.2	19.3	19.7
	6H	17.1	18.0	17.5	18.4	18.9	18.2	19.2	18.7	19.6	20.1
	8H	17.2	18.1	17.7	18.6	19.0	18.4	19.3	18.9	19.7	20.2
	12H	17.4	18.2	17.9	18.6	19.1	18.5	19.3	19.0	19.8	20.3

8H	4H	16.9	17.8	17.4	18.2	18.7	18.0	18.9	18.5	19.4	19.8
	6H	17.6	18.4	18.1	18.8	19.3	18.6	19.3	19.1	19.8	20.3
	8H	17.9	18.6	18.4	19.1	19.6	18.8	19.5	19.4	20.0	20.5
	12H	18.1	18.7	18.6	19.2	19.8	19.0	19.6	19.5	20.1	20.6

12H	4H	16.9	17.7	17.4	18.2	18.7	18.1	18.9	18.5	19.3	19.8
	6H	17.7	18.4	18.2	18.8	19.4	18.7	19.3	19.2	19.8	20.3
	8H	18.0	18.6	18.5	19.1	19.7	18.9	19.5	19.4	20.0	20.6

Maximum UGR = 20.6

POLAR GRAPH



Maximum Candela = 1201.264 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.)