



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : DIG-S24-L50-840-AD-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

[ISSUEDATE] 08-DEC-2020

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] 2x4'RECESSED WHITE LUMINAIRE w/A-SHAPED

[MORE] CENTER REFL, FROST ACRYLIC LINEAR RIBBED DIFFUSER

[LUMCAT] DIG-S24-L50-840-AD-DIM-UNV

[LAMPCAT] HLM 80 CRI 4000K CCT

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	5211
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	137
Total Luminaire Watts	38
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	2364	2617	2774
55	2054	2404	2621
65	1850	2401	2875
75	1515	2058	1852
85	1269	1404	1539

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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>
<b>0</b>	1894.035	1894.035	1894.035	1894.035	1894.035
<b>5</b>	1871.601	1871.067	1871.067	1872.135	1872.135
<b>10</b>	1853.975	1855.043	1857.714	1862.521	1864.658
<b>15</b>	1780.799	1783.469	1793.618	1801.630	1804.301
<b>20</b>	1746.614	1748.217	1765.843	1780.799	1785.606
<b>25</b>	1570.885	1582.101	1606.671	1626.434	1635.515
<b>30</b>	1334.264	1430.408	1542.041	1507.323	1469.933
<b>35</b>	1336.400	1362.573	1409.576	1449.102	1462.990
<b>40</b>	1219.425	1252.007	1315.035	1362.573	1378.597
<b>45</b>	1138.237	1181.502	1260.019	1317.706	1335.866
<b>50</b>	968.383	1013.784	1097.643	1155.329	1172.956
<b>55</b>	802.267	851.942	939.005	1002.567	1023.933
<b>60</b>	646.301	697.577	784.107	861.556	888.263
<b>65</b>	532.530	589.148	691.168	789.448	827.372
<b>70</b>	398.463	457.218	568.317	605.707	559.771
<b>75</b>	267.066	322.082	362.676	329.026	326.355
<b>80</b>	165.581	209.380	207.244	194.424	192.288
<b>85</b>	75.313	86.530	83.325	86.530	91.337
<b>90</b>	0.000	0.000	0.000	0.000	0.000

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	688.29	N.A.	13.20
0-30	1430.88	N.A.	27.50
0-40	2306.89	N.A.	44.30
0-60	4082.9	N.A.	78.40
0-80	5110.76	N.A.	98.10
0-90	5210.75	N.A.	100.00
10-90	5032.29	N.A.	96.60
20-40	1618.6	N.A.	31.10
20-50	2563.41	N.A.	49.20
40-70	2439.82	N.A.	46.80
60-80	1027.86	N.A.	19.70
70-80	364.05	N.A.	7.00
80-90	99.99	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	5210.75	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	178.46
10-20	509.84
20-30	742.59
30-40	876.01
40-50	944.81
50-60	831.20
60-70	663.81
70-80	364.05
80-90	99.99
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	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**

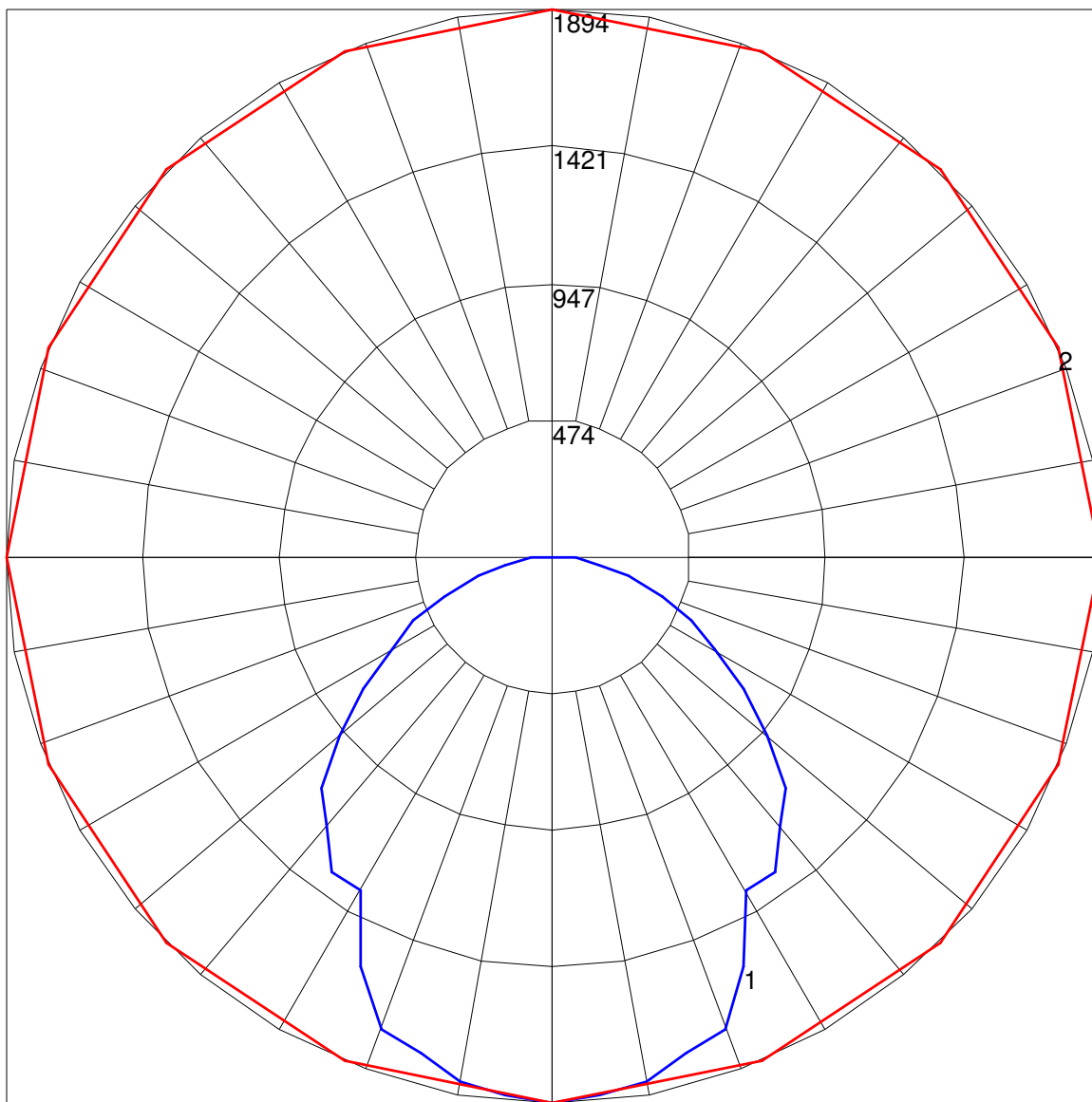
Reflectances

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	14.3	15.9	14.6	16.2	16.5	15.7	17.3	16.0	17.6	18.0
	3H	16.0	17.5	16.4	17.9	18.2	17.8	19.3	18.2	19.7	20.0
	4H	16.6	18.1	17.0	18.4	18.8	18.4	19.8	18.8	20.1	20.5
	6H	17.1	18.4	17.5	18.8	19.2	18.7	20.0	19.1	20.4	20.8
	8H	17.3	18.5	17.7	18.9	19.3	18.8	20.1	19.2	20.5	20.9
	12H	17.4	18.6	17.8	18.9	19.4	18.9	20.1	19.3	20.5	20.9
4H	2H	15.2	16.6	15.6	17.0	17.4	16.3	17.7	16.7	18.1	18.4
	3H	17.2	18.4	17.6	18.8	19.2	18.7	19.9	19.1	20.3	20.7
	4H	18.0	19.0	18.4	19.4	19.9	19.3	20.3	19.7	20.8	21.2
	6H	18.6	19.5	19.0	19.9	20.4	19.7	20.7	20.2	21.1	21.6
	8H	18.7	19.6	19.2	20.1	20.5	19.9	20.8	20.4	21.2	21.7
	12H	18.9	19.7	19.4	20.1	20.6	20.0	20.8	20.5	21.3	21.8
8H	4H	18.4	19.3	18.9	19.7	20.2	19.5	20.4	20.0	20.9	21.3
	6H	19.1	19.9	19.6	20.3	20.8	20.1	20.8	20.6	21.3	21.8
	8H	19.4	20.1	19.9	20.6	21.1	20.3	21.0	20.8	21.5	22.0
	12H	19.6	20.2	20.1	20.7	21.3	20.5	21.1	21.0	21.6	22.1
12H	4H	18.4	19.2	18.9	19.7	20.2	19.6	20.4	20.0	20.8	21.3
	6H	19.2	19.9	19.7	20.3	20.9	20.2	20.8	20.7	21.3	21.8
	8H	19.5	20.1	20.0	20.6	21.2	20.4	21.0	20.9	21.5	22.1

Maximum UGR = 22.1

POLAR GRAPH



Maximum Candela = 1894.035 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.)