



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : DIG-S24-L50-835-WPR-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] 06-10-2020

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] 2x4'RECESSED LED TROFFER

[MORE] WITH WHITE PERFORATED DIFFUSER

[LUMCAT] DIG-S24-L50-835-WPR-DIM-UNV

[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	3947
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	106
Total Luminaire Watts	37.4
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	1790	1982	2101
55	1556	1821	1985
65	1401	1819	2177
75	1148	1558	1402
85	961	1063	1166

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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>	1434.611	1434.611	1434.611	1434.611	1434.611
<b>5</b>	1417.619	1417.214	1417.214	1418.023	1418.023
<b>10</b>	1404.268	1405.077	1407.100	1410.741	1412.359
<b>15</b>	1348.841	1350.864	1358.551	1364.620	1366.643
<b>20</b>	1322.949	1324.163	1337.513	1348.841	1352.483
<b>25</b>	1189.845	1198.341	1216.951	1231.920	1238.798
<b>30</b>	1010.620	1083.442	1167.998	1141.701	1113.381
<b>35</b>	1012.238	1032.062	1067.664	1097.602	1108.121
<b>40</b>	923.637	948.316	996.055	1032.062	1044.199
<b>45</b>	862.142	894.912	954.384	998.078	1011.833
<b>50</b>	733.488	767.877	831.394	875.088	888.439
<b>55</b>	607.666	645.292	711.237	759.381	775.564
<b>60</b>	489.532	528.370	593.911	652.574	672.802
<b>65</b>	403.358	446.242	523.516	597.957	626.681
<b>70</b>	301.810	346.313	430.464	458.784	423.991
<b>75</b>	202.286	243.957	274.704	249.216	247.193
<b>80</b>	125.417	158.592	156.974	147.264	145.646
<b>85</b>	57.045	65.541	63.113	65.541	69.182
<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	521.34	N.A.	13.20
0-30	1083.8	N.A.	27.50
0-40	1747.32	N.A.	44.30
0-60	3092.54	N.A.	78.40
0-80	3871.07	N.A.	98.10
0-90	3946.81	N.A.	100.00
10-90	3811.64	N.A.	96.60
20-40	1225.98	N.A.	31.10
20-50	1941.62	N.A.	49.20
40-70	1848.01	N.A.	46.80
60-80	778.54	N.A.	19.70
70-80	275.74	N.A.	7.00
80-90	75.74	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	3946.81	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	135.17
10-20	386.17
20-30	562.46
30-40	663.52
40-50	715.63
50-60	629.58
60-70	502.79
70-80	275.74
80-90	75.74
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	13.4	15.0	13.7	15.3	15.7	14.8	16.4	15.1	16.7	17.1
	3H	15.1	16.6	15.5	17.0	17.3	16.9	18.4	17.3	18.8	19.1
	4H	15.7	17.2	16.1	17.5	17.9	17.5	18.9	17.9	19.2	19.6
	6H	16.2	17.5	16.6	17.9	18.3	17.8	19.1	18.2	19.5	19.9
	8H	16.4	17.6	16.8	18.0	18.4	17.9	19.2	18.3	19.6	20.0
	12H	16.5	17.7	16.9	18.0	18.5	18.0	19.2	18.4	19.6	20.0

UGR Viewed Endwise

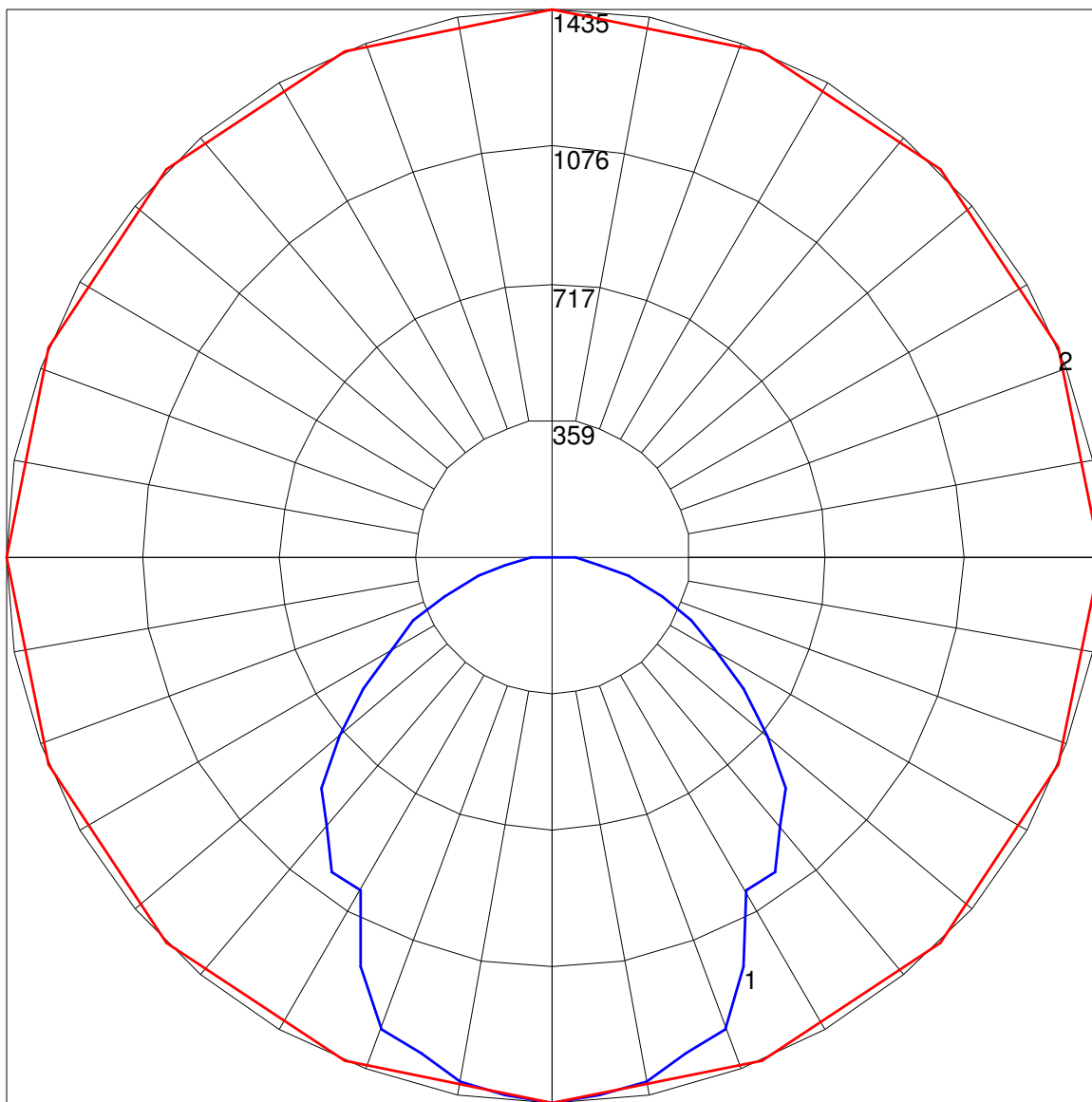
4H	2H	14.3	15.7	14.7	16.1	16.5	15.4	16.8	15.8	17.2	17.5
	3H	16.3	17.5	16.7	17.9	18.3	17.8	19.0	18.2	19.4	19.8
	4H	17.1	18.1	17.5	18.5	19.0	18.4	19.4	18.8	19.9	20.3
	6H	17.7	18.6	18.1	19.0	19.5	18.8	19.8	19.3	20.2	20.7
	8H	17.8	18.7	18.3	19.2	19.6	19.0	19.9	19.5	20.3	20.8
	12H	18.0	18.8	18.5	19.2	19.7	19.1	19.9	19.6	20.4	20.9

8H	4H	17.5	18.4	18.0	18.8	19.3	18.6	19.5	19.1	20.0	20.4
	6H	18.2	19.0	18.7	19.4	19.9	19.2	19.9	19.7	20.4	20.9
	8H	18.5	19.2	19.0	19.7	20.2	19.4	20.1	19.9	20.6	21.1
	12H	18.7	19.3	19.2	19.8	20.4	19.6	20.2	20.1	20.7	21.2

12H	4H	17.5	18.3	18.0	18.8	19.3	18.7	19.5	19.1	19.9	20.4
	6H	18.3	19.0	18.8	19.4	20.0	19.3	19.9	19.8	20.4	20.9
	8H	18.6	19.2	19.1	19.7	20.3	19.5	20.1	20.0	20.6	21.2

Maximum UGR = 21.2

POLAR GRAPH



Maximum Candela = 1434.611 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.)