



IES INDOOR REPORT

PHOTOMETRIC FILENAME : DIG-S24-L88-835-(L70)-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] 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-L98-835-AD-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	7071
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	126
Total Luminaire Watts	56.1
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	3207	3550	3764
55	2787	3262	3557
65	2511	3259	3901
75	2056	2792	2512
85	1722	1905	2088

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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>
0	2570.086	2570.086	2570.086	2570.086	2570.086
5	2539.645	2538.921	2538.921	2540.370	2540.370
10	2515.728	2517.177	2520.801	2527.324	2530.223
15	2416.432	2420.056	2433.827	2444.699	2448.323
20	2370.046	2372.220	2396.138	2416.432	2422.955
25	2131.592	2146.812	2180.152	2206.969	2219.291
30	1810.512	1940.973	2092.453	2045.342	1994.607
35	1813.411	1848.926	1912.707	1966.341	1985.185
40	1654.683	1698.895	1784.420	1848.926	1870.669
45	1544.516	1603.224	1709.767	1788.044	1812.686
50	1314.035	1375.641	1489.433	1567.709	1591.627
55	1088.627	1156.032	1274.171	1360.421	1389.412
60	876.989	946.569	1063.984	1169.078	1205.317
65	722.610	799.437	937.871	1071.232	1122.691
70	540.689	620.416	771.171	821.906	759.574
75	362.392	437.045	492.129	446.467	442.843
80	224.683	284.116	281.216	263.822	260.922
85	102.195	117.415	113.066	117.415	123.938
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	933.97	N.A.	13.20
0-30	1941.61	N.A.	27.50
0-40	3130.3	N.A.	44.30
0-60	5540.24	N.A.	78.40
0-80	6934.97	N.A.	98.10
0-90	7070.66	N.A.	100.00
10-90	6828.51	N.A.	96.60
20-40	2196.33	N.A.	31.10
20-50	3478.38	N.A.	49.20
40-70	3310.68	N.A.	46.80
60-80	1394.74	N.A.	19.70
70-80	493.99	N.A.	7.00
80-90	135.69	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	7070.66	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	242.15
10-20	691.82
20-30	1007.64
30-40	1188.69
40-50	1282.05
50-60	1127.89
60-70	900.75
70-80	493.99
80-90	135.69
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 RW	80				70				50			30			10			0
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	95	95	95	95	93	93	93	93	89	89	89	85	85	85	81	81	81	80
1	87	83	79	76	85	81	78	75	78	75	73	75	72	70	72	70	68	67
2	79	72	67	62	77	71	66	61	68	64	60	65	62	58	63	60	57	55
3	72	63	57	51	70	62	56	51	60	54	50	57	53	49	55	52	48	47
4	66	56	49	44	64	55	48	43	53	47	43	51	46	42	49	45	41	40
5	60	50	43	37	59	49	42	37	47	41	37	46	41	36	44	40	36	34
6	56	45	38	33	54	44	37	33	43	37	32	41	36	32	40	35	32	30
7	52	41	34	29	50	40	34	29	39	33	29	38	32	28	37	32	28	27
8	48	37	30	26	47	37	30	26	36	30	26	35	29	25	34	29	25	24
9	45	34	28	23	44	34	27	23	33	27	23	32	27	23	31	26	23	21
10	42	32	25	21	41	31	25	21	30	25	21	30	24	21	29	24	21	19

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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	16.2	17.8	16.5	18.1	18.5	UGR Viewed Endwise				
	3H	17.9	19.4	18.3	19.8	20.1	17.6	19.2	17.9	19.5	19.9
	4H	18.5	20.0	18.9	20.3	20.7	19.7	21.2	20.1	21.6	21.9
	6H	19.0	20.3	19.4	20.7	21.1	20.3	21.7	20.7	22.0	22.4
	8H	19.2	20.4	19.6	20.8	21.2	20.6	21.9	21.0	22.3	22.7
	12H	19.3	20.5	19.7	20.8	21.3	20.7	22.0	21.1	22.4	22.8

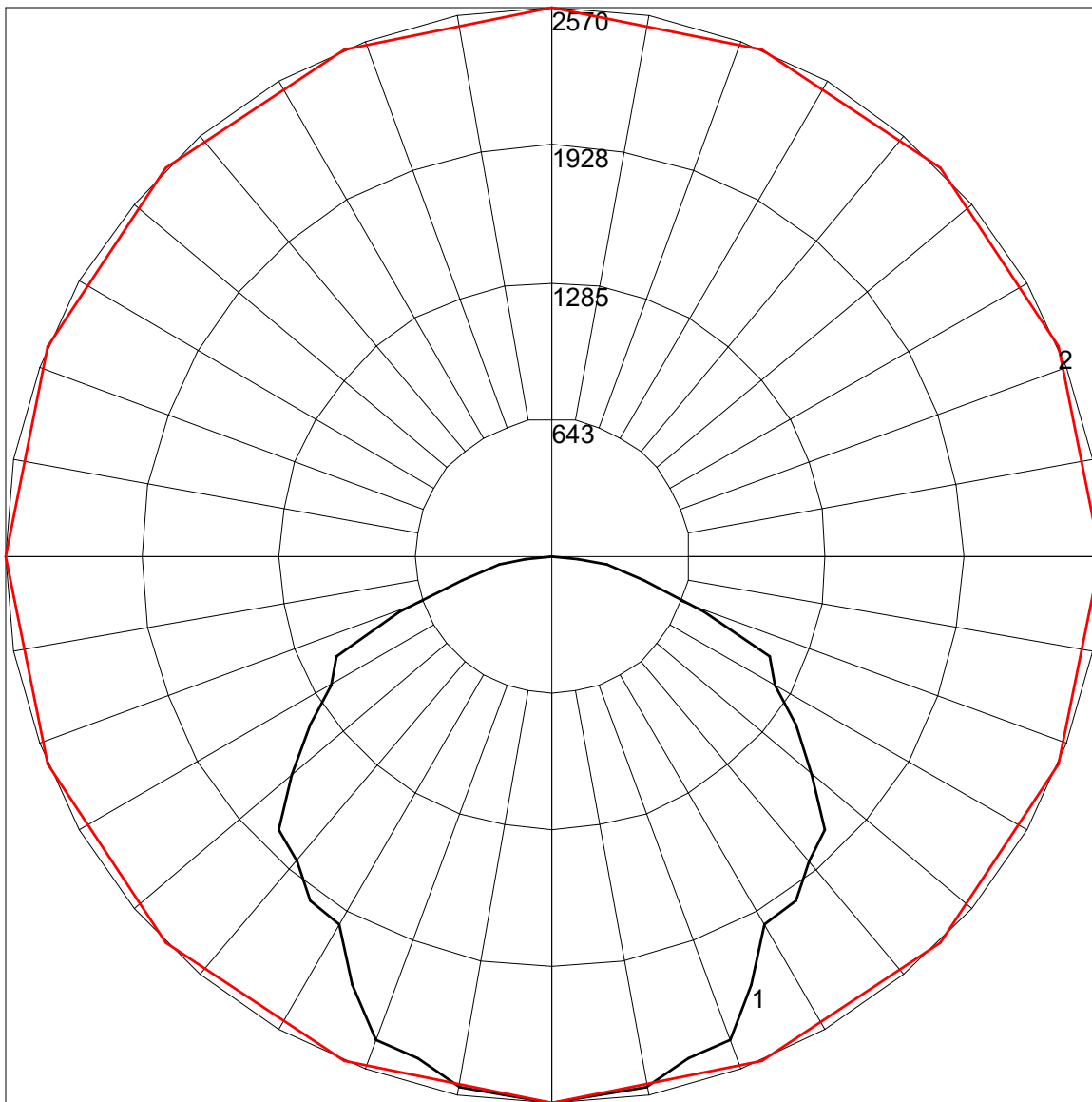
4H	2H	17.1	18.5	17.5	18.9	19.3	20.8	22.0	21.2	22.4	22.8
	3H	19.1	20.3	19.5	20.7	21.1	20.6	21.8	21.0	22.2	22.6
	4H	19.9	20.9	20.3	21.3	21.8	21.2	22.2	21.6	22.7	23.1
	6H	20.5	21.4	20.9	21.8	22.3	21.6	22.6	22.1	23.0	23.5
	8H	20.6	21.5	21.1	22.0	22.4	21.8	22.7	22.3	23.1	23.6
	12H	20.8	21.6	21.3	22.0	22.5	21.9	22.7	22.4	23.2	23.7

8H	4H	20.3	21.2	20.8	21.6	22.1	21.4	22.3	21.9	22.8	23.2
	6H	21.0	21.8	21.5	22.2	22.7	22.0	22.7	22.5	23.2	23.7
	8H	21.3	22.0	21.8	22.5	23.0	22.2	22.9	22.7	23.4	23.9
	12H	21.5	22.1	22.0	22.6	23.2	22.4	23.0	22.9	23.5	24.0

12H	4H	20.3	21.1	20.8	21.6	22.1	21.5	22.3	21.9	22.7	23.2
	6H	21.1	21.8	21.6	22.2	22.8	22.1	22.7	22.6	23.2	23.7
	8H	21.4	22.0	21.9	22.5	23.1	22.3	22.9	22.8	23.4	24.0

Maximum UGR = 24.0

POLAR GRAPH



Maximum Candela = 2570.086 Located At Horizontal Angle = 0, Vertical Angle = 0
1 - Vertical Plane Through Horizontal Angles (90 - 270)
2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)