H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : DIG-S24-L50-835-AD-(L45)-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] 06-12-2023
[MANUFAC]WILLIAMS INDOOR
[OTHER]H.E. WILLIAMS, INC - CARTHAGE, MO 64836
[LUMINAIRE] 2x4'RECESSED LED TROFFER
[MORE] WITH FROST ACRYLIC DIFFUSER
[LUMCAT] DIG-S24-L50-835-AD-(L45)-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	4569
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	131
Total Luminaire Watts	34.8
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	2072	2294	2432
55	1801	2108	2298
65	1622	2106	2520
75	1328	1804	1623
85	1113	1231	1349

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1660.688	1660.688	1660.688	1660.688	1660.688
5	1641.018	1640.550	1640.550	1641.487	1641.487
10	1625.564	1626.500	1628.842	1633.057	1634.930
15	1561.403	1563.745	1572.643	1579.668	1582.009
20	1531.430	1532.835	1548.290	1561.403	1565.618
25	1377.350	1387.185	1408.728	1426.056	1434.018
30	1169.881	1254.180	1352.061	1321.619	1288.836
35	1171.755	1194.703	1235.915	1270.572	1282.748
40	1069.191	1097.759	1153.022	1194.703	1208.752
45	998.005	1035.940	1104.784	1155.363	1171.286
50	849.077	888.885	962.412	1012.992	1028.447
55	703.427	746.982	823.319	879.050	897.783
60	566.676	611.635	687.504	755.412	778.828
65	466.922	516.565	606.015	692.188	725.439
70	349.372	400.888	498.300	531.083	490.807
75	234.164	282.401	317.994	288.490	286.148
80	145.181	183.584	181.711	170.471	168.598
85	66.034	75.869	73.059	75.869	80.084
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	603.49	N.A.	13.20
0-30	1254.59	N.A.	27.50
0-40	2022.68	N.A.	44.30
0-60	3579.88	N.A.	78.40
0-80	4481.11	N.A.	98.10
0-90	4568.78	N.A.	100.00
10-90	4412.31	N.A.	96.60
20-40	1419.18	N.A.	31.10
20-50	2247.59	N.A.	49.20
40-70	2139.23	N.A.	46.80
60-80	901.22	N.A.	19.70
70-80	319.20	N.A.	7.00
80-90	87.68	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	4568.78	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	156.47
10-20	447.02
20-30	651.10
30-40	768.08
40-50	828.41
50-60	728.80
60-70	582.03
70-80	319.20
80-90	87.68
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	13.9	15.5	14.2	15.8	16.2	15.3	16.9	15.6	17.2	17.6
	3H	15.6	17.1	16.0	17.5	17.8	17.4	18.9	17.8	19.3	19.6
	4H	16.2	17.7	16.6	18.0	18.4	18.0	19.4	18.4	19.7	20.1
	6H	16.7	18.0	17.1	18.4	18.8	18.3	19.6	18.7	20.0	20.4
	8H	16.9	18.1	17.3	18.5	18.9	18.4	19.7	18.8	20.1	20.5
	12H	17.0	18.2	17.4	18.5	19.0	18.5	19.7	18.9	20.1	20.5
4H	2H	14.8	16.2	15.2	16.6	17.0	15.9	17.3	16.3	17.7	18.0
	3H	16.8	18.0	17.2	18.4	18.8	18.3	19.5	18.7	19.9	20.3
	4H	17.6	18.6	18.0	19.0	19.5	18.9	19.9	19.3	20.4	20.8
	6H	18.2	19.1	18.6	19.5	20.0	19.3	20.3	19.8	20.7	21.2
	8H	18.3	19.2	18.8	19.7	20.1	19.5	20.4	20.0	20.8	21.3
	12H	18.5	19.3	19.0	19.7	20.2	19.6	20.4	20.1	20.9	21.4
8H	4H	18.0	18.9	18.5	19.3	19.8	19.1	20.0	19.6	20.5	20.9
	6H	18.7	19.5	19.2	19.9	20.4	19.7	20.4	20.2	20.9	21.4
	8H	19.0	19.7	19.5	20.2	20.7	19.9	20.6	20.4	21.1	21.6
	12H	19.2	19.8	19.7	20.3	20.9	20.1	20.7	20.6	21.2	21.7
12H	4H	18.0	18.8	18.5	19.3	19.8	19.2	20.0	19.6	20.4	20.9
	6H	18.8	19.5	19.3	19.9	20.5	19.8	20.4	20.3	20.9	21.4
	8H	19.1	19.7	19.6	20.2	20.8	20.0	20.6	20.5	21.1	21.7

Maximum UGR = 21.7

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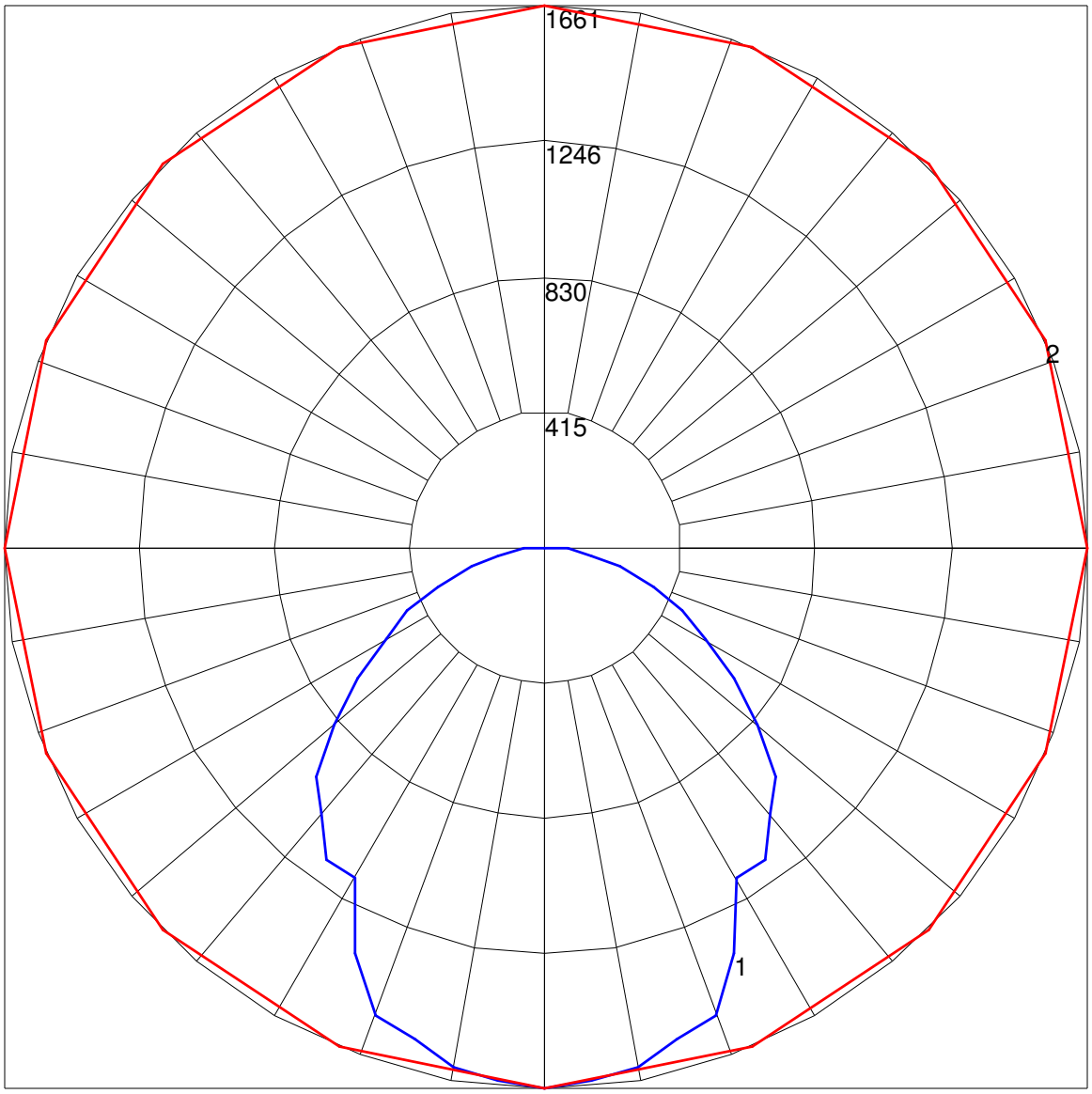
POLAR GRAPH



Maximum Candela = 1660.688 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.)

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