



IES INDOOR REPORT
PHOTOMETRIC FILENAME : SIA1-SC-4-L10 840-S-DIM-UNV.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST]GEN from BALLABS TEST NO. 17966.0
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
[ISSUEDATE] 03-10-2022
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO 64836
[LUMINAIRE] 4'SUSPENDED BIDIRECT
[MORE] WITH FROSTED ACRYLIC LENS
[LUMCAT] SIA1-SC-4-L10-840-S-DIM-UNV
[LAMPCAT] HLM 80 CRI, 4000K CCT
[_SEARCH_SOURCETYPE] LED
[_SEARCH_APPLICATION] Indoor, Architectural, Classroom, Bidirect
[_SEARCH_MOUNTING] Suspended

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4040
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	128
Total Luminaire Watts	31.5
Ballast Factor	1.00
CIE Type	Indirect
Spacing Criterion (0-180)	N.A.
Spacing Criterion (90-270)	N.A.
Spacing Criterion (Diagonal)	N.A.
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	3.91 ft
Luminous Width (90-270)	0.50 ft
Luminous Height	0.22 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	84	224	379
55	101	315	525
65	121	380	661
75	100	463	779
85	182	574	925

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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	16.073	16.073	16.073	16.073	16.073
5	13.237	13.237	15.128	14.182	15.128
10	13.237	14.182	17.964	17.964	17.964
15	13.237	14.182	18.909	22.691	22.691
20	11.346	14.182	18.909	24.582	28.364
25	11.346	15.128	21.746	31.201	34.037
30	12.291	17.018	27.419	36.873	42.546
35	11.346	16.073	30.255	45.383	50.110
40	11.346	17.018	35.928	52.001	60.510
45	11.346	20.800	38.764	62.401	69.965
50	10.400	20.800	43.492	69.965	80.365
55	11.346	20.800	49.165	76.583	88.874
60	8.509	20.800	49.165	80.365	94.547
65	10.400	21.746	51.055	84.147	98.329
70	5.673	18.909	49.165	83.201	96.438
75	5.673	20.800	50.110	82.256	96.438
80	3.782	16.073	46.328	76.583	90.765
85	4.727	17.018	45.383	78.474	87.929
90	0.000	29.310	90.765	123.857	128.584
95	28.364	78.474	220.295	244.877	243.932
100	74.692	132.366	343.206	389.534	391.425
105	133.311	192.876	450.990	524.737	511.500
110	198.549	259.059	544.592	718.558	685.467
115	264.732	332.806	618.338	961.545	937.908
120	331.861	400.880	661.830	1100.529	1162.930
125	400.880	467.063	704.376	1103.365	1262.205
130	468.954	533.246	749.759	1040.019	1213.040
135	537.973	597.538	785.687	995.582	1126.057
140	598.484	653.321	806.487	990.854	1061.765
145	661.830	709.104	814.997	985.181	1043.801
150	726.122	761.105	818.778	948.308	1008.818
155	780.960	802.705	826.342	895.362	943.581
160	822.560	839.579	847.143	872.670	894.416
165	857.543	875.507	876.452	883.070	884.016
170	886.852	901.980	899.143	900.089	898.198
175	904.816	914.271	914.271	913.326	905.762
180	914.271	914.271	914.271	914.271	914.271

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	6.64	N.A.	0.20
0-30	17.37	N.A.	0.40
0-40	36.86	N.A.	0.90
0-60	111.68	N.A.	2.80
0-80	215.66	N.A.	5.30
0-90	274.95	N.A.	6.80
10-90	273.49	N.A.	6.80
20-40	30.22	N.A.	0.70
20-50	61.56	N.A.	1.50
40-70	126.12	N.A.	3.10
60-80	103.98	N.A.	2.60
70-80	52.69	N.A.	1.30
80-90	59.28	N.A.	1.50
90-110	587.39	N.A.	14.50
90-120	1200.56	N.A.	29.70
90-130	1889.11	N.A.	46.80
90-150	3037.49	N.A.	75.20
90-180	3765.01	N.A.	93.20
110-180	3177.62	N.A.	78.70
0-180	4039.96	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	1.46
10-20	5.18
20-30	10.72
30-40	19.49
40-50	31.34
50-60	43.48
60-70	51.29
70-80	52.69
80-90	59.28
90-100	188.41
100-110	398.98
110-120	613.16
120-130	688.55
130-140	622.53
140-150	525.86
150-160	393.00
160-170	247.94
170-180	86.59

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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	97	97	97	97	84	84	84	84	59	59	59	37	37	37	16	16	16	7
1	87	83	79	76	75	72	69	66	51	49	47	31	30	29	13	13	12	4
2	79	72	66	61	68	62	57	53	44	41	38	27	25	24	11	10	10	3
3	72	63	56	50	62	54	49	44	38	35	31	23	21	20	10	9	8	2
4	66	55	48	42	56	48	42	37	34	30	26	21	18	16	8	7	7	2
5	60	49	41	36	51	42	36	31	30	26	22	18	16	14	8	6	6	1
6	55	43	36	30	47	38	31	27	27	22	19	16	14	12	7	6	5	1
7	50	39	31	26	43	34	27	23	24	20	17	15	12	10	6	5	4	1
8	47	35	28	23	40	30	24	20	22	17	14	13	11	9	5	4	4	1
9	43	32	25	20	37	27	22	17	20	15	13	12	10	8	5	4	3	1
10	40	29	22	17	34	25	19	15	18	14	11	11	9	7	5	3	3	1

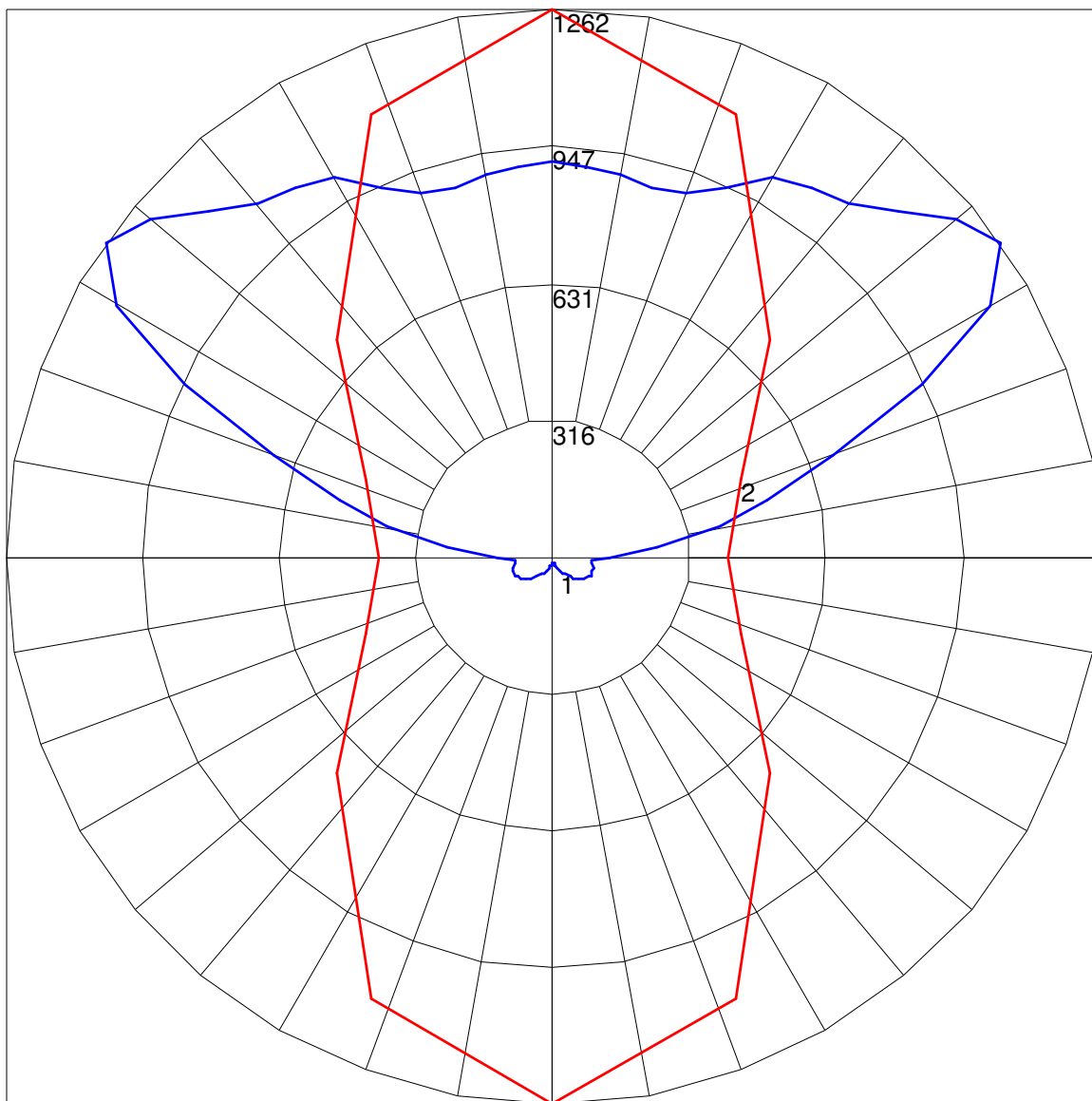
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UGR TABLE - CORRECTED

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	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
	3H	4.9	4.9	4.9	4.9	4.9	5.0	5.6	6.3	6.8	8.6
	4H	4.9	4.9	4.9	4.9	4.9	7.0	7.5	8.2	8.7	10.5
	6H	4.9	4.9	4.9	4.9	4.9	8.9	9.4	10.2	10.6	12.4
	8H	4.9	4.9	4.9	4.9	4.9	9.9	10.3	11.1	11.6	13.4
	12H	4.9	4.9	4.9	4.9	4.9	11.0	11.4	12.2	12.6	14.4
4H	2H	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
	3H	4.9	4.9	4.9	4.9	4.9	5.4	5.9	6.7	7.1	8.9
	4H	4.9	4.9	4.9	4.9	4.9	7.6	8.0	8.9	9.3	11.1
	6H	4.9	4.9	4.9	4.9	4.9	9.8	10.1	11.1	11.4	13.2
	8H	4.9	4.9	4.9	4.9	4.9	10.9	11.2	12.2	12.5	14.3
	12H	4.9	4.9	4.9	4.9	4.9	12.1	12.4	13.4	13.7	15.5
8H	4H	4.9	4.9	4.9	4.9	4.9	7.7	8.0	9.0	9.3	11.1
	6H	4.9	4.9	4.9	4.9	4.9	10.1	10.3	11.4	11.6	13.4
	8H	4.9	4.9	4.9	4.9	4.9	11.4	11.6	12.7	12.9	14.7
	12H	4.9	4.9	4.9	4.9	4.9	12.9	13.1	14.2	14.3	16.2
12H	4H	4.9	4.9	4.9	4.9	4.9	7.6	7.9	8.9	9.2	11.0
	6H	4.9	4.9	4.9	4.9	5.5	10.1	10.3	11.3	11.6	13.4
	8H	4.9	4.9	4.9	4.9	5.9	11.4	11.7	12.7	12.9	14.8

Maximum UGR = 16.2

POLAR GRAPH



Maximum Candela = 1262.205 Located At Horizontal Angle = 90, Vertical Angle = 125
1 - Vertical Plane Through Horizontal Angles (90 - 270) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (125) (Through Max. Cd.)