



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4AR-L20-9DW-DIM-UNV-OW-OF-CS_0 DEGREE TILT_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM BALLABS TEST NO. 20445.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUEDATE] 11-MAR-2020

[MANUFAC] WILLAIMS INDOOR

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

[LUMINAIRE] GEN7 V13 LED 4" SHORT HEATSINK 4" RND ADJ DOWNLIGHT @ 0 TILT

[MORE] ACRYLIC WIDE TIR OPTIC & 4" OPEN ASYM SEMI-SPEC TRIM

[LUMCAT] 4AR-L20-9DW-DIM-UNV-OW-OF-CS_0 DEGREE TILT

[_SEARCH_SOURCETYPE] LED

[_SEARCH_APPLICATION] Indoor, Classroom, Commercial, Industrial, Direct, Downlight

[_SEARCH_MOUNTING] Recessed

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1339
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	36
Total Luminaire Watts	37.7
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.76
Spacing Criterion (90-270)	0.76
Spacing Criterion (Diagonal)	0.64
Basic Luminous Shape	Circular
Luminous Length (0-180)	0.33 ft (Diameter)
Luminous Width (90-270)	0.33 ft (Diameter)
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	847	678	1355
55	835	835	835
65	851	283	283
75	0	0	0
85	0	0	0

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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>	<u>112.5</u>	<u>135.0</u>	<u>157.5</u>	<u>180.0</u>
0	2602.317	2602.317	2602.317	2602.317	2602.317	2602.317	2602.317	2602.317	2602.317
5	2683.822	2678.000	2674.119	2669.267	2667.327	2671.208	2675.089	2684.792	2678.970
10	2774.059	2763.385	2755.623	2758.534	2764.356	2785.702	2797.346	2808.019	2809.959
15	2601.347	2571.268	2557.684	2562.535	2576.119	2629.485	2666.356	2672.178	2680.911
20	1757.195	1684.423	1701.888	1618.443	1721.294	1667.928	1808.620	1846.462	1926.996
25	655.916	637.480	667.559	702.490	708.312	694.728	673.381	668.530	661.738
30	174.652	180.474	166.890	140.692	174.652	185.325	158.157	143.603	167.860
35	20.376	19.406	20.376	23.287	31.049	32.990	29.109	28.138	29.109
40	7.762	7.762	7.762	11.643	13.584	14.554	12.614	12.614	12.614
45	4.851	4.851	3.881	3.881	7.762	8.733	6.792	6.792	6.792
50	6.792	3.881	2.911	4.851	4.851	6.792	3.881	4.851	4.851
55	3.881	3.881	3.881	1.941	3.881	2.911	2.911	2.911	2.911
60	2.911	1.941	0.970	1.941	1.941	0.970	0.970	0.970	1.941
65	2.911	2.911	0.970	0.970	0.970	0.000	0.000	0.000	0.000
70	1.941	0.970	1.941	0.000	0.970	0.000	0.000	0.000	0.000
75	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
80	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
85	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
90	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 4AR-L20-9DW-DIM-UNV-OW-OF-CS_0 DEGREE TILT_.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	935.94	N.A.	69.90
0-30	1295.49	N.A.	96.70
0-40	1329.91	N.A.	99.30
0-60	1338.14	N.A.	99.90
0-80	1339.27	N.A.	100.00
0-90	1339.27	N.A.	100.00
10-90	1081.1	N.A.	80.70
20-40	393.98	N.A.	29.40
20-50	399.38	N.A.	29.80
40-70	9.20	N.A.	0.70
60-80	1.13	N.A.	0.10
70-80	0.16	N.A.	0.00
80-90	0.00	N.A.	0.00
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	1339.27	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	258.17
10-20	677.77
20-30	359.56
30-40	34.42
40-50	5.40
50-60	2.82
60-70	0.97
70-80	0.16
80-90	0.00
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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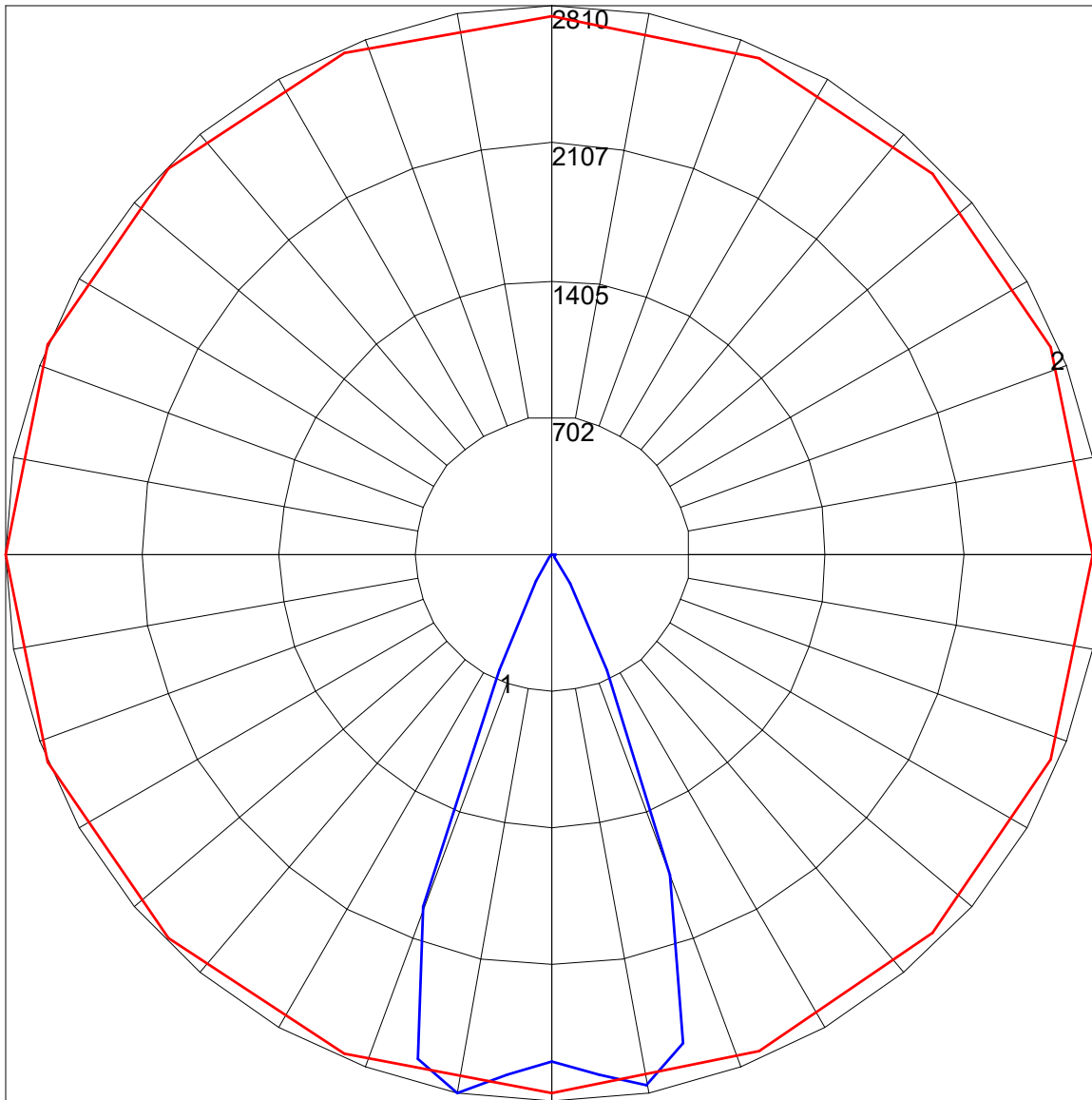
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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	342	342	342	342	334	334	334	334	319	319	319	306	306	306	293	293	293	287
1	329	323	317	312	323	317	311	307	305	301	297	295	291	288	285	282	280	275
2	317	306	297	289	311	301	293	286	292	285	279	284	278	274	276	272	268	264
3	306	291	280	271	300	287	277	268	280	271	264	273	266	260	267	261	256	252
4	295	278	265	256	290	275	263	254	269	259	251	263	255	248	258	251	246	242
5	284	265	252	243	280	263	251	242	258	248	240	254	245	238	250	242	236	232
6	274	254	241	231	271	252	240	231	248	237	229	245	235	228	241	233	226	223
7	265	244	231	221	262	242	230	221	239	228	220	236	226	218	233	224	217	214
8	256	235	221	212	253	233	220	212	230	219	211	228	217	210	225	216	209	206
9	247	226	212	203	245	224	212	203	222	211	203	220	209	202	218	208	201	198
10	239	217	204	196	237	216	204	195	214	203	195	212	202	194	210	201	194	191

POLAR GRAPH



Maximum Candela = 2809.959 Located At Horizontal Angle = 180, Vertical Angle = 10
1 - Vertical Plane Through Horizontal Angles (180 - 0) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (10) (Through Max. Cd.)