



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4AR-L20-9DW-DIM-UNV-OM-OF-CS\_0 DEGREE TILT\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from BALLABS TEST NO. 20448.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUEDATE] 11-MAR-2020

[MANUFAC] WILLIAMS INDOOR

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

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

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

[LUMCAT] 4AR-L20-9DW-DIM-UNV-OM-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	1860
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	49
Total Luminaire Watts	37.7
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.54
Spacing Criterion (90-270)	0.54
Spacing Criterion (Diagonal)	0.48
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	515	515	515
55	212	212	212
65	0	0	0
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>
<b>0</b>	6866.860	6866.860	6866.860	6866.860	6866.860	6866.860	6866.860	6866.860	6866.860
<b>5</b>	6834.418	6766.585	6757.737	6752.822	6753.805	6776.416	6770.517	6766.585	6748.889
<b>10</b>	6049.915	6020.422	6051.881	6025.338	5996.828	5844.450	5854.281	5871.976	5721.564
<b>15</b>	3606.945	3635.454	3895.972	3769.154	3690.507	3347.410	2985.634	2998.414	2801.797
<b>20</b>	1261.300	1287.843	1340.930	1349.778	1277.029	1130.550	1064.683	1007.664	953.594
<b>25</b>	530.867	549.545	573.139	578.055	564.292	473.848	422.727	407.981	364.725
<b>30</b>	191.702	191.702	199.567	200.550	181.871	165.159	140.581	129.767	112.072
<b>35</b>	34.408	31.459	33.425	32.442	31.459	29.493	25.560	25.560	25.560
<b>40</b>	12.780	11.797	10.814	10.814	10.814	10.814	9.831	9.831	8.848
<b>45</b>	2.949	2.949	2.949	2.949	2.949	2.949	1.966	2.949	2.949
<b>50</b>	0.983	0.983	0.983	0.983	0.983	0.983	0.000	0.000	0.983
<b>55</b>	0.983	0.983	0.983	0.000	0.983	1.966	0.000	1.966	0.000
<b>60</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>65</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>70</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>75</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>80</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>85</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>90</b>	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-OM-OF-CS\_0 DEGREE TILT\_.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	1556.51	N.A.	83.70
0-30	1819.68	N.A.	97.80
0-40	1855.91	N.A.	99.80
0-60	1859.71	N.A.	100.00
0-80	1859.71	N.A.	100.00
0-90	1859.71	N.A.	100.00
10-90	1242.01	N.A.	66.80
20-40	299.40	N.A.	16.10
20-50	302.62	N.A.	16.30
40-70	3.80	N.A.	0.20
60-80	0.00	N.A.	0.00
70-80	0.00	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	1859.71	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	617.70
10-20	938.82
20-30	263.16
30-40	36.24
40-50	3.22
50-60	0.57
60-70	0.00
70-80	0.00
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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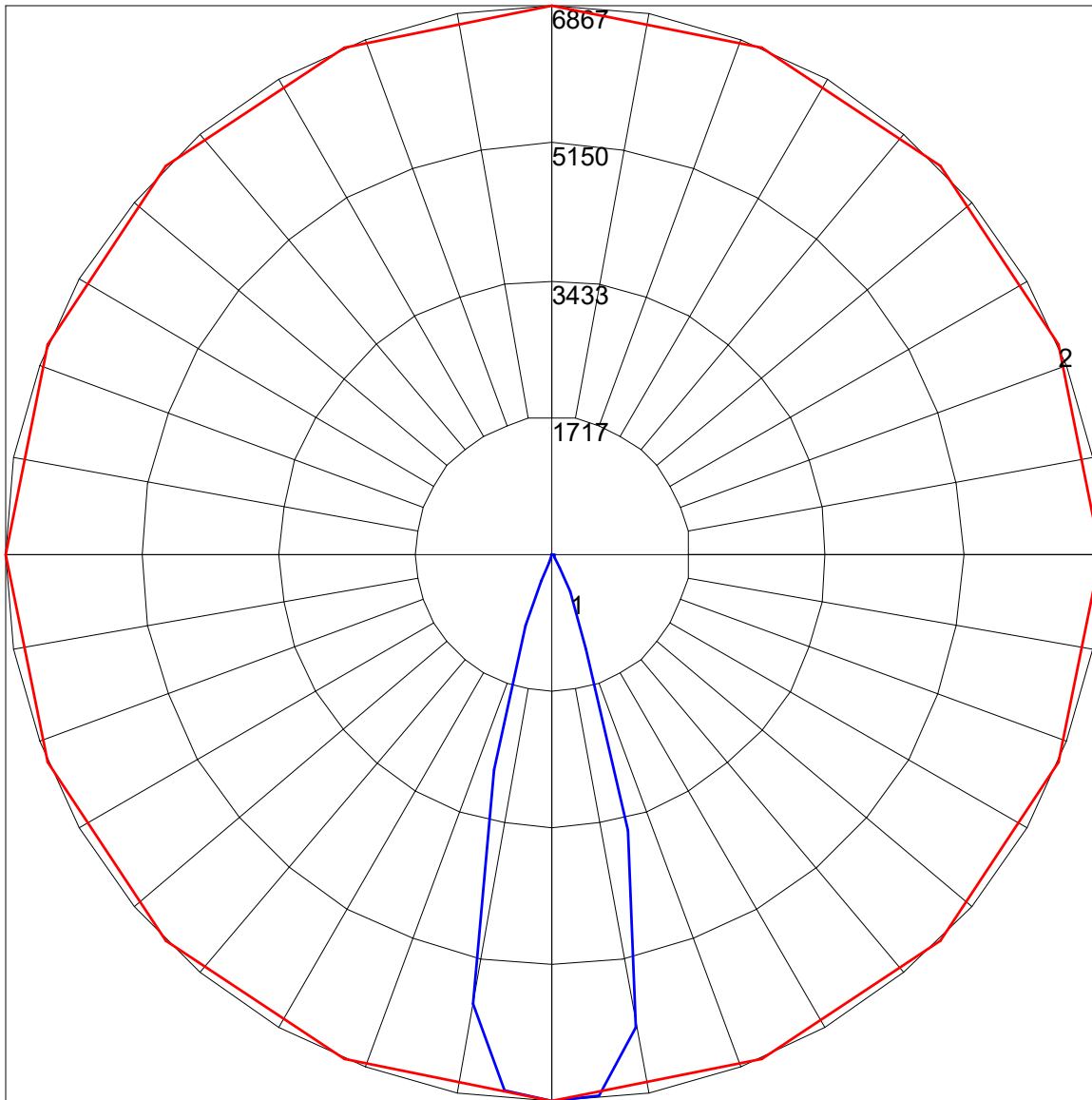
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## COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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	305	305	305	293	293	293	287
1	330	324	319	314	324	318	314	309	307	303	300	296	294	291	287	285	283	278
2	320	310	301	294	314	305	297	291	296	290	285	288	283	279	280	276	273	269
3	310	297	287	279	305	293	284	277	286	279	272	280	273	268	274	269	264	261
4	301	286	275	266	296	283	273	265	277	269	262	272	265	259	267	261	256	253
5	292	276	264	256	288	273	263	255	269	259	252	264	257	250	260	254	248	245
6	284	266	255	246	280	264	254	246	261	251	244	257	249	243	254	247	241	238
7	276	258	246	238	273	256	245	238	253	244	236	250	242	235	248	240	234	231
8	269	250	239	231	266	249	238	230	246	236	229	244	235	229	241	234	228	225
9	262	243	232	224	259	242	231	224	240	230	223	238	229	222	236	228	222	219
10	255	236	225	218	253	235	225	217	233	224	217	232	223	216	230	222	216	213

POLAR GRAPH



Maximum Candela = 6866.86 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.)