



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4AR-L12-9DW-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-L12-9DW-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	818
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	35
Total Luminaire Watts	23.4
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	518	414	828
55	510	510	510
65	519	173	173
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>	1589.765	1589.765	1589.765	1589.765	1589.765	1589.765	1589.765	1589.765	1589.765
<b>5</b>	1639.556	1636.000	1633.629	1630.665	1629.480	1631.851	1634.222	1640.149	1636.593
<b>10</b>	1694.683	1688.162	1683.420	1685.198	1688.755	1701.796	1708.909	1715.429	1716.614
<b>15</b>	1589.172	1570.797	1562.498	1565.462	1573.761	1606.362	1628.887	1632.443	1637.778
<b>20</b>	1073.477	1029.020	1039.690	988.713	1051.545	1018.943	1104.893	1128.010	1177.209
<b>25</b>	400.701	389.439	407.814	429.154	432.710	424.412	411.371	408.407	404.258
<b>30</b>	106.696	110.252	101.954	85.949	106.696	113.216	96.619	87.728	102.546
<b>35</b>	12.448	11.855	12.448	14.226	18.968	20.154	17.783	17.190	17.783
<b>40</b>	4.742	4.742	4.742	7.113	8.299	8.891	7.706	7.706	7.706
<b>45</b>	2.964	2.964	2.371	2.371	4.742	5.335	4.149	4.149	4.149
<b>50</b>	4.149	2.371	1.778	2.964	2.964	4.149	2.371	2.964	2.964
<b>55</b>	2.371	2.371	2.371	1.186	2.371	1.778	1.778	1.778	1.778
<b>60</b>	1.778	1.186	0.593	1.186	1.186	0.593	0.593	0.593	1.186
<b>65</b>	1.778	1.778	0.593	0.593	0.593	0.000	0.000	0.000	0.000
<b>70</b>	1.186	0.593	1.186	0.000	0.593	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-L12-9DW-DIM-UNV-OW-OF-CS\_0 DEGREE TILT\_.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	571.77	N.A.	69.90
0-30	791.42	N.A.	96.70
0-40	812.45	N.A.	99.30
0-60	817.47	N.A.	99.90
0-80	818.16	N.A.	100.00
0-90	818.16	N.A.	100.00
10-90	660.45	N.A.	80.70
20-40	240.68	N.A.	29.40
20-50	243.98	N.A.	29.80
40-70	5.62	N.A.	0.70
60-80	0.69	N.A.	0.10
70-80	0.10	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	818.16	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	157.72
10-20	414.05
20-30	219.65
30-40	21.03
40-50	3.30
50-60	1.72
60-70	0.59
70-80	0.10
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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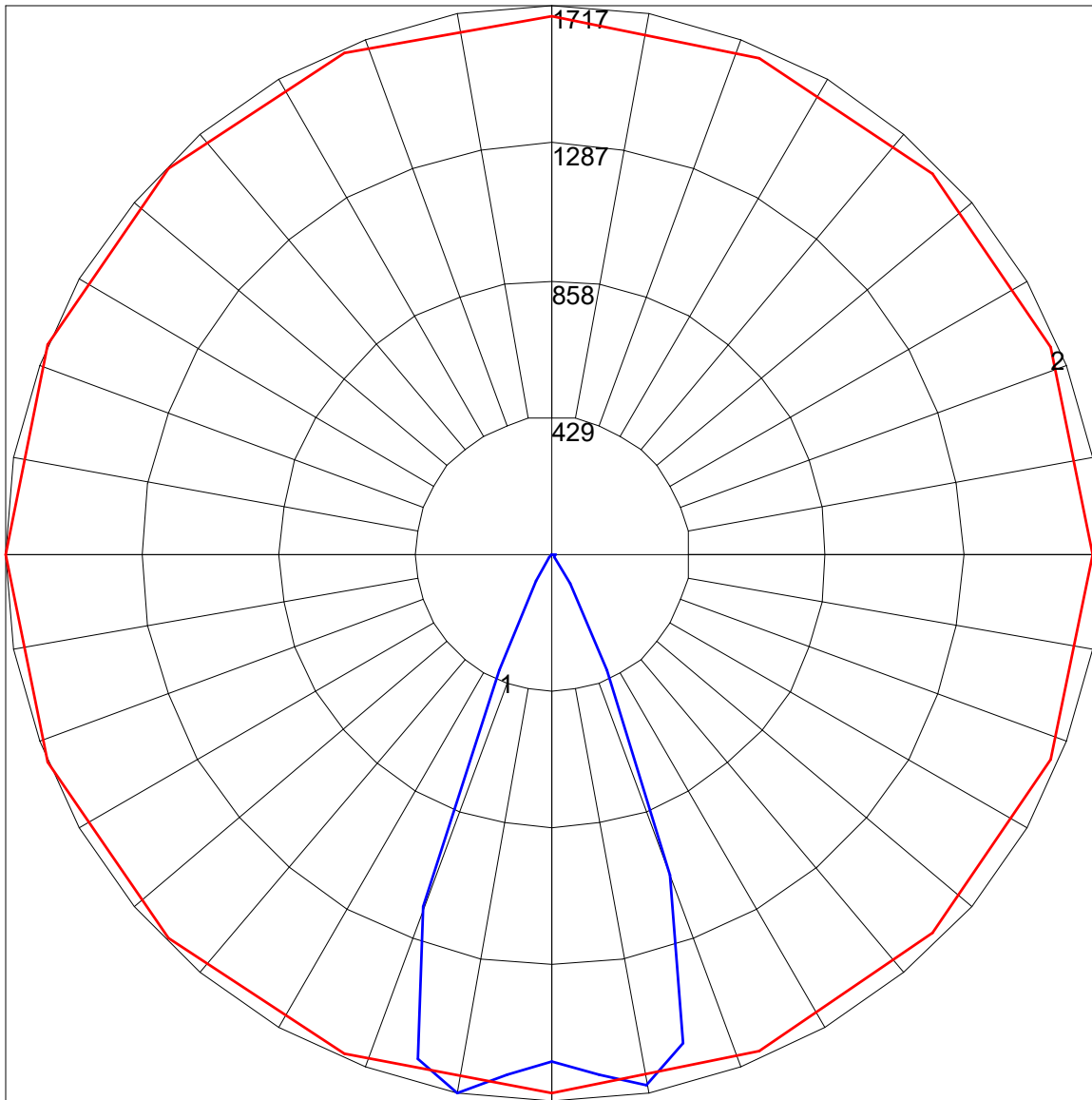
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## COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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	209	209	209	209	204	204	204	204	195	195	195	187	187	187	179	179	179	176
1	201	197	194	190	197	193	190	187	186	184	182	180	178	176	174	173	171	168
2	194	187	181	176	190	184	179	174	178	174	171	173	170	167	169	166	164	161
3	187	178	171	165	184	175	169	164	171	166	161	167	163	159	163	160	157	154
4	180	170	162	156	177	168	161	155	164	158	153	161	156	152	158	154	150	148
5	174	162	154	148	171	161	153	148	158	151	146	155	149	145	152	148	144	142
6	168	155	147	141	165	154	146	141	152	145	140	149	144	139	147	142	138	136
7	162	149	141	135	160	148	140	135	146	139	134	144	138	133	142	137	133	131
8	156	143	135	129	154	142	135	129	141	134	129	139	133	128	138	132	128	126
9	151	138	130	124	149	137	129	124	136	129	124	134	128	123	133	127	123	121
10	146	133	125	120	145	132	125	119	131	124	119	130	123	119	129	123	119	117

POLAR GRAPH



Maximum Candela = 1716.614 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.)