



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4AR-L20-9DW-DIM-UNV-AM-OF-WH\_25 DEGREE TILT.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST]GEN from BALLABS TEST NO. 20467.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIE,S INC

[ISSUEDATE] 21-MAY-2018

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] GEN7 V13 LED 4"SHORT HEATSINK 4"RND ADJ DOWNLIGHT @ 25 TILT

[MORE] ACRYLIC MED TIR OPTIC & 4"ASYM TRIM w/SOLITE LENS

[MORE] ADVANCE # XI025C070V054DSM1 @ 610mA

[LUMCAT] 4AR-L20-9DW-DIM-AM-OF-WH\_25 DEGREE TILT

[LAMPCAT] BXRE-35E2000

[\_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	1358
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)	2.04
Spacing Criterion (90-270)	0.54
Spacing Criterion (Diagonal)	1.08
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	116626	16345	5618
55	14273	4618	5037
65	4843	3703	3134
75	2791	1395	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>	439.725	439.725	439.725	439.725	439.725	439.725	439.725	439.725	439.725
<b>5</b>	1133.925	963.300	785.850	604.500	423.150	293.475	223.275	180.375	159.900
<b>10</b>	2201.550	1889.550	1240.200	664.950	338.325	191.100	121.875	97.500	86.775
<b>15</b>	3826.875	3202.875	1599.975	626.925	245.700	116.025	75.075	56.550	50.700
<b>20</b>	4909.125	3986.775	1699.425	486.525	156.975	68.250	48.750	37.050	33.150
<b>25</b>	5225.025	4131.075	1444.950	316.875	91.650	47.775	37.050	34.125	32.175
<b>30</b>	4602.975	3710.850	968.175	166.725	56.550	37.050	34.125	36.075	37.050
<b>35</b>	3297.450	2307.825	529.425	88.725	40.950	35.100	38.025	38.025	40.950
<b>40</b>	1998.750	1181.700	235.950	54.600	35.100	37.050	39.000	40.950	41.925
<b>45</b>	667.875	426.075	93.600	33.150	32.175	36.075	37.050	39.975	39.975
<b>50</b>	223.275	136.500	38.025	25.350	28.275	31.200	33.150	34.125	35.100
<b>55</b>	66.300	44.850	21.450	19.500	23.400	25.350	25.350	24.375	25.350
<b>60</b>	26.325	19.500	16.575	14.625	16.575	16.575	16.575	16.575	15.600
<b>65</b>	16.575	14.625	12.675	10.725	10.725	9.750	9.750	8.775	6.825
<b>70</b>	10.725	9.750	7.800	5.850	5.850	3.900	2.925	0.975	2.925
<b>75</b>	5.850	5.850	2.925	0.975	0.000	0.000	0.000	0.000	0.975
<b>80</b>	2.925	1.950	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-AM-OF-WH\_25 DEGREE TILT.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	328.99	N.A.	24.20
0-30	814.94	N.A.	60.00
0-40	1191.4	N.A.	87.70
0-60	1344.33	N.A.	99.00
0-80	1357.83	N.A.	100.00
0-90	1357.95	N.A.	100.00
10-90	1302.67	N.A.	95.90
20-40	862.42	N.A.	63.50
20-50	986.06	N.A.	72.60
40-70	164.01	N.A.	12.10
60-80	13.50	N.A.	1.00
70-80	2.42	N.A.	0.20
80-90	0.12	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	1357.95	N.A.	100.00

Total Luminaire Efficiency = N.A.%

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	55.27
10-20	273.71
20-30	485.96
30-40	376.46
40-50	123.64
50-60	29.28
60-70	11.09
70-80	2.42
80-90	0.12
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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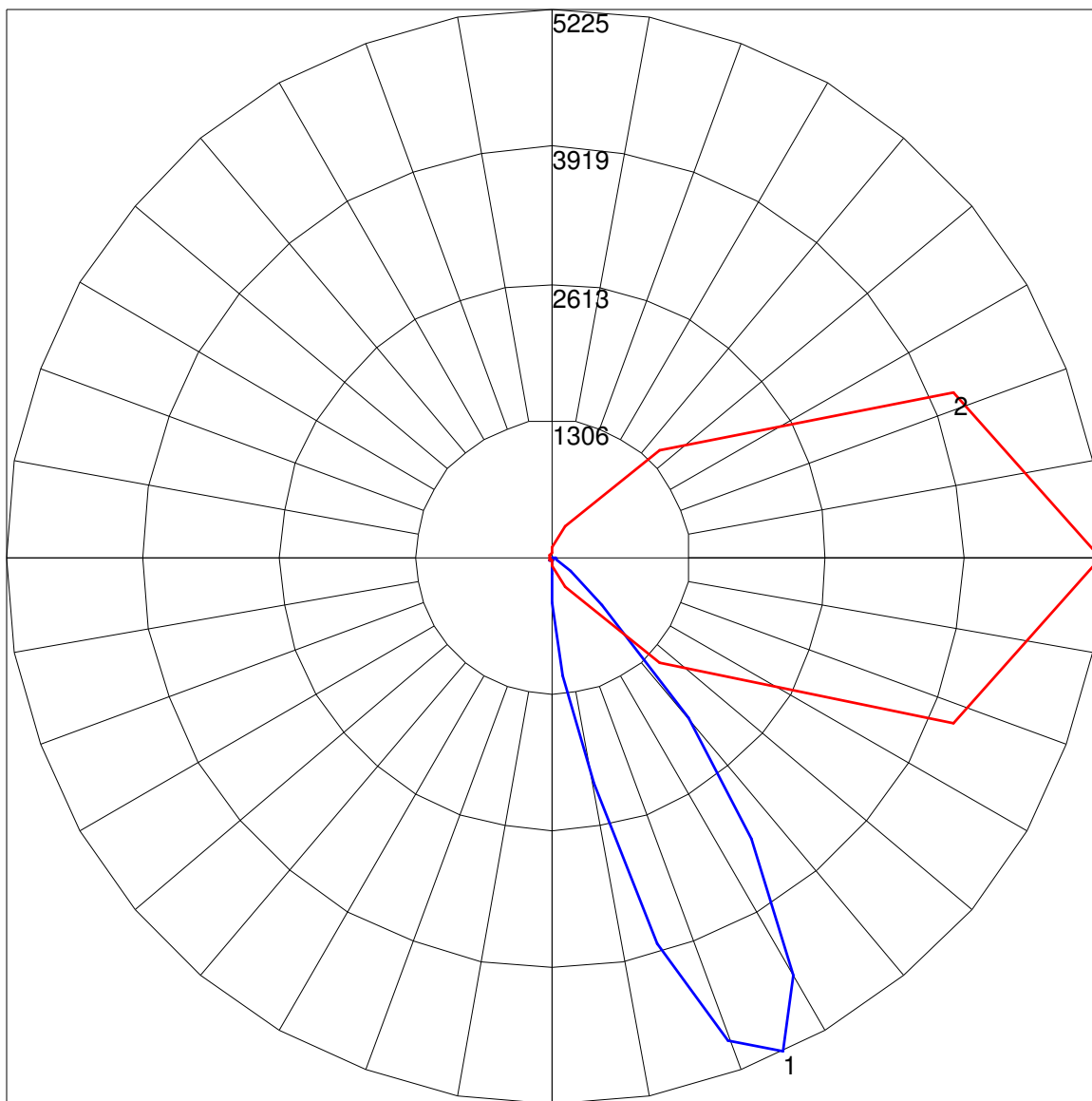
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## COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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	116	116	116	116	113	113	113	113	108	108	108	104	104	104	99	99	99	97
1	110	107	105	102	108	105	103	100	101	99	97	97	96	94	94	93	92	90
2	104	99	94	91	102	97	93	90	94	91	88	91	88	86	88	86	84	82
3	98	91	86	81	96	90	85	81	87	83	79	85	81	78	82	79	77	75
4	92	84	78	73	90	83	77	73	81	76	72	79	75	71	77	73	70	69
5	87	78	71	67	85	77	71	66	75	70	66	73	69	65	72	68	65	63
6	82	72	65	61	80	71	65	61	70	64	60	68	63	60	67	63	59	58
7	77	67	60	56	75	66	60	56	65	59	55	64	59	55	62	58	55	53
8	72	62	56	51	71	62	55	51	60	55	51	59	54	51	58	54	50	49
9	68	58	51	47	67	57	51	47	56	51	47	55	50	47	55	50	47	45
10	65	54	48	44	63	54	48	44	53	47	43	52	47	43	51	46	43	42

POLAR GRAPH



Maximum Candela = 5225.025 Located At Horizontal Angle = 0, Vertical Angle = 25

# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)

# 2 - Horizontal Cone Through Vertical Angle (25) (Through Max. Cd.)