



**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : RND-2-L83-835-FXA-DIM-UNV.IES**

**DESCRIPTION INFORMATION (From Photometric File)**

IESNA:LM-63-2002  
 [TEST]GEN FROM BALLABS TEST NO. 18641.0  
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC  
 [ISSUE DATE] 07-OCT-2018  
 [MANUFAC] WILLIAMS INDOOR  
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO  
 [LUMINAIRE] 3-32LED 22"ARRAYS 2x2'RECESSED LUMINAIRE w/WHITE REFL  
 [MORE] ARRAYS ON WHITE INTERNAL REFLS & 2"DIA WHITE FROST ACRYLIC  
 [MORE] CONVEX LENS  
 [LUMCAT] RND-2-L83-835-FXA-DIM-UNV  
 [LAMPCAT] HLM 80 CRI 3500K CCT

**CHARACTERISTICS**

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	8376
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	79
Total Luminaire Watts	106.1
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.26
Spacing Criterion (90-270)	1.26
Spacing Criterion (Diagonal)	1.36
Basic Luminous Shape	Circular w/ Sides
Luminous Length (0-180)	1.81 ft (Diameter)
Luminous Width (90-270)	1.81 ft (Diameter)
Luminous Height	0.10 ft

**LUMINANCE DATA (cd/sq.m)**

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	10668	10585	10627
55	9634	9807	9609
65	8601	8697	8504
75	7192	7144	6858
85	5003	4905	4905

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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>
<b>0</b>	2978.727	2978.727	2978.727	2978.727	2978.727
<b>5</b>	2986.259	2978.727	2971.196	2971.196	2963.664
<b>10</b>	2944.835	2941.070	2929.772	2933.538	2929.772
<b>15</b>	2873.286	2873.286	2865.754	2861.988	2861.988
<b>20</b>	2771.610	2771.610	2767.844	2764.078	2760.312
<b>25</b>	2654.871	2647.339	2651.105	2636.042	2647.339
<b>30</b>	2515.537	2496.708	2504.240	2481.645	2504.240
<b>35</b>	2342.311	2327.248	2327.248	2308.419	2334.780
<b>40</b>	2146.491	2138.960	2131.428	2112.599	2138.960
<b>45</b>	1943.139	1939.374	1928.076	1905.482	1935.608
<b>50</b>	1709.661	1713.427	1713.427	1709.661	1705.896
<b>55</b>	1464.886	1483.715	1491.247	1487.481	1461.120
<b>60</b>	1246.471	1246.471	1261.534	1246.471	1227.642
<b>65</b>	1009.227	1001.696	1020.525	1005.462	997.930
<b>70</b>	779.515	756.921	794.578	771.984	764.452
<b>75</b>	568.632	542.271	564.866	549.803	542.271
<b>80</b>	357.749	346.451	346.451	331.388	338.920
<b>85</b>	192.054	184.523	188.289	180.757	188.289
<b>90</b>	82.847	79.081	67.784	67.784	60.252

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	1091.13	N.A.	13.00
0-30	2309.98	N.A.	27.60
0-40	3763.86	N.A.	44.90
0-60	6575.85	N.A.	78.50
0-80	8162.01	N.A.	97.40
0-90	8376.27	N.A.	100.00
10-90	8093.71	N.A.	96.60
20-40	2672.72	N.A.	31.90
20-50	4159.72	N.A.	49.70
40-70	3811.49	N.A.	45.50
60-80	1586.16	N.A.	18.90
70-80	586.66	N.A.	7.00
80-90	214.27	N.A.	2.60
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	8376.27	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	282.56
10-20	808.57
20-30	1218.85
30-40	1453.87
40-50	1486.99
50-60	1325.00
60-70	999.50
70-80	586.66
80-90	214.27
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

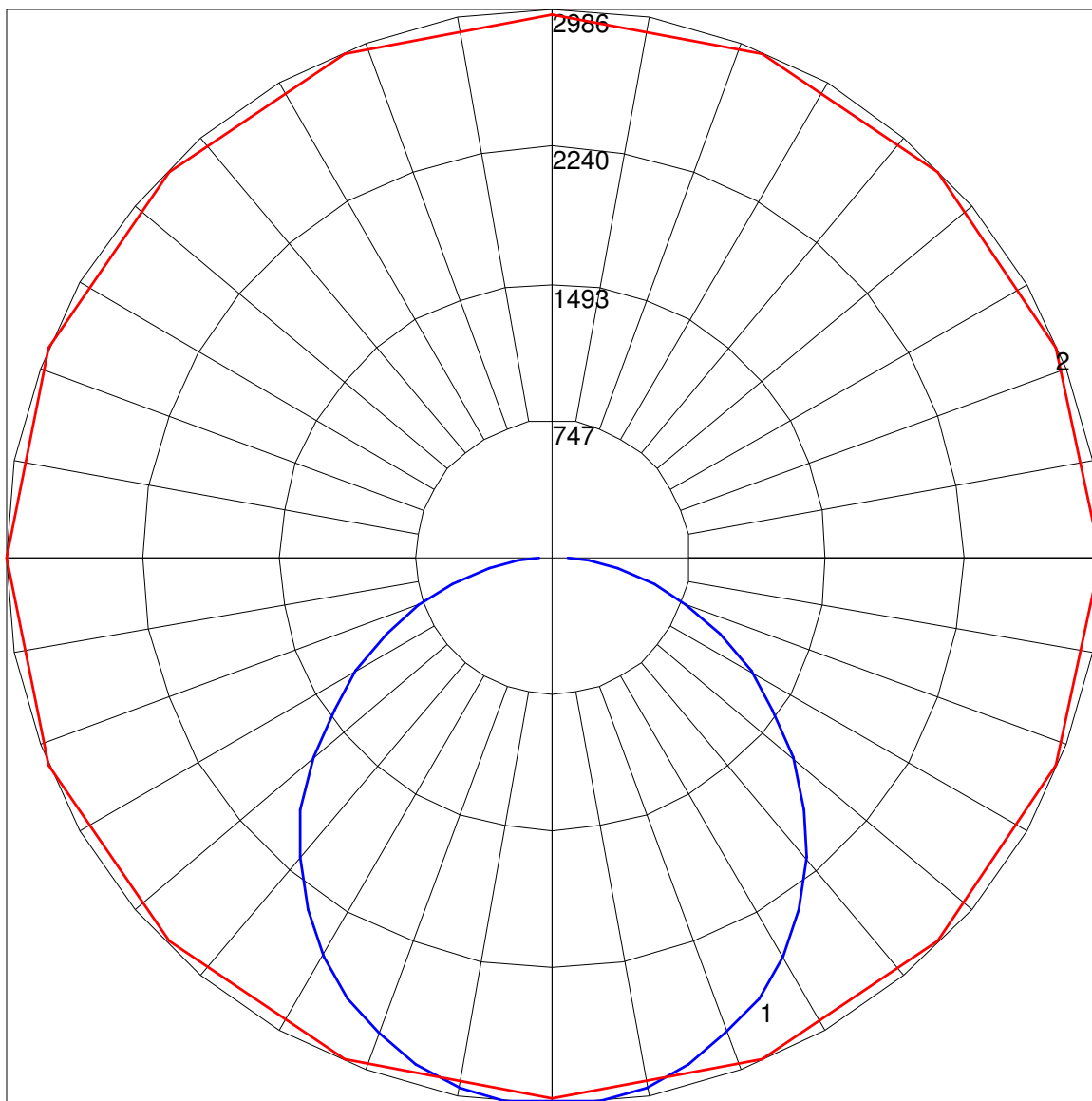
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**COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD**

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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	108	104	99	95	106	101	97	94	97	94	91	93	90	88	90	87	85	83
2	99	90	83	78	96	88	82	77	85	79	75	81	77	73	78	75	71	69
3	90	79	71	64	87	78	70	64	75	68	63	72	66	62	69	65	61	58
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	50
5	76	63	54	47	74	62	53	47	59	52	46	58	51	46	56	50	45	43
6	70	57	48	41	68	56	47	41	54	46	41	52	45	40	50	44	40	38
7	65	51	42	36	63	50	42	36	49	41	36	47	41	36	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	44	37	32	42	36	32	30
9	56	43	35	29	55	42	34	29	41	34	29	40	34	29	39	33	29	27
10	53	40	32	26	52	39	32	26	38	31	26	37	31	26	36	30	26	24

POLAR GRAPH



Maximum Candela = 2986.259 Located At Horizontal Angle = 0, Vertical Angle = 5  
# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)