



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 6AR-L20-830-DIM-UNV-LM-OF-WH\_0 DEGREE TILT.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
 [TEST] GEN FROM BALLABS TEST NO. 20428.0  
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC  
 [ISSUEDATE] 18-OCT-2021  
 [MANUFAC] WILLIAMS INDOOR  
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE,MO  
 [LUMINAIRE] 6"RND ADJUSTABLE LED DOWNLIGHT @ 0 TILT  
 [MORE] ACRYLIC MED TIR OPTIC & 6"WHITE ASYM FLUSH TRIM w/LENS  
 [LUMCAT] 6AR-L20-830-DIM-UNV-LM-OF-WH\_0 DEG TILT  
 [LAMPCAT] BXRE-35E4000  
 [ \_SEARCH\_SOURCETYPE] LED  
 [ \_SEARCH\_APPLICATION] Indoor, Classroom, Industrial, Office, Direct, Downlight  
 [ \_SEARCH\_MOUNTING] Recessed

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1873
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	89
Total Luminaire Watts	21
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.56
Spacing Criterion (90-270)	0.60
Spacing Criterion (Diagonal)	0.58
Basic Luminous Shape	Circular
Luminous Length (0-180)	0.50 ft (Diameter)
Luminous Width (90-270)	0.50 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	3925	4326	5728
55	2518	2716	3259
65	1943	1943	2279
75	1423	1204	1641
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>	4369.644	4369.644	4369.644	4369.644	4369.644	4369.644	4369.644	4369.644	4369.644
<b>5</b>	4182.447	4174.691	4176.242	4197.444	4217.611	4257.429	4273.460	4276.046	4309.658
<b>10</b>	3577.420	3611.549	3618.272	3652.919	3746.517	3805.986	3854.078	3991.631	3967.326
<b>15</b>	2493.024	2592.828	2639.885	2696.251	2841.044	2983.252	3012.210	3177.688	3198.890
<b>20</b>	1488.265	1477.922	1538.425	1672.358	1601.513	1787.158	1929.883	2163.103	2072.090
<b>25</b>	754.992	731.721	799.981	834.111	907.024	912.195	970.630	1115.423	1085.947
<b>30</b>	379.564	400.766	384.736	417.831	447.307	474.714	481.437	518.669	537.285
<b>35</b>	191.334	188.748	188.748	210.467	230.117	226.498	252.871	261.662	266.316
<b>40</b>	92.564	91.530	96.701	104.458	113.766	116.351	127.211	131.865	140.139
<b>45</b>	50.678	51.712	55.849	61.537	73.948	70.845	74.982	75.499	86.876
<b>50</b>	34.130	34.647	37.232	41.887	43.955	47.575	48.609	50.678	52.229
<b>55</b>	26.373	25.856	28.441	31.027	34.130	34.647	35.164	36.198	38.267
<b>60</b>	20.168	20.685	21.719	22.753	25.339	25.856	26.373	26.373	28.441
<b>65</b>	14.996	14.996	14.996	16.031	17.582	18.099	19.133	20.168	21.202
<b>70</b>	11.894	11.377	11.894	11.377	12.928	13.445	13.445	14.479	15.514
<b>75</b>	6.723	6.723	5.688	7.240	7.757	7.757	8.274	9.308	9.825
<b>80</b>	3.103	2.068	2.068	2.586	3.103	4.137	4.137	5.171	5.688
<b>85</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.517	1.551
<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 : 6AR-L20-830-DIM-UNV-LM-OF-WH\_0 DEGREE TILT.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	1158.69	N.A.	61.90
0-30	1606.33	N.A.	85.80
0-40	1761.23	N.A.	94.00
0-60	1846.1	N.A.	98.60
0-80	1872.17	N.A.	99.90
0-90	1873.2	N.A.	100.00
10-90	1484.81	N.A.	79.30
20-40	602.53	N.A.	32.20
20-50	657.91	N.A.	35.10
40-70	102.63	N.A.	5.50
60-80	26.07	N.A.	1.40
70-80	8.31	N.A.	0.40
80-90	1.03	N.A.	0.10
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	1873.2	N.A.	100.00

Total Luminaire Efficiency = N.A.%

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	388.39
10-20	770.31
20-30	447.63
30-40	154.90
40-50	55.38
50-60	29.49
60-70	17.76
70-80	8.31
80-90	1.03
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	114	112	109	107	112	109	107	106	105	104	102	102	101	99	98	97	97	95
2	109	105	101	98	107	103	100	97	100	98	95	97	95	93	95	93	91	90
3	105	99	95	91	103	98	94	91	95	92	89	93	90	88	91	88	87	85
4	101	94	89	86	99	93	89	85	91	87	84	89	86	83	87	84	82	81
5	97	89	84	81	95	89	84	80	87	83	80	85	82	79	84	81	78	77
6	93	85	80	76	92	85	80	76	83	79	76	82	78	75	81	77	75	74
7	89	81	76	73	88	81	76	73	80	75	72	79	75	72	77	74	72	70
8	86	78	73	69	85	77	73	69	76	72	69	76	72	69	75	71	69	67
9	83	75	70	66	82	74	70	66	74	69	66	73	69	66	72	68	66	65
10	80	72	67	64	79	72	67	64	71	66	64	70	66	63	69	66	63	62

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## UGR TABLE - CORRECTED

### Reflectances

Ceiling Cavity	70	70	50	50	30	70	70	50	50	30
Walls	50	30	50	30	30	50	30	50	30	30
Floor Cavity	20	20	20	20	20	20	20	20	20	20

### Room Size UGR Viewed Crosswise

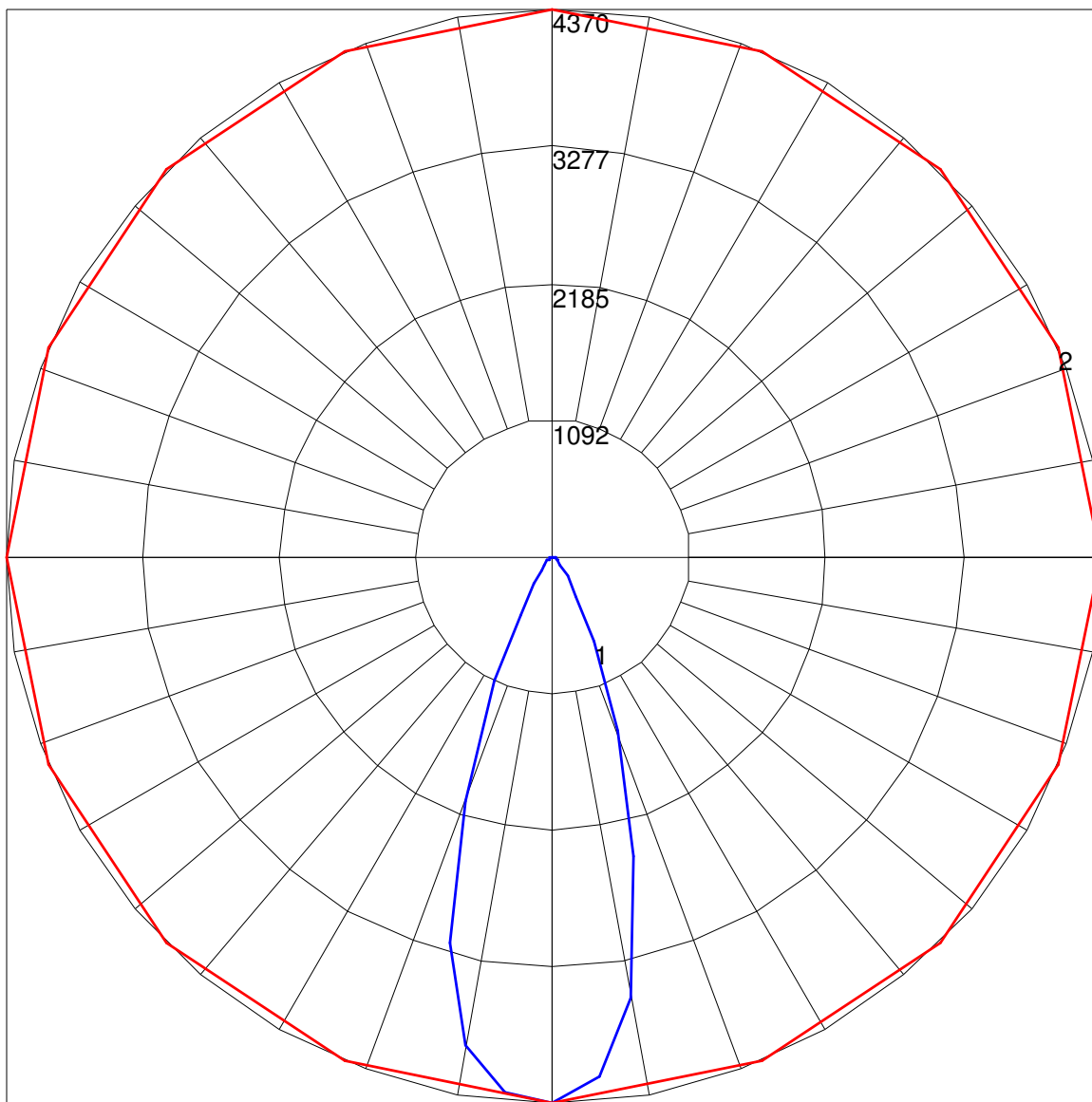
X=2H	Y=2H	6.2	7.2	6.6	7.5	7.8	7.7	8.6	8.0	8.9	9.3
	3H	7.6	8.4	7.9	8.8	9.1	8.8	9.6	9.2	10.0	10.3
	4H	8.0	8.7	8.4	9.1	9.5	9.1	9.9	9.5	10.3	10.7
	6H	8.1	8.8	8.5	9.2	9.6	9.2	10.0	9.7	10.3	10.7
	8H	8.1	8.8	8.5	9.2	9.6	9.2	9.9	9.7	10.3	10.7
	12H	8.0	8.7	8.5	9.1	9.5	9.2	9.8	9.6	10.2	10.6

### UGR Viewed Endwise

4H	2H	6.6	7.3	7.0	7.7	8.1	7.9	8.7	8.3	9.1	9.5
	3H	8.1	8.8	8.5	9.2	9.6	9.2	9.9	9.7	10.3	10.7
	4H	8.6	9.2	9.0	9.6	10.0	9.7	10.2	10.1	10.7	11.1
	6H	8.8	9.2	9.2	9.7	10.2	9.8	10.3	10.3	10.8	11.3
	8H	8.7	9.2	9.2	9.6	10.1	9.8	10.3	10.3	10.7	11.2
	12H	8.7	9.1	9.2	9.6	10.0	9.8	10.2	10.3	10.7	11.1
8H	4H	8.6	9.1	9.1	9.5	10.0	9.7	10.2	10.2	10.6	11.1
	6H	8.8	9.2	9.3	9.7	10.2	10.0	10.3	10.5	10.8	11.3
	8H	8.8	9.1	9.3	9.7	10.2	10.0	10.3	10.5	10.8	11.3
	12H	8.8	9.0	9.3	9.5	10.1	9.9	10.2	10.4	10.7	11.3
12H	4H	8.6	9.0	9.1	9.5	9.9	9.7	10.1	10.2	10.6	11.0
	6H	8.8	9.1	9.3	9.6	10.1	9.9	10.2	10.5	10.7	11.3
	8H	8.8	9.1	9.3	9.6	10.1	9.9	10.2	10.5	10.7	11.3

Maximum UGR = 11.3

POLAR GRAPH



Maximum Candela = 4369.644 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.)