



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 6AR-L20-940-DIM-UNV-AM-OF-WH_0 DEGREE TILT_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] GEN FROM BALLABS TEST NO. 20437.0
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
 [ISSUE DATE] 06/09/2023
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
 [LUMINAIRE] 6" RND ADJ DOWNLIGHT @ 0 TILT
 [MORE] ACRYLIC MED TIR OPTIC & 6" WHITE ASYM TRIM w/ ANGLED
 [MORE] SOLITE LENS
 [LUMCAT] 6AR-L20-940-DIM-UNV-AM-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	1492
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	71
Total Luminaire Watts	21
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.64
Spacing Criterion (90-270)	0.56
Spacing Criterion (Diagonal)	0.56
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	3458	3250	3734
55	2004	2089	2046
65	2199	1909	1273
75	2078	1228	567
85	280	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>
0	3802.767	3802.767	3802.767	3802.767	3802.767	3802.767	3802.767	3802.767	3802.767
5	3724.194	3687.586	3669.282	3626.870	3580.887	3560.351	3538.475	3539.368	3576.423
10	3358.561	3292.934	3259.451	3155.877	3056.321	3018.374	2876.853	2947.837	2983.105
15	2688.902	2513.005	2386.663	2386.216	2247.374	2168.354	2133.532	1974.600	2152.282
20	1658.967	1602.716	1408.069	1326.817	1222.796	1215.653	1225.029	1225.475	1222.796
25	867.877	784.840	683.498	657.605	657.158	646.444	655.372	665.641	672.337
30	424.563	374.562	348.222	329.026	313.400	329.918	336.169	366.080	352.687
35	196.433	187.951	173.665	155.361	170.540	173.665	194.201	194.647	198.665
40	96.431	89.734	78.127	80.805	83.931	94.645	102.235	106.699	105.806
45	44.644	42.412	41.965	42.858	48.215	54.912	60.269	62.948	60.269
50	27.679	27.233	28.126	29.465	30.358	34.376	36.608	40.180	40.180
55	20.983	21.876	21.876	23.215	21.429	23.215	24.108	25.893	27.679
60	19.197	18.750	18.750	17.411	15.179	14.732	13.840	15.179	15.625
65	16.965	15.625	14.732	12.054	9.822	7.589	6.697	4.911	5.804
70	13.393	12.500	9.822	8.036	5.357	3.572	2.679	3.125	3.125
75	9.822	8.482	5.804	4.464	2.679	1.339	1.339	1.339	1.339
80	4.464	3.125	1.786	0.446	0.000	0.000	0.000	0.000	0.000
85	0.446	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
90	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 6AR-L20-940-DIM-UNV-AM-OF-WH_0 DEGREE TILT_.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	945.00	N.A.	63.30
0-30	1288.63	N.A.	86.40
0-40	1412.13	N.A.	94.70
0-60	1476.71	N.A.	99.00
0-80	1491.58	N.A.	100.00
0-90	1491.85	N.A.	100.00
10-90	1163.45	N.A.	78.00
20-40	467.13	N.A.	31.30
20-50	510.42	N.A.	34.20
40-70	75.40	N.A.	5.10
60-80	14.86	N.A.	1.00
70-80	4.05	N.A.	0.30
80-90	0.27	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	1491.85	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	328.40
10-20	616.60
20-30	343.63
30-40	123.49
40-50	43.29
50-60	21.29
60-70	10.81
70-80	4.05
80-90	0.27
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	114	112	110	108	112	110	108	106	106	104	103	102	101	100	99	98	97	95
2	110	105	102	99	107	104	100	98	100	98	96	98	95	94	95	93	92	90
3	105	100	95	92	103	98	94	91	96	92	90	93	91	88	91	89	87	86
4	101	95	90	86	99	93	89	86	91	88	85	90	86	84	88	85	83	82
5	97	90	85	81	96	89	85	81	87	83	80	86	82	80	84	81	79	78
6	93	86	81	77	92	85	80	77	84	80	77	82	79	76	81	78	76	74
7	90	82	77	74	89	82	77	73	80	76	73	79	76	73	78	75	72	71
8	87	79	74	70	86	78	74	70	77	73	70	76	72	70	75	72	69	68
9	84	76	71	67	83	75	71	67	74	70	67	74	70	67	73	69	67	66
10	81	73	68	65	80	72	68	65	72	67	65	71	67	64	70	67	64	63

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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

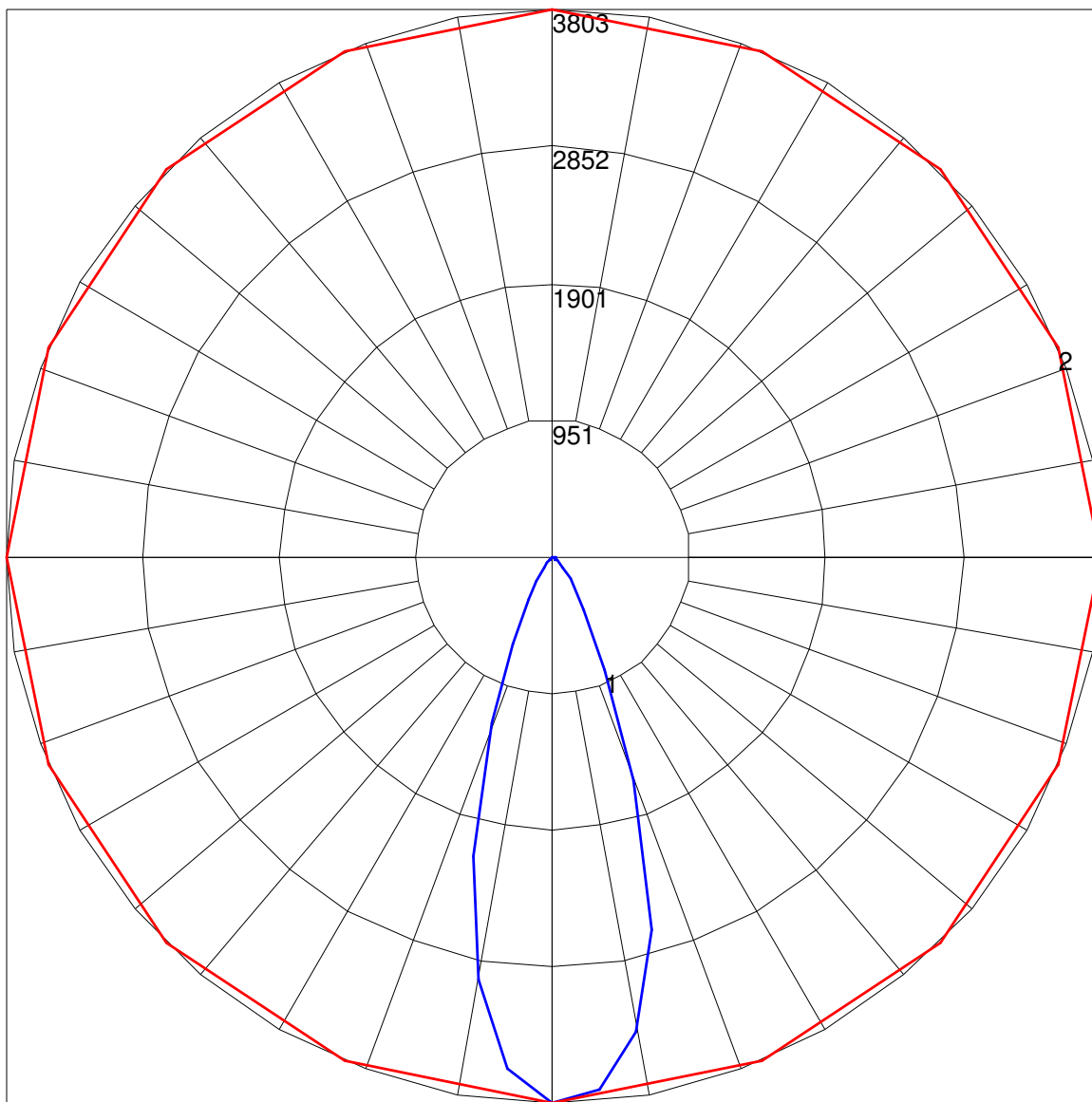
X=2H	Y=2H	6.1	7.0	6.4	7.3	7.6	5.7	6.7	6.1	7.0	7.3
	3H	8.1	8.9	8.5	9.3	9.6	6.3	7.1	6.7	7.4	7.8
	4H	8.9	9.6	9.3	10.0	10.4	6.3	7.1	6.7	7.5	7.9
	6H	9.2	9.9	9.7	10.3	10.7	6.2	7.0	6.7	7.3	7.7
	8H	9.3	9.9	9.7	10.3	10.7	6.2	6.9	6.6	7.2	7.7
	12H	9.2	9.9	9.7	10.3	10.7	6.1	6.8	6.6	7.2	7.6

UGR Viewed Endwise

4H	2H	6.5	7.3	7.0	7.7	8.1	5.9	6.7	6.4	7.1	7.5
	3H	8.7	9.3	9.1	9.7	10.2	6.6	7.3	7.1	7.7	8.1
	4H	9.6	10.1	10.0	10.6	11.0	6.8	7.3	7.2	7.8	8.2
	6H	10.0	10.5	10.4	10.9	11.4	6.7	7.2	7.2	7.6	8.1
	8H	10.0	10.5	10.5	10.9	11.4	6.6	7.1	7.1	7.5	8.0
	12H	10.0	10.4	10.5	10.9	11.3	6.6	6.9	7.1	7.4	7.9
8H	4H	9.6	10.0	10.0	10.5	10.9	6.8	7.3	7.3	7.7	8.2
	6H	10.0	10.4	10.5	10.9	11.4	6.7	7.1	7.3	7.6	8.1
	8H	10.1	10.4	10.6	10.9	11.4	6.7	7.0	7.2	7.5	8.0
	12H	10.0	10.3	10.6	10.8	11.4	6.6	6.9	7.1	7.4	8.0
12H	4H	9.5	9.9	10.0	10.4	10.8	6.8	7.2	7.3	7.7	8.1
	6H	10.0	10.3	10.5	10.7	11.3	6.7	7.0	7.2	7.5	8.0
	8H	10.0	10.3	10.5	10.8	11.4	6.6	6.9	7.2	7.4	8.0

Maximum UGR = 11.4

POLAR GRAPH



Maximum Candela = 3802.767 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.)