



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 80-4-L32-840-DIM-UNV\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
 [TEST] GEN FROM BALLABS TEST NO. 18635.0  
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC  
 [ISSUEDATE] 21-SEP-2020  
 [MANUFAC] WILLIAMS INDOOR  
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO  
 [LUMINAIRE] 4-32 LED 22" ARRAYS 4' INDUSTRIAL LUMINAIRE  
 [MORE] WHITE REFLECTOR w/OPEN BOTTOM  
 [LUMCAT] 80-4-L32-840-DIM-UNV  
 [LAMPCAT] 80 CRI 4000K CCT

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3331
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	164
Total Luminaire Watts	20.3
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.26
Spacing Criterion (90-270)	1.22
Spacing Criterion (Diagonal)	1.36
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	4.00 ft
Luminous Width (90-270)	0.88 ft
Luminous Height	0.00 ft



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

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	3614	3526	3517
55	3482	3405	3391
65	3317	3243	1734
75	2667	1482	284
85	1198	524	393

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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>	1251.780	1251.780	1251.780	1251.780	1251.780
<b>5</b>	1236.910	1232.661	1228.943	1233.723	1239.034
<b>10</b>	1211.949	1207.700	1226.819	1230.006	1217.791
<b>15</b>	1183.801	1196.016	1182.739	1173.179	1173.179
<b>20</b>	1148.218	1174.772	1137.065	1131.223	1131.223
<b>25</b>	1102.013	1107.855	1089.267	1086.080	1086.080
<b>30</b>	1043.062	1034.033	1027.129	1023.411	1022.349
<b>35</b>	980.393	971.365	963.398	962.336	960.212
<b>40</b>	911.351	896.481	892.232	890.639	889.577
<b>45</b>	831.688	814.693	811.506	810.444	809.382
<b>50</b>	738.747	726.532	722.814	721.752	721.752
<b>55</b>	650.055	636.778	635.715	633.060	633.060
<b>60</b>	549.148	539.057	537.995	535.870	534.277
<b>65</b>	456.207	447.178	446.116	343.616	238.460
<b>70</b>	348.395	340.429	272.449	184.819	188.537
<b>75</b>	224.651	224.651	124.806	107.811	23.899
<b>80</b>	118.964	77.008	21.775	18.057	18.057
<b>85</b>	33.990	18.057	14.871	11.153	11.153
<b>90</b>	0.000	0.000	0.000	0.000	0.000

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	451.86	N.A.	13.60
0-30	955.55	N.A.	28.70
0-40	1560.12	N.A.	46.80
0-60	2755.58	N.A.	82.70
0-80	3309.56	N.A.	99.30
0-90	3331.24	N.A.	100.00
10-90	3213.77	N.A.	96.50
20-40	1108.26	N.A.	33.30
20-50	1735.85	N.A.	52.10
40-70	1590.46	N.A.	47.70
60-80	553.98	N.A.	16.60
70-80	158.97	N.A.	4.80
80-90	21.68	N.A.	0.70
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	3331.24	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	117.47
10-20	334.40
20-30	503.68
30-40	604.58
40-50	627.59
50-60	567.87
60-70	395.01
70-80	158.97
80-90	21.68
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 RW	80				70				50			30			10			0
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	64	64	64	64	63	63	63	63	60	60	60	57	57	57	55	55	55	54
1	59	57	55	53	58	56	54	52	53	52	50	51	50	49	49	48	47	46
2	54	50	46	43	53	49	45	43	47	44	42	45	43	41	43	42	40	39
3	49	44	40	36	48	43	39	36	41	38	35	40	37	35	38	36	34	33
4	45	39	34	31	44	38	34	30	37	33	30	36	32	30	34	32	29	28
5	42	35	30	26	40	34	30	26	33	29	26	32	28	26	31	28	25	24
6	38	31	26	23	37	31	26	23	30	26	23	29	25	23	28	25	22	21
7	36	28	24	20	35	28	23	20	27	23	20	26	23	20	26	22	20	19
8	33	26	21	18	32	25	21	18	25	21	18	24	21	18	23	20	18	17
9	31	24	19	16	30	23	19	16	23	19	16	22	19	16	22	18	16	15
10	29	22	18	15	28	22	18	15	21	17	15	21	17	15	20	17	15	14

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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	18.8	20.4	19.2	20.7	21.0	UGR Viewed Endwise			
	3H	20.7	22.1	21.1	22.5	22.8	18.7	20.3	19.1	20.7
	4H	21.3	22.7	21.7	23.0	23.4	19.4	20.9	19.8	21.2
	6H	21.7	22.9	22.1	23.3	23.7	19.5	20.8	19.9	21.2
	8H	21.7	22.9	22.2	23.3	23.7	19.4	20.7	19.8	21.1
	12H	21.8	22.9	22.2	23.3	23.7	19.4	20.6	19.8	21.0

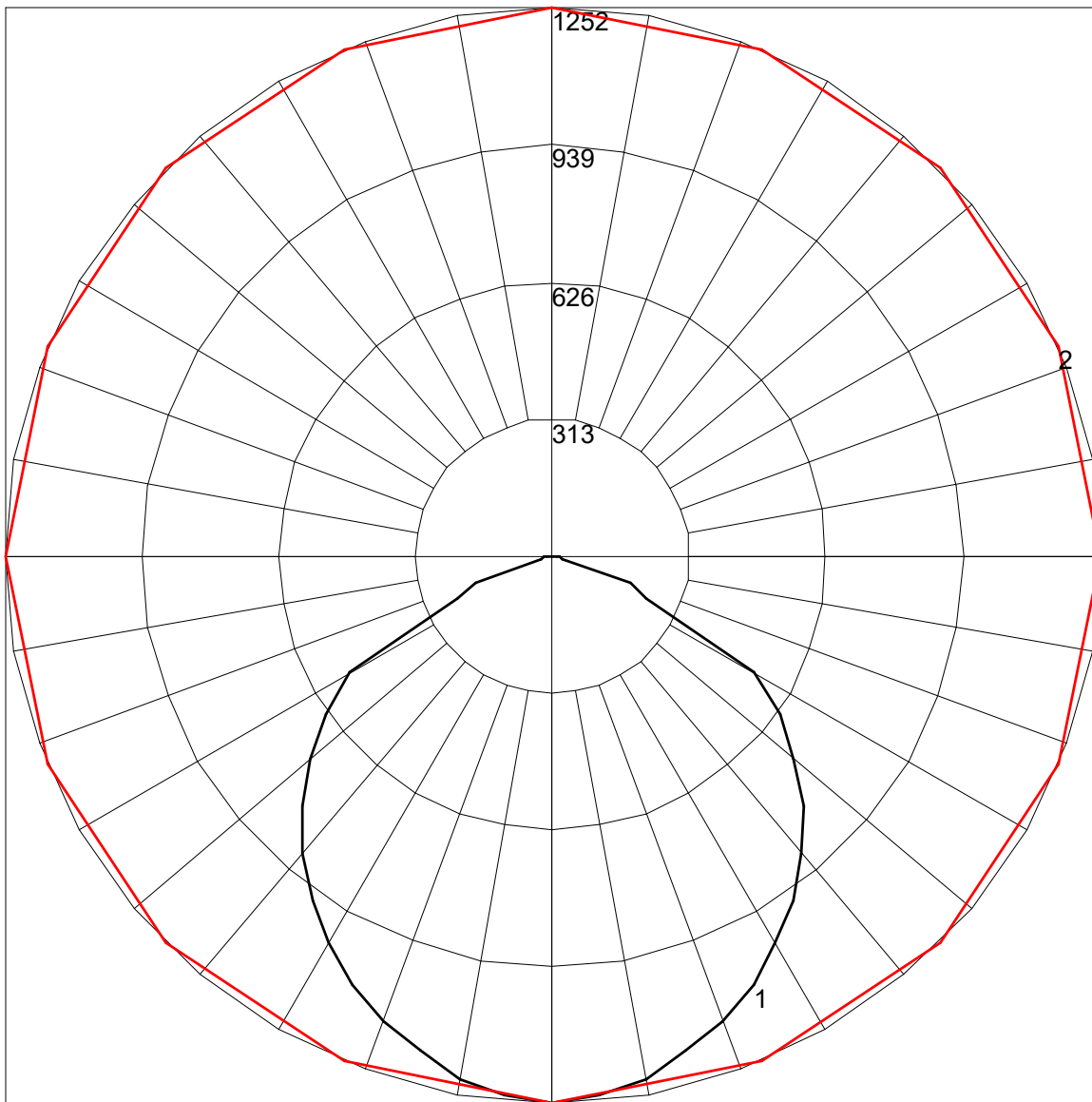
4H	2H	19.5	20.8	19.9	21.2	21.6	19.4	20.8	19.8	21.1	21.5
	3H	21.5	22.6	21.9	23.0	23.4	20.2	21.4	20.7	21.8	22.2
	4H	22.2	23.2	22.6	23.6	24.1	20.4	21.4	20.8	21.8	22.2
	6H	22.6	23.5	23.1	23.9	24.4	20.3	21.2	20.8	21.7	22.1
	8H	22.7	23.5	23.2	24.0	24.4	20.3	21.2	20.8	21.6	22.1
	12H	22.8	23.5	23.2	24.0	24.4	20.3	21.0	20.8	21.5	22.0

8H	4H	22.3	23.1	22.7	23.5	24.0	20.5	21.4	21.0	21.8	22.3
	6H	22.7	23.3	23.2	23.8	24.3	20.5	21.2	21.0	21.7	22.2
	8H	22.8	23.4	23.3	23.9	24.4	20.5	21.1	21.0	21.6	22.1
	12H	22.8	23.4	23.3	23.9	24.4	20.5	21.0	21.0	21.5	22.1

12H	4H	22.2	23.0	22.7	23.4	23.9	20.5	21.3	21.0	21.7	22.2
	6H	22.7	23.3	23.2	23.7	24.3	20.5	21.1	21.1	21.6	22.1
	8H	22.8	23.3	23.3	23.8	24.4	20.5	21.0	21.0	21.5	22.1

Maximum UGR = 24.4

POLAR GRAPH



Maximum Candela = 1251.78 Located At Horizontal Angle = 0, Vertical Angle = 0  
# 1 - Vertical Plane Through Horizontal Angles (90 - 270)  
# 2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)