



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 96-4-L40-940-PCFR-DIM-UNV\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
 [TEST] GEN FROM BALLABS TEST NO. 20009.0  
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC  
 [ISSUE DATE] 05 JUNE 2020  
 [MANUFAC] WILLIAMS INDOOR  
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO  
 [LUMINAIRE] 2-56 LED 22"ARRAYS 4'VAPORTITE LUMINAIRE  
 [MORE] WHITE FLAT REFLECTOR w/PCFR LENS  
 [MORE] EVERLINE LED DRIVER #D15CC55UNVTW-C @ 1029mA  
 [LUMCAT] 96-4-L40-940-PCFR-(L30)-DIM-UNV  
 [LAMPCAT] HLM 90 CRI 4000K CCT

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2371
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	103
Total Luminaire Watts	23
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.20
Spacing Criterion (90-270)	1.18
Spacing Criterion (Diagonal)	1.30
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	4.25 ft
Luminous Width (90-270)	0.50 ft
Luminous Height	0.17 ft

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

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	3237	2701	2719
55	2761	2368	2514
65	2197	2039	2286
75	1514	1709	2026
85	485	1429	1780

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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>
0	828.801	828.801	828.801	828.801	828.801
5	841.713	824.362	817.906	815.082	813.871
10	826.380	810.240	801.766	794.099	793.292
15	804.591	786.836	777.959	772.310	769.082
20	769.889	748.907	745.275	730.346	729.942
25	723.486	704.925	698.065	691.609	689.995
30	669.013	655.697	647.627	643.592	643.592
35	607.680	599.610	590.329	595.978	598.399
40	539.487	536.663	533.435	549.171	552.803
45	470.084	472.102	476.944	501.154	506.803
50	400.278	407.944	424.488	453.944	463.628
55	330.471	346.611	369.611	406.734	420.857
60	263.489	283.665	317.559	359.524	374.050
65	198.928	223.946	266.717	314.331	327.647
70	141.631	171.893	218.700	268.331	279.226
75	88.771	124.280	173.507	221.525	232.823
80	43.175	83.929	133.964	177.139	186.420
85	12.105	51.245	98.859	138.402	147.683
90	3.632	31.070	74.245	106.929	119.438
95	3.228	20.579	56.894	87.561	99.262
100	2.825	12.105	44.386	71.421	81.912
105	1.211	4.842	31.877	56.087	66.175
110	1.211	1.211	22.596	43.175	52.859
115	0.807	0.404	14.123	31.877	40.351
120	0.000	0.000	5.649	21.789	29.456
125	0.000	0.000	1.211	12.509	19.772
130	0.000	0.000	0.000	5.246	10.895
135	0.000	0.000	0.000	0.807	3.632
140	0.000	0.000	0.000	0.404	0.404
145	0.000	0.000	0.000	0.000	0.000
150	0.000	0.000	0.000	0.000	0.000
155	0.000	0.000	0.000	0.000	0.000
160	0.000	0.000	0.000	0.000	0.000
165	0.000	0.000	0.000	0.000	0.000
170	0.000	0.000	0.000	0.000	0.000
175	0.000	0.000	0.000	0.000	0.000
180	0.000	0.000	0.000	0.000	0.000

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	297.53	N.A.	12.50
0-30	619.97	N.A.	26.10
0-40	993.71	N.A.	41.90
0-60	1703.83	N.A.	71.90
0-80	2150.03	N.A.	90.70
0-90	2253.64	N.A.	95.00
10-90	2175.78	N.A.	91.80
20-40	696.18	N.A.	29.40
20-50	1070.89	N.A.	45.20
40-70	975.46	N.A.	41.10
60-80	446.19	N.A.	18.80
70-80	180.85	N.A.	7.60
80-90	103.62	N.A.	4.40
90-110	94.07	N.A.	4.00
90-120	110.89	N.A.	4.70
90-130	116.56	N.A.	4.90
90-150	117.40	N.A.	5.00
90-180	117.40	N.A.	5.00
110-180	23.34	N.A.	1.00
0-180	2371.05	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	77.87
10-20	219.67
20-30	322.43
30-40	373.75
40-50	374.71
50-60	335.41
60-70	265.34
70-80	180.85
80-90	103.62
90-100	59.80
100-110	34.26
110-120	16.83
120-130	5.67
130-140	0.82
140-150	0.03
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	118	118	118	118	115	115	115	115	108	108	108	103	103	103	97	97	97	95
1	107	101	97	92	103	99	94	90	93	90	87	89	86	83	84	82	80	77
2	97	88	81	75	94	86	79	74	81	76	71	77	73	69	74	70	66	64
3	88	77	69	62	85	75	68	61	72	65	60	68	63	58	65	60	56	54
4	81	68	60	53	78	67	59	52	64	56	51	61	55	50	58	53	48	46
5	74	61	52	45	72	60	51	45	57	50	44	55	48	43	52	47	42	40
6	69	55	46	40	66	54	46	39	52	44	39	50	43	38	47	42	37	35
7	64	50	41	35	62	49	41	35	47	40	34	45	39	34	43	38	33	31
8	59	46	37	31	57	45	37	31	43	36	31	41	35	30	40	34	30	28
9	55	42	34	28	54	41	33	28	40	33	28	38	32	27	37	31	27	25
10	52	39	31	26	50	38	31	26	37	30	25	36	29	25	34	29	24	23

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**UGR TABLE - CORRECTED**

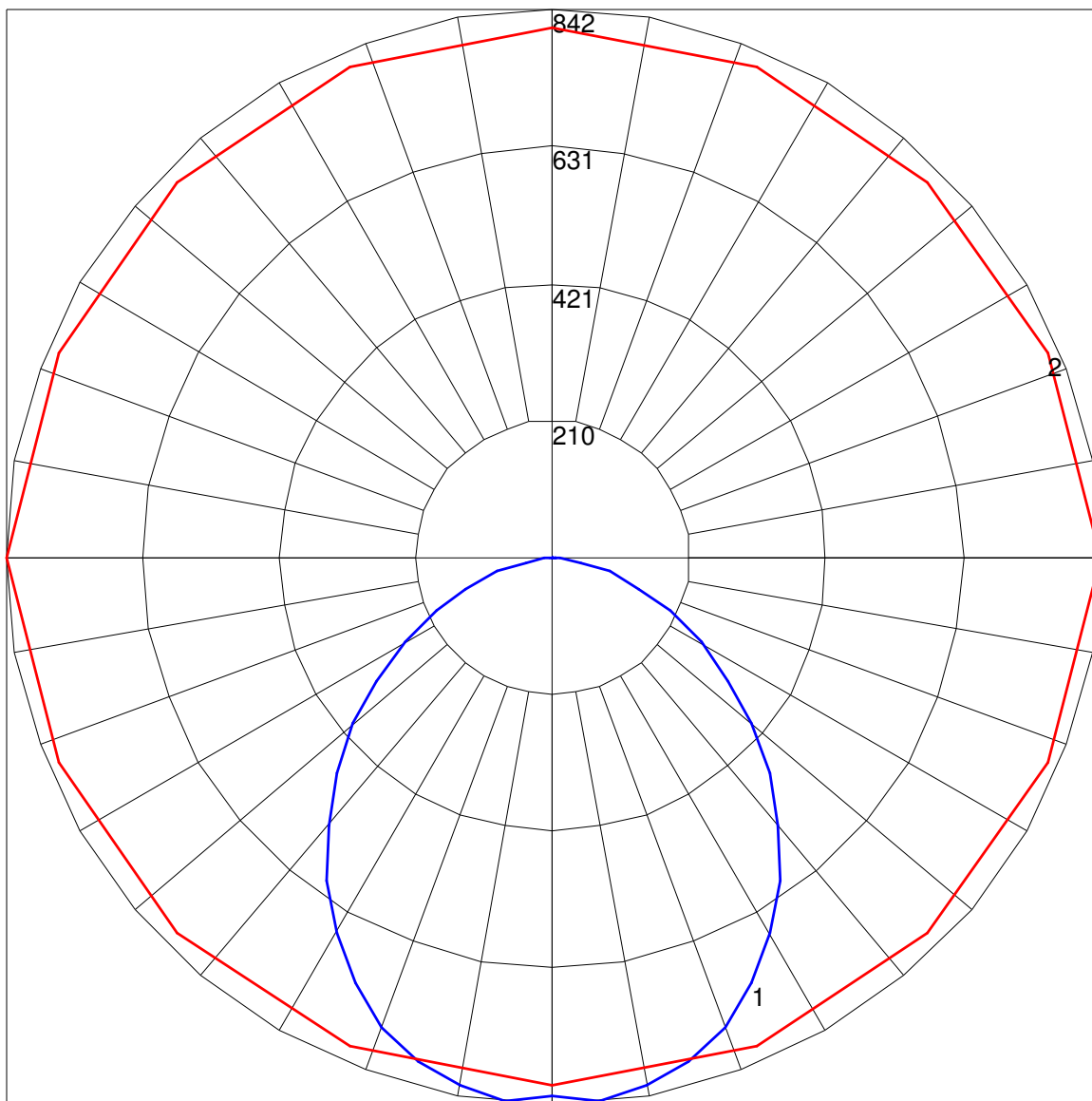
Reflectances

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					UGR Viewed Endwise				
X=2H	Y=2H	13.5	15.0	13.9	15.4	15.9	15.7	17.3	16.2	17.7	18.1
	3H	14.7	16.1	15.2	16.5	17.0	18.1	19.5	18.5	19.9	20.4
	4H	15.1	16.4	15.5	16.8	17.3	19.1	20.5	19.6	20.9	21.4
	6H	15.2	16.5	15.7	16.9	17.4	20.2	21.4	20.7	21.9	22.4
	8H	15.3	16.4	15.8	16.9	17.4	20.7	21.9	21.2	22.4	22.9
	12H	15.3	16.4	15.8	16.9	17.4	21.2	22.4	21.7	22.8	23.4
4H	2H	14.3	15.6	14.8	16.1	16.6	16.1	17.4	16.6	17.9	18.3
	3H	15.8	16.9	16.3	17.4	17.9	18.7	19.8	19.2	20.3	20.8
	4H	16.3	17.3	16.8	17.8	18.3	19.9	20.9	20.4	21.4	22.0
	6H	16.6	17.5	17.1	18.0	18.6	21.1	22.1	21.7	22.6	23.1
	8H	16.6	17.5	17.1	18.0	18.6	21.8	22.6	22.3	23.1	23.7
	12H	16.6	17.4	17.2	18.0	18.5	22.4	23.2	23.0	23.8	24.3
8H	4H	16.9	17.8	17.5	18.3	18.9	20.1	20.9	20.6	21.5	22.0
	6H	17.4	18.1	18.0	18.7	19.3	21.5	22.2	22.1	22.8	23.4
	8H	17.5	18.2	18.1	18.7	19.3	22.2	22.9	22.8	23.5	24.1
	12H	17.6	18.2	18.2	18.7	19.4	23.1	23.6	23.6	24.2	24.9
12H	4H	17.1	17.9	17.6	18.4	19.0	20.1	20.8	20.6	21.4	22.0
	6H	17.6	18.3	18.2	18.8	19.5	21.5	22.2	22.1	22.7	23.4
	8H	17.9	18.4	18.4	19.0	19.7	22.3	22.9	22.9	23.5	24.1

Maximum UGR = 24.9

POLAR GRAPH



Maximum Candela = 841.713 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.)