H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-24-L110-827-RA-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] GEN FROM BALLABS TEST NO. 19235.0
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
[ISSUEDATE] 2023-06-27
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 2x4' RECESSED LED LUMINAIRE
[MORE] WHITE REFLECTOR w/RIBBED FROSTED ACRYLIC CENTER DIFFUSER
[MORE] 0-10V DRIVER
[LUMCAT] PT-24-L110-827-RA-DIM-UNV
[LAMPCAT] 22 INCH HLM LED ARRAYS
[_SEARCH_SOURCETYPE] LED
[_SEARCH_APPLICATION] Indoor, Architectural, Office, Direct
[_SEARCH_MOUNTING] Recessed

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	10754
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	128
Total Luminaire Watts	83.7
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.14
Spacing Criterion (90-270)	1.18
Spacing Criterion (Diagonal)	1.28
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	3.92 ft
Luminous Width (90-270)	1.92 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	4612	4866	5115
55	4134	4524	4887
65	3633	4305	4892
75	2812	4318	5345
85	1697	5666	6492

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	4114.024	4114.024	4114.024	4114.024	4114.024
5	4051.203	4045.619	4045.619	4031.659	4024.679
10	4038.639	4038.639	4045.619	4051.203	4051.203
15	3932.543	3938.127	3945.107	3954.879	3961.859
20	3672.886	3686.846	3703.599	3725.935	3732.915
25	3464.882	3477.446	3510.950	3540.266	3554.226
30	3036.309	2942.776	3325.281	3214.997	3198.245
35	2800.384	2826.908	2889.728	2942.776	2963.716
40	2491.867	2525.371	2595.171	2664.972	2691.496
45	2276.882	2306.199	2402.523	2491.867	2525.371
50	1978.138	2024.206	2130.302	2223.834	2255.942
55	1655.661	1705.917	1812.013	1918.109	1957.198
60	1349.936	1402.984	1523.040	1631.929	1672.413
65	1072.131	1141.931	1270.364	1397.400	1443.468
70	790.138	872.502	1024.667	1158.683	1204.751
75	508.145	610.054	780.366	915.779	966.035
80	279.201	411.821	607.262	739.882	780.366
85	103.304	235.925	344.813	388.089	395.069
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1491.33	N.A.	13.90
0-30	3090.76	N.A.	28.70
0-40	4893.77	N.A.	45.50
0-60	8357.49	N.A.	77.70
0-80	10432.1	N.A.	97.00
0-90	10753.69	N.A.	100.00
10-90	10366.97	N.A.	96.40
20-40	3402.44	N.A.	31.60
20-50	5241.45	N.A.	48.70
40-70	4717.92	N.A.	43.90
60-80	2074.6	N.A.	19.30
70-80	820.41	N.A.	7.60
80-90	321.59	N.A.	3.00
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	10753.69	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	386.72
10-20	1104.61
20-30	1599.44
30-40	1803.00
40-50	1839.01
50-60	1624.72
60-70	1254.19
70-80	820.41
80-90	321.59
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	103	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	85	79	74	81	77	73	78	74	71	69
3	90	79	71	64	87	78	70	64	75	68	63	72	66	61	69	64	60	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	60	52	46	58	51	46	56	50	45	43
6	70	57	48	41	68	56	47	41	54	46	41	52	46	40	51	45	40	38
7	65	52	43	37	63	51	42	37	49	42	36	48	41	36	46	40	36	34
8	61	47	39	33	59	46	38	33	45	38	32	44	37	32	43	37	32	30
9	57	43	35	30	55	43	35	30	42	34	29	41	34	29	40	33	29	27
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	27	25

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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	16.6	18.3	17.0	18.6	18.9	17.7	19.3	18.0	19.6	19.9
	3H	18.3	19.8	18.7	20.1	20.5	19.8	21.3	20.2	21.7	22.0
	4H	18.9	20.3	19.3	20.6	21.0	20.8	22.2	21.2	22.6	23.0
	6H	19.2	20.6	19.7	20.9	21.3	21.9	23.2	22.3	23.5	23.9
	8H	19.4	20.6	19.8	21.0	21.4	22.3	23.5	22.7	23.9	24.3
	12H	19.4	20.6	19.9	21.0	21.4	22.6	23.8	23.1	24.2	24.6
4H	2H	17.4	18.8	17.8	19.2	19.6	18.2	19.6	18.6	20.0	20.3
	3H	19.3	20.5	19.8	20.9	21.3	20.7	21.9	21.1	22.3	22.6
	4H	20.0	21.1	20.5	21.5	22.0	21.8	22.9	22.3	23.3	23.8
	6H	20.6	21.5	21.0	22.0	22.4	23.1	24.0	23.5	24.5	24.9
	8H	20.7	21.6	21.2	22.1	22.5	23.6	24.5	24.1	24.9	25.4
	12H	20.9	21.7	21.4	22.1	22.6	24.0	24.8	24.5	25.3	25.8
8H	4H	20.6	21.5	21.1	22.0	22.4	22.2	23.1	22.6	23.5	24.0
	6H	21.4	22.1	21.9	22.6	23.1	23.6	24.4	24.1	24.9	25.3
	8H	21.7	22.3	22.2	22.8	23.3	24.3	25.0	24.8	25.5	25.9
	12H	21.9	22.5	22.4	23.0	23.5	24.9	25.4	25.4	25.9	26.5
12H	4H	20.8	21.6	21.3	22.1	22.5	22.2	23.0	22.7	23.5	24.0
	6H	21.6	22.3	22.2	22.8	23.3	23.7	24.4	24.3	24.9	25.4
	8H	22.0	22.6	22.5	23.1	23.7	24.5	25.0	25.0	25.5	26.1

Maximum UGR = 26.5

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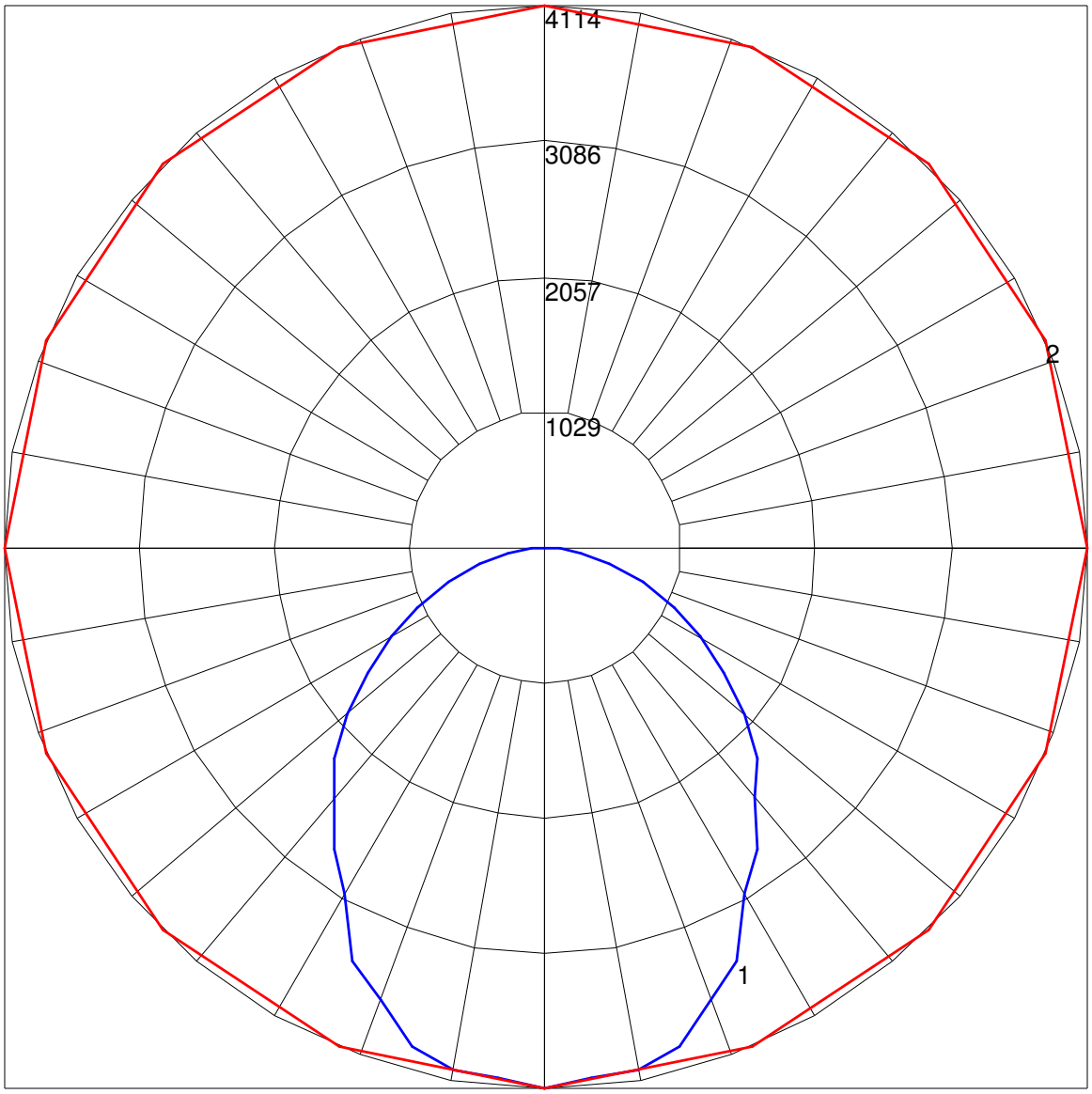
POLAR GRAPH



Maximum Candela = 4114.024 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.)

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