H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-24-L90-850-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-L90-850-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	9604
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	144
Total Luminaire Watts	66.6
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	4118	4346	4568
55	3692	4041	4364
65	3245	3845	4369
75	2511	3856	4774
85	1516	5060	5798

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	3674.128	3674.128	3674.128	3674.128	3674.128
5	3618.025	3613.038	3613.038	3600.571	3594.337
10	3606.804	3606.804	3613.038	3618.025	3618.025
15	3512.052	3517.039	3523.273	3532.000	3538.234
20	3280.160	3292.627	3307.588	3327.536	3333.769
25	3094.396	3105.617	3135.538	3161.720	3174.187
30	2711.649	2628.117	2969.723	2871.231	2856.270
35	2500.950	2524.638	2580.741	2628.117	2646.818
40	2225.422	2255.344	2317.680	2380.017	2403.705
45	2033.425	2059.606	2145.631	2225.422	2255.344
50	1766.623	1807.766	1902.518	1986.049	2014.724
55	1478.628	1523.510	1618.262	1713.014	1747.922
60	1205.593	1252.969	1360.188	1457.433	1493.589
65	957.492	1019.829	1134.529	1247.982	1289.124
70	705.652	779.209	915.103	1034.790	1075.932
75	453.812	544.823	696.925	817.858	862.741
80	249.347	367.787	542.330	660.770	696.925
85	92.258	210.698	307.944	346.592	352.826
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1331.86	N.A.	13.90
0-30	2760.28	N.A.	28.70
0-40	4370.5	N.A.	45.50
0-60	7463.86	N.A.	77.70
0-80	9316.64	N.A.	97.00
0-90	9603.84	N.A.	100.00
10-90	9258.48	N.A.	96.40
20-40	3038.63	N.A.	31.60
20-50	4681.00	N.A.	48.70
40-70	4213.45	N.A.	43.90
60-80	1852.78	N.A.	19.30
70-80	732.69	N.A.	7.60
80-90	287.21	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	9603.84	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	345.37
10-20	986.50
20-30	1428.42
30-40	1610.21
40-50	1642.37
50-60	1450.99
60-70	1120.09
70-80	732.69
80-90	287.21
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	16.2	17.9	16.6	18.2	18.5	17.3	18.9	17.6	19.2	19.5
	3H	17.9	19.4	18.3	19.7	20.1	19.4	20.9	19.8	21.3	21.6
	4H	18.5	19.9	18.9	20.2	20.6	20.4	21.8	20.8	22.2	22.6
	6H	18.8	20.2	19.3	20.5	20.9	21.5	22.8	21.9	23.1	23.5
	8H	19.0	20.2	19.4	20.6	21.0	21.9	23.1	22.3	23.5	23.9
	12H	19.0	20.2	19.5	20.6	21.0	22.2	23.4	22.7	23.8	24.2
4H	2H	17.0	18.4	17.4	18.8	19.2	17.8	19.2	18.2	19.6	19.9
	3H	18.9	20.1	19.4	20.5	20.9	20.3	21.5	20.7	21.9	22.2
	4H	19.6	20.7	20.1	21.1	21.6	21.4	22.5	21.9	22.9	23.4
	6H	20.2	21.1	20.6	21.6	22.0	22.7	23.6	23.1	24.1	24.5
	8H	20.3	21.2	20.8	21.7	22.1	23.2	24.1	23.7	24.5	25.0
	12H	20.5	21.3	21.0	21.7	22.2	23.6	24.4	24.1	24.9	25.4
8H	4H	20.2	21.1	20.7	21.6	22.0	21.8	22.7	22.2	23.1	23.6
	6H	21.0	21.7	21.5	22.2	22.7	23.2	24.0	23.7	24.5	24.9
	8H	21.3	21.9	21.8	22.4	22.9	23.9	24.6	24.4	25.1	25.5
	12H	21.5	22.1	22.0	22.6	23.1	24.5	25.0	25.0	25.5	26.1
12H	4H	20.4	21.2	20.9	21.7	22.1	21.8	22.6	22.3	23.1	23.6
	6H	21.2	21.9	21.8	22.4	22.9	23.3	24.0	23.9	24.5	25.0
	8H	21.6	22.2	22.1	22.7	23.3	24.1	24.6	24.6	25.1	25.7

Maximum UGR = 26.1

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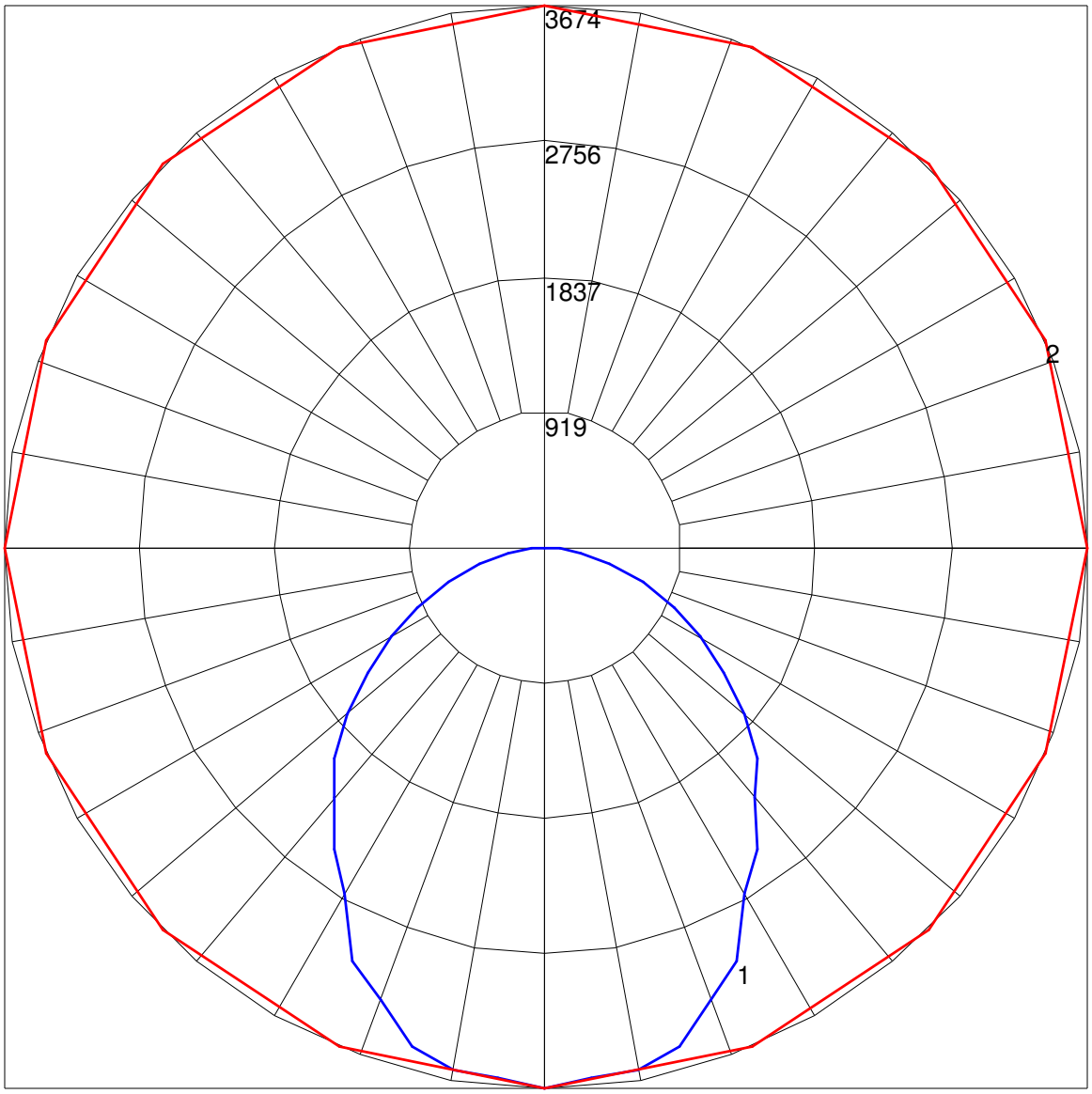
POLAR GRAPH



Maximum Candela = 3674.128 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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