H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-24-L110-950-SA-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] GEN FROM BALLABS TEST NO. 20790.0
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
[ISSUEDATE] 2023-06-27
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 2 X 4 RECESSED LED LUMINAIRE WITH
[MORE] FROST SQUARED RIBBED LENS
[MORE] 0-10V DRIVER
[LUMCAT] PT-24-L110-950-SA-DIM-UNV
[LAMPCAT] 22 INCH LED ARRAYS
[_SEARCH_SOURCETYPE] LED
[_SEARCH_APPLICATION] INDOOR
[_SEARCH_MOUNTING] RECESSED

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	10277
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	123
Total Luminaire Watts	83.7
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.20
Spacing Criterion (90-270)	1.16
Spacing Criterion (Diagonal)	1.28
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	3.92 ft
Luminous Width (90-270)	0.98 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	9183	8898	8832
55	8263	8312	8496
65	7220	7990	8752
75	5829	8067	10066
85	2701	8708	10521

Photometric Toolbox (R) Copyright 2002-2019 by Lighting Analysts, Inc.
Calculations based on published IES Methods and recommendations, values rounded for display purposes.
Results derived from content of manufacturers photometric file.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-24-L110-950-SA-DIM-UNV_.IES

CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	4002.212	4002.212	4002.212	4002.212	4002.212
5	4022.096	3977.910	3955.816	3900.583	3951.398
10	3944.770	3897.269	3868.547	3863.024	3870.757
15	3814.419	3768.023	3742.615	3733.778	3727.150
20	3640.986	3595.694	3553.717	3532.728	3536.042
25	3424.471	3386.912	3369.237	3314.004	3293.015
30	3171.502	3132.839	3093.070	3063.244	3046.674
35	2908.591	2873.242	2825.741	2784.868	2761.670
40	2607.017	2578.295	2528.585	2496.550	2477.770
45	2315.384	2282.244	2243.581	2225.906	2227.011
50	2007.182	1997.240	1955.262	1962.995	1972.937
55	1690.142	1690.142	1700.084	1726.596	1737.643
60	1395.196	1401.824	1447.115	1492.406	1520.023
65	1088.098	1127.866	1204.088	1282.520	1318.974
70	793.152	859.432	968.794	1073.737	1116.819
75	537.973	606.463	744.546	880.420	929.026
80	281.690	398.785	542.392	685.999	731.290
85	83.955	188.898	270.644	307.098	326.982
90	0.000	3.314	4.419	7.733	4.419

Photometric Toolbox (R) Copyright 2002-2019 by Lighting Analysts, Inc.
Calculations based on published IES Methods and recommendations, values rounded for display purposes.
Results derived from content of manufacturers photometric file.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-24-L110-950-SA-DIM-UNV_.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1432.04	N.A.	13.90
0-30	2975.44	N.A.	29.00
0-40	4743.89	N.A.	46.20
0-60	8017.23	N.A.	78.00
0-80	9998.46	N.A.	97.30
0-90	10277.19	N.A.	100.00
10-90	9901.62	N.A.	96.30
20-40	3311.85	N.A.	32.20
20-50	5054.32	N.A.	49.20
40-70	4467.73	N.A.	43.50
60-80	1981.23	N.A.	19.30
70-80	786.84	N.A.	7.70
80-90	278.73	N.A.	2.70
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	10277.19	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	375.57
10-20	1056.47
20-30	1543.4
30-40	1768.44
40-50	1742.47
50-60	1530.87
60-70	1194.39
70-80	786.84
80-90	278.73
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

Photometric Toolbox (R) Copyright 2002-2019 by Lighting Analysts, Inc.
Calculations based on published IES Methods and recommendations, values rounded for display purposes.
Results derived from content of manufacturers photometric file.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-24-L110-950-SA-DIM-UNV_.IES

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	94	97	94	91	93	90	88	89	87	85	83
2	99	90	83	77	96	88	82	77	85	79	75	81	77	73	78	75	71	69
3	90	79	71	65	87	78	70	64	75	68	63	72	66	62	69	65	61	58
4	83	70	62	55	80	69	61	55	67	59	54	64	58	53	62	57	52	50
5	76	63	54	47	74	62	54	47	60	52	47	58	51	46	56	50	46	44
6	70	57	48	42	68	56	48	41	54	47	41	53	46	41	51	45	40	38
7	65	52	43	37	64	51	43	37	49	42	36	48	41	36	47	41	36	34
8	61	47	39	33	59	47	39	33	45	38	33	44	37	33	43	37	32	30
9	57	44	35	30	56	43	35	30	42	35	30	41	34	29	40	34	29	27
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	27	25

Photometric Toolbox (R) Copyright 2002-2019 by Lighting Analysts, Inc.
Calculations based on published IES Methods and recommendations, values rounded for display purposes.
Results derived from content of manufacturers photometric file.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-24-L110-950-SA-DIM-UNV_.IES

UGR TABLE - CORRECTED

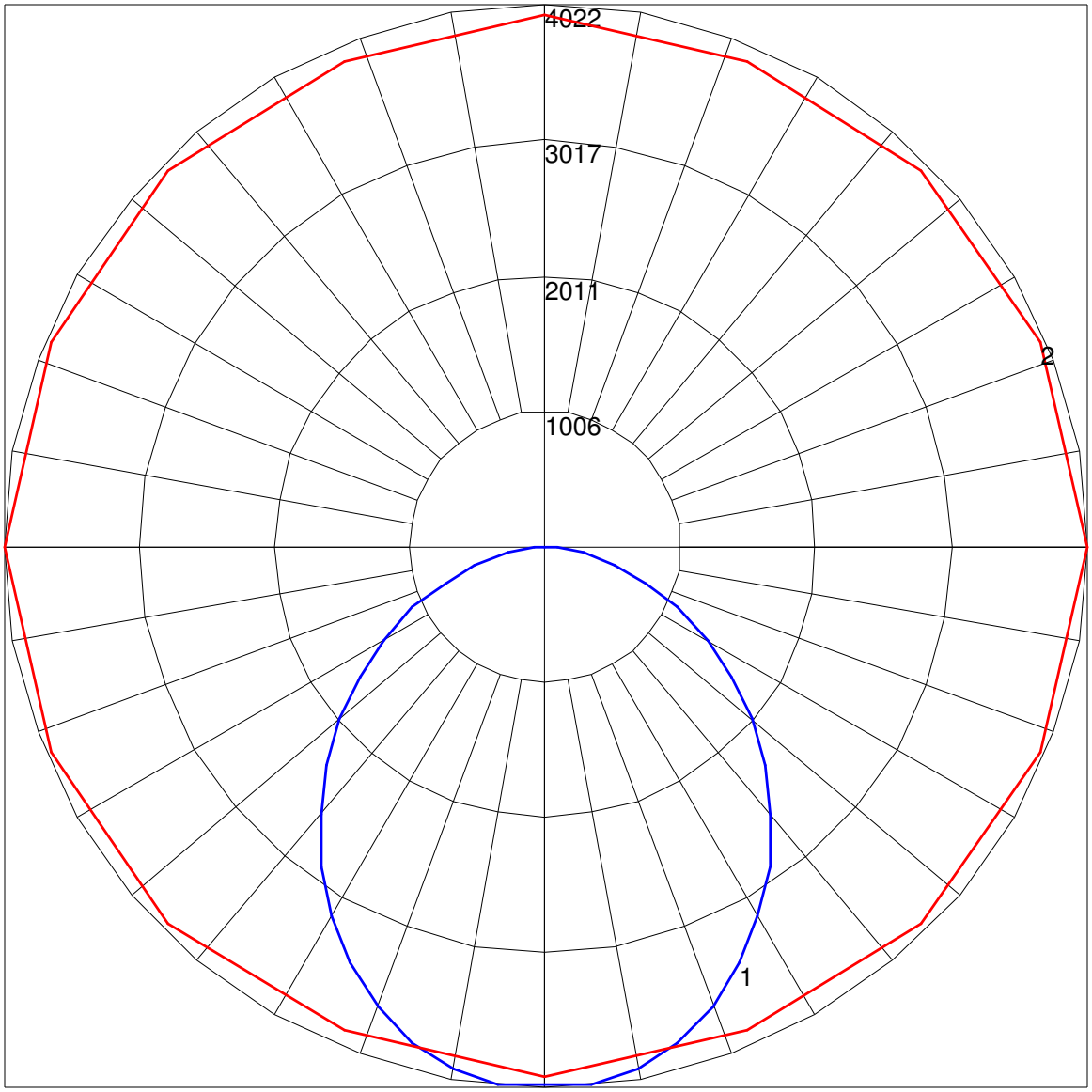
Reflectances											
Ceiling Cavity		70	70	50	50	30	70	70	50	50	30
Walls		50	30	50	30	30	50	30	50	30	30
Floor Cavity		20	20	20	20	20	20	20	20	20	20
Room Size		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H	Y=2H	19.1	20.7	19.5	21.1	21.4	19.4	21.0	19.8	21.4	21.7
	3H	20.8	22.2	21.1	22.6	22.9	21.7	23.2	22.1	23.5	23.8
	4H	21.4	22.7	21.8	23.1	23.5	22.8	24.2	23.2	24.5	24.9
	6H	21.7	23.0	22.2	23.4	23.8	23.8	25.1	24.2	25.5	25.9
	8H	21.8	23.1	22.3	23.5	23.9	24.2	25.5	24.6	25.9	26.3
	12H	21.9	23.1	22.3	23.5	23.9	24.5	25.7	24.9	26.1	26.5
4H	2H	19.8	21.2	20.2	21.6	21.9	20.1	21.4	20.5	21.8	22.2
	3H	21.7	22.9	22.1	23.3	23.7	22.6	23.7	23.0	24.1	24.5
	4H	22.5	23.5	22.9	23.9	24.4	23.8	24.9	24.3	25.3	25.7
	6H	23.0	23.9	23.5	24.4	24.8	25.1	26.0	25.5	26.5	26.9
	8H	23.2	24.0	23.6	24.5	24.9	25.6	26.4	26.0	26.9	27.4
	12H	23.2	24.0	23.7	24.5	25.0	25.9	26.7	26.4	27.2	27.6
8H	4H	23.0	23.9	23.4	24.3	24.8	24.2	25.0	24.6	25.5	25.9
	6H	23.7	24.4	24.2	24.9	25.4	25.6	26.4	26.1	26.8	27.3
	8H	24.0	24.6	24.5	25.1	25.6	26.2	26.9	26.7	27.4	27.9
	12H	24.1	24.7	24.6	25.2	25.8	26.7	27.3	27.2	27.8	28.3
12H	4H	23.1	23.9	23.6	24.4	24.8	24.2	25.0	24.7	25.5	25.9
	6H	23.9	24.6	24.4	25.0	25.6	25.7	26.4	26.2	26.8	27.4
	8H	24.2	24.8	24.8	25.3	25.9	26.4	26.9	26.9	27.4	28.0

Maximum UGR = 28.3

Photometric Toolbox (R) Copyright 2002-2019 by Lighting Analysts, Inc.
Calculations based on published IES Methods and recommendations, values rounded for display purposes.
Results derived from content of manufacturers photometric file.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-24-L110-950-SA-DIM-UNV_.IES

POLAR GRAPH



Maximum Candela = 4022.096 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.)

Photometric Toolbox (R) Copyright 2002-2019 by Lighting Analysts, Inc.
Calculations based on published IES Methods and recommendations, values rounded for display purposes.
Results derived from content of manufacturers photometric file.