H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-24-L90-827-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-L90-827-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	8788
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	132
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	3769	3977	4180
55	3378	3698	3994
65	2969	3518	3998
75	2298	3529	4369
85	1387	4631	5305

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-L90-827-RA-DIM-UNV_.IES

CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	3362.173	3362.173	3362.173	3362.173	3362.173
5	3310.834	3306.270	3306.270	3294.861	3289.157
10	3300.566	3300.566	3306.270	3310.834	3310.834
15	3213.859	3218.422	3224.127	3232.113	3237.817
20	3001.655	3013.064	3026.755	3045.009	3050.713
25	2831.664	2841.932	2869.313	2893.272	2904.680
30	2481.414	2404.975	2717.576	2627.447	2613.756
35	2288.605	2310.282	2361.622	2404.975	2422.088
40	2036.471	2063.852	2120.896	2177.940	2199.617
45	1860.775	1884.734	1963.454	2036.471	2063.852
50	1616.627	1654.276	1740.983	1817.422	1843.662
55	1353.084	1394.155	1480.862	1567.569	1599.514
60	1103.231	1146.584	1244.700	1333.689	1366.774
65	876.196	933.240	1038.201	1142.021	1179.670
70	645.738	713.050	837.406	946.930	984.579
75	415.280	498.565	637.752	748.417	789.489
80	228.176	336.560	496.283	604.666	637.752
85	84.425	192.809	281.797	317.165	322.869
90	0.000	0.000	0.000	0.000	0.000

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-L90-827-RA-DIM-UNV_.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1218.78	N.A.	13.90
0-30	2525.92	N.A.	28.70
0-40	3999.42	N.A.	45.50
0-60	6830.14	N.A.	77.70
0-80	8525.6	N.A.	97.00
0-90	8788.42	N.A.	100.00
10-90	8472.38	N.A.	96.40
20-40	2780.63	N.A.	31.60
20-50	4283.56	N.A.	48.70
40-70	3855.71	N.A.	43.90
60-80	1695.46	N.A.	19.30
70-80	670.48	N.A.	7.60
80-90	262.82	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	8788.42	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	316.04
10-20	902.74
20-30	1307.14
30-40	1473.5
40-50	1502.93
50-60	1327.8
60-70	1024.99
70-80	670.48
80-90	262.82
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-L90-827-RA-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	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

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-L90-827-RA-DIM-UNV_.IES

UGR TABLE - CORRECTED

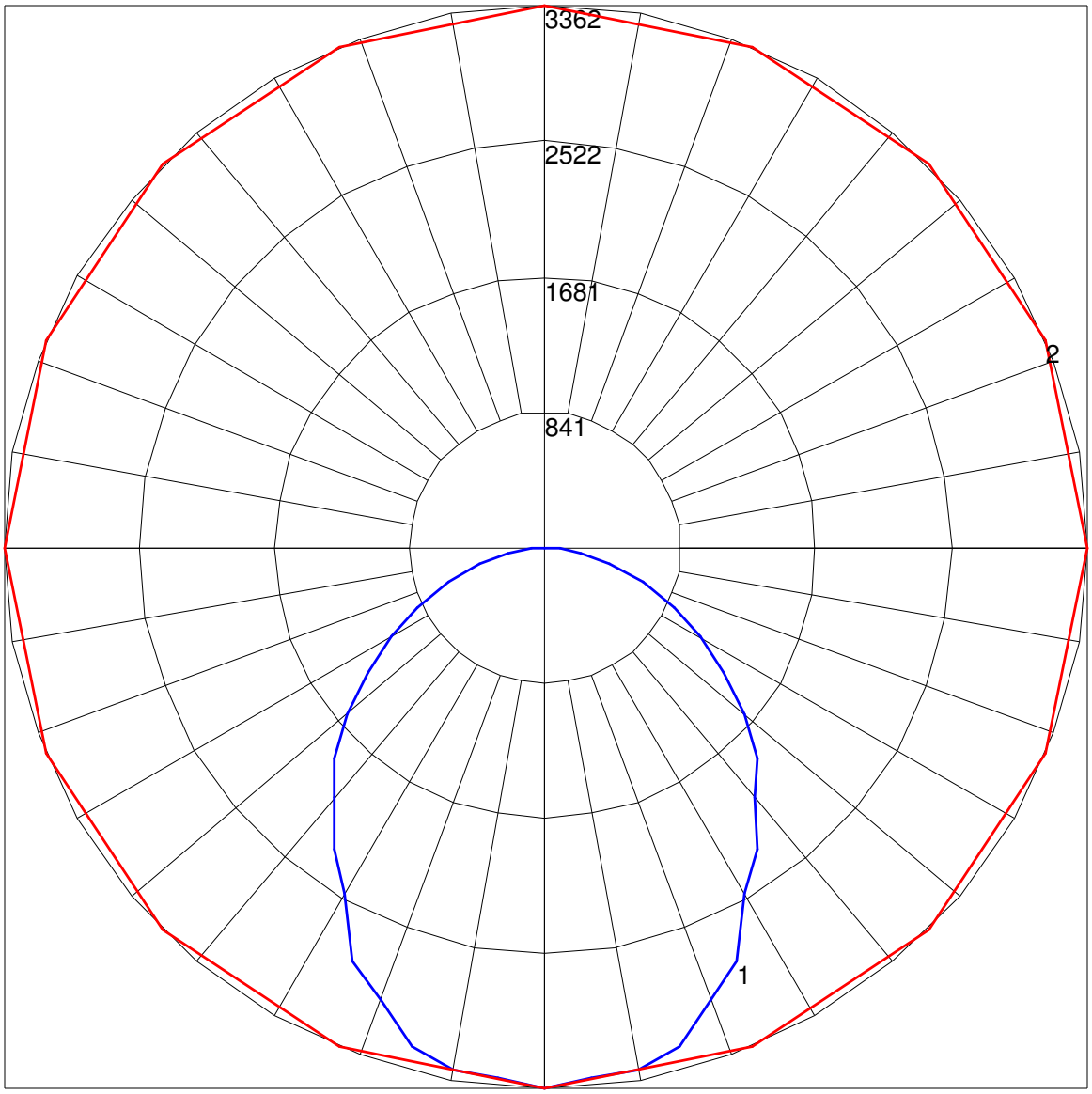
Reflectances											
Ceiling Cavity		70	70	50	50	30	70	70	50	50	30
Walls		50	30	50	30	30	50	30	50	30	30
Floor Cavity		20	20	20	20	20	20	20	20	20	20
Room Size		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H	Y=2H	16.0	17.6	16.3	17.9	18.2	17.0	18.6	17.3	18.9	19.2
	3H	17.6	19.1	18.0	19.4	19.8	19.1	20.6	19.5	21.0	21.3
	4H	18.2	19.6	18.6	19.9	20.3	20.1	21.5	20.5	21.9	22.3
	6H	18.5	19.9	19.0	20.2	20.6	21.2	22.5	21.6	22.8	23.2
	8H	18.7	19.9	19.1	20.3	20.7	21.6	22.8	22.0	23.2	23.6
	12H	18.7	19.9	19.2	20.3	20.7	21.9	23.1	22.4	23.5	23.9
4H	2H	16.7	18.1	17.1	18.5	18.9	17.5	18.9	17.9	19.3	19.6
	3H	18.6	19.8	19.1	20.2	20.6	20.0	21.2	20.4	21.6	22.0
	4H	19.3	20.4	19.8	20.8	21.3	21.1	22.2	21.6	22.6	23.1
	6H	19.9	20.8	20.3	21.3	21.7	22.4	23.3	22.8	23.8	24.2
	8H	20.0	20.9	20.5	21.4	21.8	22.9	23.8	23.4	24.2	24.7
	12H	20.2	21.0	20.7	21.4	21.9	23.3	24.1	23.8	24.6	25.1
8H	4H	19.9	20.8	20.4	21.3	21.7	21.5	22.4	21.9	22.8	23.3
	6H	20.7	21.4	21.2	21.9	22.4	22.9	23.7	23.4	24.2	24.6
	8H	21.0	21.6	21.5	22.1	22.6	23.6	24.3	24.1	24.8	25.2
	12H	21.2	21.8	21.7	22.3	22.8	24.2	24.7	24.7	25.2	25.8
12H	4H	20.1	20.9	20.6	21.4	21.8	21.5	22.3	22.0	22.8	23.3
	6H	20.9	21.6	21.5	22.1	22.6	23.0	23.7	23.6	24.2	24.7
	8H	21.3	21.9	21.8	22.4	23.0	23.8	24.3	24.3	24.8	25.4

Maximum UGR = 25.8

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-L90-827-RA-DIM-UNV_.IES

POLAR GRAPH



Maximum Candela = 3362.173 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.)

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.