H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-22-L43-927-RA-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] GEN FROM BALLABS TEST NO. 19562.0
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
[ISSUEDATE] 2023-06-23
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 2x2'RECESSED LED LUMINAIRE
[MORE] WHITE REFLECTOR w/CENTER FROSTED RIBBED ACRYLIC LENS
[MORE] ELECTRONIC 0-10V LED DRIVER
[LUMCAT] PT-22-L43-927-RA-DIM-UNV
[LAMPCAT] 22 INCH HLM LED ARRAY

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3439
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	107
Total Luminaire Watts	32.2
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.24
Spacing Criterion (90-270)	1.24
Spacing Criterion (Diagonal)	1.34
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	1.92 ft
Luminous Width (90-270)	1.93 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	3231	3351	3460
55	2732	3010	3212
65	2088	2612	2904
75	1451	2316	2863
85	827	1889	2362

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-22-L43-927-RA-DIM-UNV_.IES

CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1314.292	1314.292	1314.292	1314.292	1314.292
5	1318.712	1310.757	1308.989	1304.570	1304.570
10	1301.035	1293.080	1292.196	1287.777	1286.893
15	1270.100	1261.261	1260.377	1258.609	1257.726
20	1225.907	1217.952	1217.068	1217.952	1217.952
25	1164.037	1156.082	1161.385	1164.921	1161.385
30	1088.025	1084.490	1089.793	1095.980	1091.561
35	1000.524	999.640	1011.130	1015.549	1019.969
40	899.764	899.764	919.209	927.164	934.235
45	784.863	784.863	814.030	832.591	840.546
50	663.775	664.659	703.549	728.297	739.787
55	538.268	547.990	593.067	619.582	632.840
60	415.412	434.857	479.933	509.100	523.242
65	303.162	328.794	379.174	410.993	421.599
70	204.171	235.989	286.369	319.072	331.446
75	129.043	159.978	205.938	238.641	254.550
80	69.825	96.340	136.998	159.978	175.887
85	24.748	43.309	56.567	56.567	70.708
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-22-L43-927-RA-DIM-UNV_.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	480.19	N.A.	14.00
0-30	1014.72	N.A.	29.50
0-40	1644.99	N.A.	47.80
0-60	2794.6	N.A.	81.30
0-80	3376.00	N.A.	98.20
0-90	3438.91	N.A.	100.00
10-90	3314.51	N.A.	96.40
20-40	1164.8	N.A.	33.90
20-50	1789.77	N.A.	52.00
40-70	1518.68	N.A.	44.20
60-80	581.40	N.A.	16.90
70-80	212.32	N.A.	6.20
80-90	62.91	N.A.	1.80
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	3438.91	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	124.40
10-20	355.80
20-30	534.52
30-40	630.27
40-50	624.98
50-60	524.63
60-70	369.08
70-80	212.32
80-90	62.91
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-22-L43-927-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	109	104	100	97	106	102	98	95	98	95	92	94	91	89	90	88	86	84
2	100	91	85	79	97	90	83	78	86	81	76	83	79	75	80	76	73	71
3	91	81	73	66	89	79	72	66	76	70	65	73	68	63	71	66	62	60
4	83	72	63	57	81	70	62	56	68	61	55	66	60	55	63	58	54	52
5	77	64	55	49	75	63	55	49	61	54	48	59	53	48	57	52	47	45
6	71	58	49	43	69	57	49	43	55	48	42	54	47	42	52	46	42	40
7	66	53	44	38	64	52	44	38	50	43	38	49	42	37	48	42	37	35
8	62	48	40	34	60	47	39	34	46	39	34	45	38	33	44	38	33	31
9	58	44	36	31	56	44	36	31	43	35	30	41	35	30	40	34	30	28
10	54	41	33	28	53	40	33	28	39	32	28	38	32	28	38	32	27	26

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-22-L43-927-RA-DIM-UNV_.IES

UGR TABLE - CORRECTED

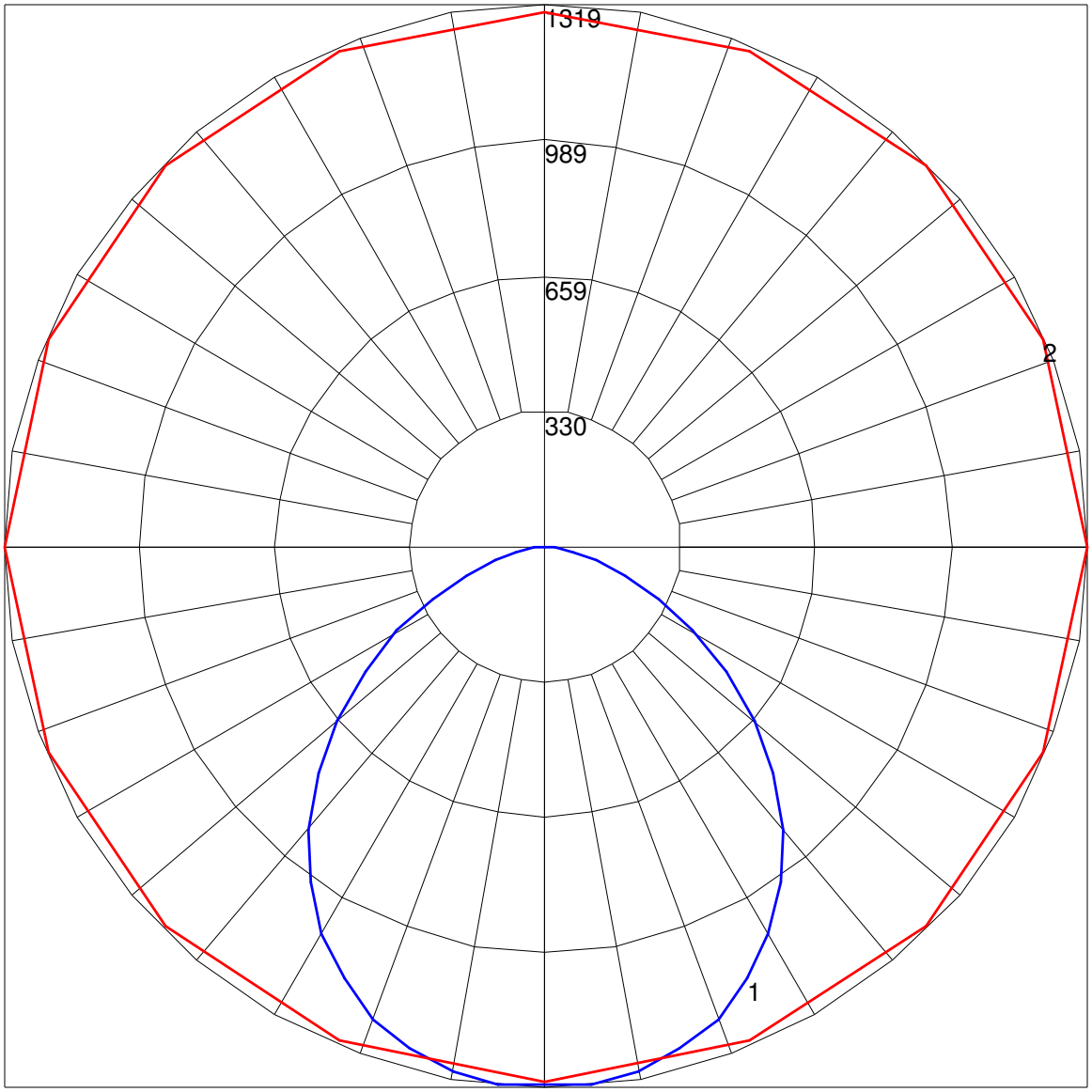
Reflectances											
Ceiling Cavity		70	70	50	50	30	70	70	50	50	30
Walls		50	30	50	30	30	50	30	50	30	30
Floor Cavity		20	20	20	20	20	20	20	20	20	20
Room Size		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H	Y=2H	15.1	16.7	15.4	17.0	17.3	16.1	17.7	16.5	18.0	18.3
	3H	16.4	17.8	16.7	18.1	18.5	17.9	19.4	18.3	19.7	20.1
	4H	16.8	18.1	17.2	18.5	18.9	18.7	20.1	19.1	20.4	20.8
	6H	17.0	18.3	17.5	18.7	19.1	19.4	20.7	19.8	21.0	21.4
	8H	17.1	18.3	17.5	18.7	19.1	19.6	20.8	20.1	21.2	21.6
	12H	17.1	18.3	17.6	18.7	19.1	19.8	20.9	20.2	21.3	21.8
4H	2H	15.8	17.1	16.2	17.5	17.9	16.6	18.0	17.0	18.3	18.7
	3H	17.3	18.4	17.7	18.8	19.2	18.7	19.8	19.1	20.2	20.6
	4H	17.9	18.9	18.3	19.3	19.7	19.6	20.6	20.0	21.0	21.5
	6H	18.2	19.1	18.7	19.6	20.0	20.5	21.4	20.9	21.8	22.3
	8H	18.3	19.2	18.8	19.6	20.1	20.8	21.6	21.2	22.0	22.5
	12H	18.4	19.2	18.9	19.6	20.1	21.0	21.7	21.4	22.2	22.7
8H	4H	18.3	19.1	18.8	19.6	20.0	19.9	20.7	20.3	21.1	21.6
	6H	18.8	19.5	19.3	20.0	20.5	20.8	21.5	21.3	22.0	22.5
	8H	19.0	19.6	19.5	20.2	20.6	21.2	21.9	21.8	22.4	22.9
	12H	19.1	19.7	19.6	20.2	20.7	21.5	22.1	22.0	22.5	23.1
12H	4H	18.4	19.1	18.9	19.6	20.1	19.9	20.6	20.3	21.1	21.6
	6H	19.0	19.6	19.5	20.1	20.6	20.9	21.5	21.4	22.0	22.5
	8H	19.2	19.8	19.7	20.3	20.8	21.3	21.9	21.8	22.4	22.9

Maximum UGR = 23.1

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-22-L43-927-RA-DIM-UNV_.IES

POLAR GRAPH



Maximum Candela = 1318.712 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.