H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-14-L45-827-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] 2023-06-23
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 1 X 4 RECESSED LED LUMINAIRE
[MORE] W/ FROSTED SQUARE RIBBED LENS
[MORE] 0-10V LED DRIVER
[LUMCAT] PT-14-L45-827-SA-DIM-UNV
[LAMPCAT] HLM 22" LED ARRAYS

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4312
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	142
Total Luminaire Watts	30.4
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	3853	3734	3706
55	3467	3488	3565
65	3030	3353	3672
75	2446	3385	4224
85	1133	3654	4415

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-14-L45-827-SA-DIM-UNV_.IES

CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1679.329	1679.329	1679.329	1679.329	1679.329
5	1687.672	1669.131	1659.861	1636.685	1658.007
10	1655.226	1635.294	1623.243	1620.925	1624.170
15	1600.530	1581.063	1570.402	1566.694	1563.912
20	1527.758	1508.754	1491.140	1482.333	1483.724
25	1436.908	1421.149	1413.732	1390.556	1381.750
30	1330.762	1314.539	1297.853	1285.338	1278.385
35	1220.445	1205.612	1185.681	1168.531	1158.797
40	1093.904	1081.853	1060.995	1047.552	1039.673
45	971.535	957.630	941.407	933.990	934.454
50	842.214	838.042	820.428	823.673	827.845
55	709.184	709.184	713.355	724.480	729.115
60	585.424	588.205	607.210	626.214	637.802
65	456.566	473.253	505.235	538.145	553.441
70	332.806	360.618	406.506	450.540	468.618
75	225.734	254.472	312.412	369.424	389.819
80	118.197	167.330	227.588	287.845	306.849
85	35.227	79.262	113.562	128.858	137.202
90	0.000	1.391	1.854	3.245	1.854

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-14-L45-827-SA-DIM-UNV_.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	600.88	N.A.	13.90
0-30	1248.5	N.A.	29.00
0-40	1990.53	N.A.	46.20
0-60	3364.03	N.A.	78.00
0-80	4195.35	N.A.	97.30
0-90	4312.31	N.A.	100.00
10-90	4154.72	N.A.	96.30
20-40	1389.65	N.A.	32.20
20-50	2120.79	N.A.	49.20
40-70	1874.66	N.A.	43.50
60-80	831.33	N.A.	19.30
70-80	330.16	N.A.	7.70
80-90	116.96	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	4312.31	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	157.59
10-20	443.29
20-30	647.61
30-40	742.04
40-50	731.14
50-60	642.35
60-70	501.17
70-80	330.16
80-90	116.96
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-14-L45-827-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	104	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	37	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-14-L45-827-SA-DIM-UNV_.IES

UGR TABLE - CORRECTED

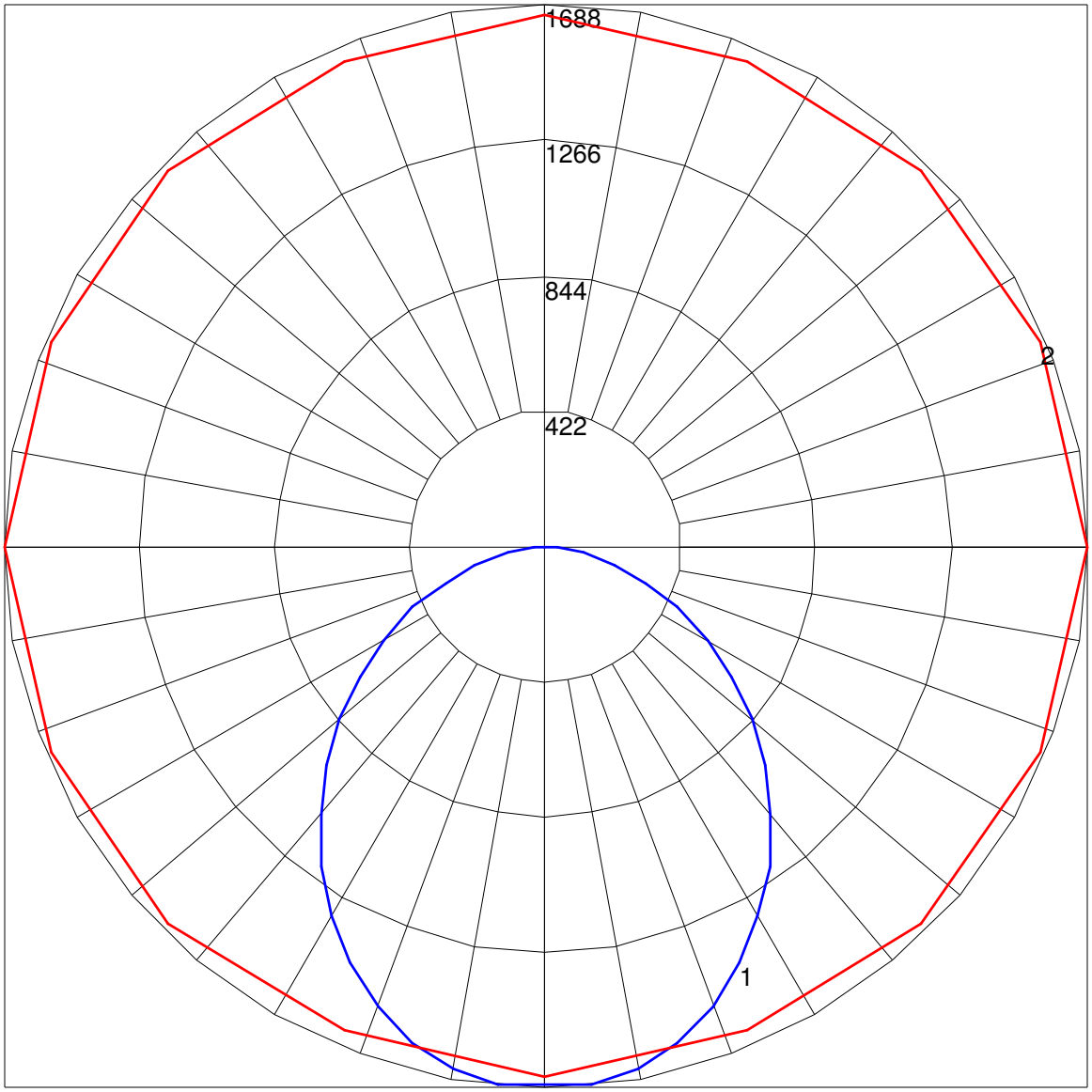
Reflectances											
Ceiling Cavity		70	70	50	50	30	70	70	50	50	30
Walls		50	30	50	30	30	50	30	50	30	30
Floor Cavity		20	20	20	20	20	20	20	20	20	20
Room Size		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H	Y=2H	16.1	17.7	16.5	18.1	18.4	16.4	18.0	16.8	18.4	18.7
	3H	17.8	19.2	18.1	19.6	19.9	18.7	20.2	19.1	20.5	20.8
	4H	18.4	19.7	18.8	20.1	20.5	19.8	21.2	20.2	21.5	21.9
	6H	18.7	20.0	19.2	20.4	20.8	20.8	22.1	21.2	22.5	22.9
	8H	18.8	20.1	19.3	20.5	20.9	21.2	22.5	21.6	22.9	23.3
	12H	18.9	20.1	19.3	20.5	20.9	21.5	22.7	21.9	23.1	23.5
4H	2H	16.8	18.2	17.2	18.6	18.9	17.1	18.4	17.5	18.8	19.2
	3H	18.7	19.9	19.1	20.3	20.7	19.6	20.7	20.0	21.1	21.5
	4H	19.5	20.5	19.9	20.9	21.4	20.8	21.9	21.3	22.3	22.7
	6H	20.0	20.9	20.5	21.4	21.8	22.1	23.0	22.5	23.5	23.9
	8H	20.2	21.0	20.6	21.5	21.9	22.6	23.4	23.0	23.9	24.4
	12H	20.2	21.0	20.7	21.5	22.0	22.9	23.7	23.4	24.2	24.6
8H	4H	20.0	20.9	20.4	21.3	21.8	21.2	22.0	21.6	22.5	22.9
	6H	20.7	21.4	21.2	21.9	22.4	22.6	23.4	23.1	23.8	24.3
	8H	21.0	21.6	21.5	22.1	22.6	23.2	23.9	23.7	24.4	24.9
	12H	21.1	21.7	21.6	22.2	22.8	23.7	24.3	24.2	24.8	25.3
12H	4H	20.1	20.9	20.6	21.4	21.8	21.2	22.0	21.7	22.5	22.9
	6H	20.9	21.6	21.4	22.0	22.6	22.7	23.4	23.2	23.8	24.4
	8H	21.2	21.8	21.8	22.3	22.9	23.4	23.9	23.9	24.4	25.0

Maximum UGR = 25.3

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-14-L45-827-SA-DIM-UNV_.IES

POLAR GRAPH



Maximum Candela = 1687.672 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.