H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-14-L45-940-RA-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] GEN FROM BALLABS TEST NO. 19323.0
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
[ISSUEDATE] 2023-06-23
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 1x4'RECESSED LED LUMINAIRE
[MORE] WHITE REFLECTOR w/WHITE RIBBED ACRYLIC LENS
[MORE] 0-10V LED DRIVER
[LUMCAT] PT-14-L45-940-RA-DIM-UNV
[LAMPCAT] 22" 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	3712
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	122
Total Luminaire Watts	30.4
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.26
Spacing Criterion (90-270)	1.26
Spacing Criterion (Diagonal)	1.36
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	3.92 ft
Luminous Width (90-270)	0.94 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	3474	3628	3681
55	3066	3369	3512
65	2668	3162	3244
75	1938	2716	2831
85	883	1453	1710

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-L45-940-RA-DIM-UNV_.IES

CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1352.662	1352.662	1352.662	1352.662	1352.662
5	1383.212	1373.029	1367.937	1355.208	1347.571
10	1359.451	1351.814	1349.268	1335.691	1328.902
15	1322.113	1315.324	1318.719	1302.595	1302.595
20	1268.651	1266.106	1272.046	1256.771	1261.863
25	1209.250	1203.310	1215.190	1204.158	1200.764
30	1139.665	1128.633	1145.605	1139.665	1137.968
35	1052.259	1043.773	1065.837	1061.594	1066.686
40	950.428	948.731	972.491	975.886	971.643
45	839.262	841.808	876.600	884.237	889.329
50	721.307	734.036	770.525	789.195	789.195
55	600.806	624.567	660.208	696.698	688.212
60	492.186	512.552	554.982	584.683	580.440
65	385.263	403.083	456.545	477.760	468.425
70	274.945	308.040	352.167	362.351	358.108
75	171.416	215.543	240.153	250.336	250.336
80	87.405	128.138	137.473	145.110	139.170
85	26.306	50.067	43.278	47.521	50.916
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-14-L45-940-RA-DIM-UNV_.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	499.51	N.A.	13.50
0-30	1055.54	N.A.	28.40
0-40	1716.29	N.A.	46.20
0-60	2971.22	N.A.	80.00
0-80	3651.7	N.A.	98.40
0-90	3711.78	N.A.	100.00
10-90	3582.32	N.A.	96.50
20-40	1216.78	N.A.	32.80
20-50	1885.02	N.A.	50.80
40-70	1691.61	N.A.	45.60
60-80	680.48	N.A.	18.30
70-80	243.81	N.A.	6.60
80-90	60.07	N.A.	1.60
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	3711.78	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	129.46
10-20	370.05
20-30	556.04
30-40	660.74
40-50	668.24
50-60	586.70
60-70	436.68
70-80	243.81
80-90	60.07
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-L45-940-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	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84
2	99	91	84	79	97	89	83	78	86	80	76	82	78	74	79	76	72	70
3	91	80	72	66	88	78	71	65	76	69	64	73	67	63	70	66	62	59
4	83	71	62	56	81	70	62	55	67	60	54	65	59	54	63	57	53	51
5	76	64	55	48	74	62	54	48	60	53	47	58	52	47	56	51	46	44
6	71	57	48	42	69	56	48	42	54	47	41	53	46	41	51	45	41	39
7	65	52	43	37	64	51	43	37	50	42	37	48	41	36	47	41	36	34
8	61	47	39	33	59	47	39	33	45	38	33	44	38	33	43	37	32	31
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-L45-940-RA-DIM-UNV_.IES

UGR TABLE - CORRECTED

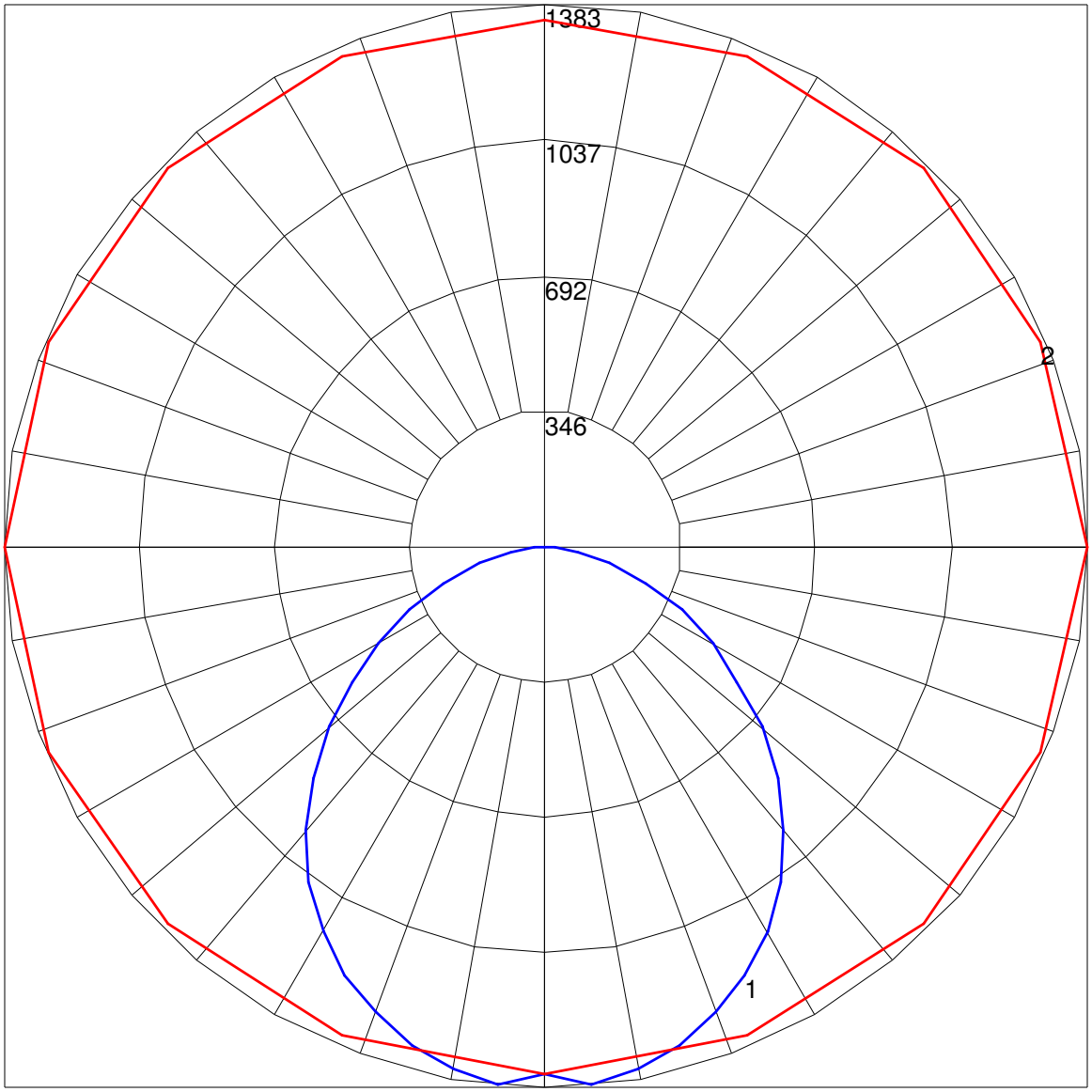
Reflectances											
Ceiling Cavity		70	70	50	50	30	70	70	50	50	30
Walls		50	30	50	30	30	50	30	50	30	30
Floor Cavity		20	20	20	20	20	20	20	20	20	20
Room Size		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H	Y=2H	15.9	17.5	16.2	17.8	18.1	16.7	18.3	17.1	18.7	19.0
	3H	17.4	18.9	17.8	19.2	19.6	18.5	20.0	18.9	20.3	20.7
	4H	17.9	19.3	18.3	19.7	20.0	19.2	20.5	19.6	20.9	21.3
	6H	18.2	19.5	18.7	19.9	20.3	19.6	20.9	20.0	21.2	21.6
	8H	18.3	19.5	18.7	19.9	20.3	19.7	20.9	20.1	21.3	21.7
	12H	18.3	19.5	18.8	19.9	20.3	19.8	21.0	20.2	21.3	21.8
4H	2H	16.6	18.0	17.0	18.3	18.7	17.3	18.7	17.7	19.0	19.4
	3H	18.4	19.6	18.8	20.0	20.4	19.3	20.5	19.7	20.9	21.3
	4H	19.1	20.1	19.5	20.5	21.0	20.1	21.1	20.5	21.6	22.0
	6H	19.5	20.4	20.0	20.9	21.3	20.7	21.6	21.1	22.0	22.5
	8H	19.6	20.5	20.1	20.9	21.4	20.8	21.7	21.3	22.1	22.6
	12H	19.7	20.5	20.2	20.9	21.4	20.9	21.7	21.4	22.2	22.7
8H	4H	19.5	20.3	19.9	20.8	21.2	20.4	21.2	20.8	21.7	22.1
	6H	20.1	20.8	20.5	21.2	21.7	21.1	21.8	21.6	22.3	22.7
	8H	20.2	20.9	20.7	21.4	21.9	21.3	21.9	21.8	22.4	22.9
	12H	20.4	20.9	20.9	21.4	22.0	21.4	22.0	21.9	22.5	23.1
12H	4H	19.5	20.3	20.0	20.8	21.2	20.4	21.2	20.9	21.6	22.1
	6H	20.1	20.8	20.6	21.2	21.8	21.1	21.7	21.6	22.2	22.7
	8H	20.4	20.9	20.9	21.4	22.0	21.4	21.9	21.9	22.4	23.0

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-14-L45-940-RA-DIM-UNV_.IES

POLAR GRAPH



Maximum Candela = 1383.212 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.