H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-14-L45-935-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-L45-935-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	3625
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	119
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	3393	3544	3596
55	2995	3291	3430
65	2606	3088	3169
75	1893	2653	2765
85	863	1420	1670

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-L45-935-RA-DIM-UNV_.IES

CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1321.205	1321.205	1321.205	1321.205	1321.205
5	1351.044	1341.098	1336.125	1323.692	1316.232
10	1327.836	1320.376	1317.890	1304.628	1297.997
15	1291.366	1284.735	1288.051	1272.302	1272.302
20	1239.148	1236.661	1242.463	1227.544	1232.517
25	1181.128	1175.326	1186.930	1176.154	1172.839
30	1113.161	1102.386	1118.963	1113.161	1111.503
35	1027.788	1019.500	1041.050	1036.906	1041.879
40	928.325	926.667	949.875	953.191	949.046
45	819.744	822.231	856.214	863.674	868.647
50	704.532	716.965	752.606	770.841	770.841
55	586.834	610.042	644.854	680.495	672.207
60	480.740	500.632	542.075	571.086	566.941
65	376.303	393.709	445.927	466.649	457.532
70	268.551	300.877	343.978	353.924	349.780
75	167.430	210.531	234.568	244.514	244.514
80	85.373	125.158	134.276	141.735	135.933
85	25.695	48.903	42.272	46.416	49.732
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-L45-935-RA-DIM-UNV_.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	487.89	N.A.	13.50
0-30	1031.00	N.A.	28.40
0-40	1676.37	N.A.	46.20
0-60	2902.12	N.A.	80.00
0-80	3566.78	N.A.	98.40
0-90	3625.46	N.A.	100.00
10-90	3499.01	N.A.	96.50
20-40	1188.48	N.A.	32.80
20-50	1841.18	N.A.	50.80
40-70	1652.27	N.A.	45.60
60-80	664.66	N.A.	18.30
70-80	238.14	N.A.	6.60
80-90	58.68	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	3625.46	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	126.45
10-20	361.44
20-30	543.11
30-40	645.38
40-50	652.69
50-60	573.05
60-70	426.52
70-80	238.14
80-90	58.68
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-L45-935-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	73	70
3	91	80	72	66	88	79	71	65	76	69	64	73	67	63	70	66	62	59
4	83	71	62	56	81	70	62	55	67	60	55	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	55	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-L45-935-RA-DIM-UNV_.IES

UGR TABLE - CORRECTED

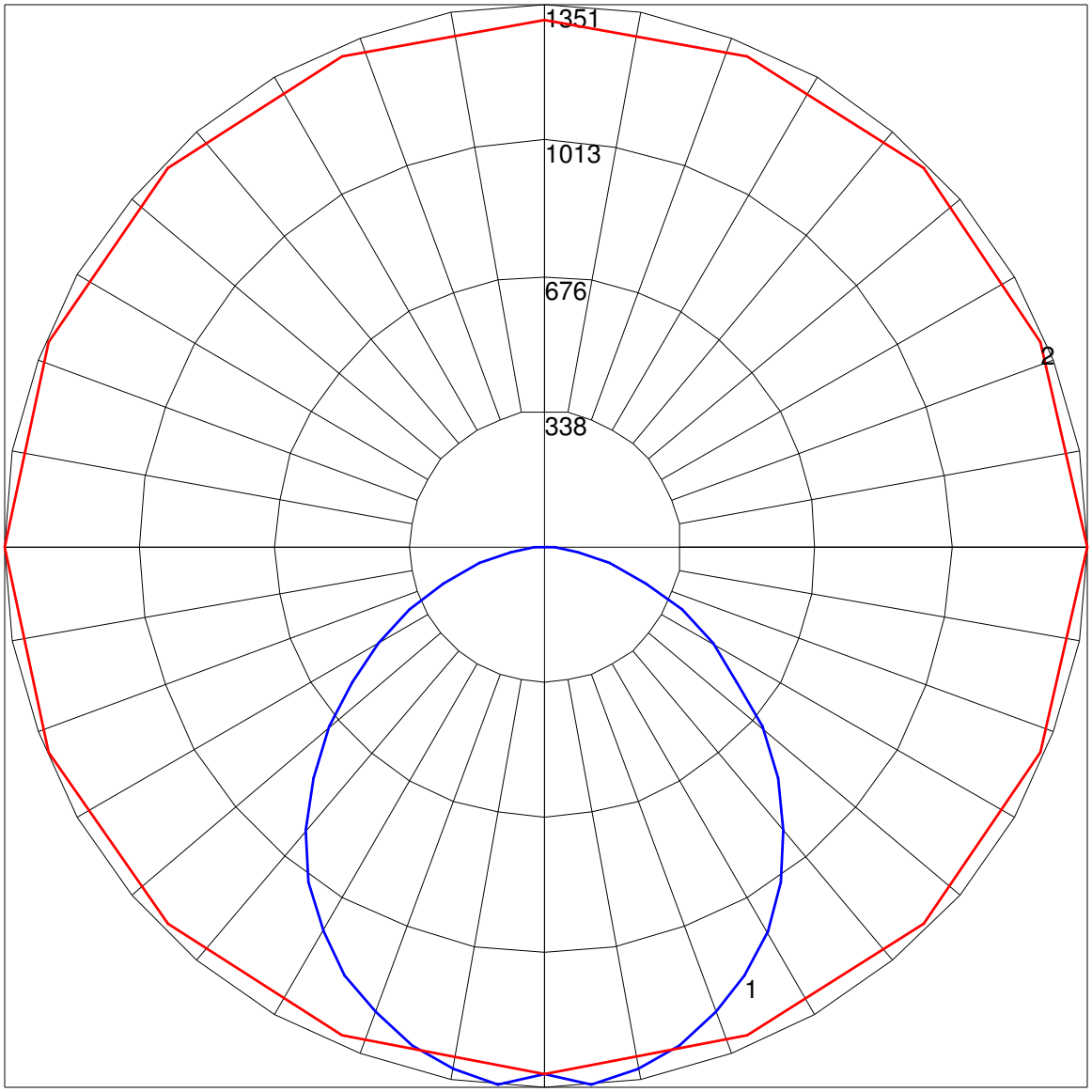
Reflectances											
Ceiling Cavity		70	70	50	50	30	70	70	50	50	30
Walls		50	30	50	30	30	50	30	50	30	30
Floor Cavity		20	20	20	20	20	20	20	20	20	20
Room Size		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H	Y=2H	15.8	17.4	16.1	17.7	18.0	16.6	18.2	17.0	18.6	18.9
	3H	17.3	18.8	17.7	19.1	19.5	18.4	19.9	18.8	20.2	20.6
	4H	17.8	19.2	18.2	19.6	19.9	19.1	20.4	19.5	20.8	21.2
	6H	18.1	19.4	18.6	19.8	20.2	19.5	20.8	19.9	21.1	21.5
	8H	18.2	19.4	18.6	19.8	20.2	19.6	20.8	20.0	21.2	21.6
	12H	18.2	19.4	18.7	19.8	20.2	19.7	20.9	20.1	21.2	21.7
4H	2H	16.5	17.9	16.9	18.2	18.6	17.2	18.6	17.6	18.9	19.3
	3H	18.3	19.5	18.7	19.9	20.3	19.2	20.4	19.6	20.8	21.2
	4H	19.0	20.0	19.4	20.4	20.9	20.0	21.0	20.4	21.5	21.9
	6H	19.4	20.3	19.9	20.8	21.2	20.6	21.5	21.0	21.9	22.4
	8H	19.5	20.4	20.0	20.8	21.3	20.7	21.6	21.2	22.0	22.5
	12H	19.6	20.4	20.1	20.8	21.3	20.8	21.6	21.3	22.1	22.6
8H	4H	19.4	20.2	19.8	20.7	21.1	20.3	21.1	20.7	21.6	22.0
	6H	20.0	20.7	20.4	21.1	21.6	21.0	21.7	21.5	22.2	22.6
	8H	20.1	20.8	20.6	21.3	21.8	21.2	21.8	21.7	22.3	22.8
	12H	20.3	20.8	20.8	21.3	21.9	21.3	21.9	21.8	22.4	23.0
12H	4H	19.4	20.2	19.9	20.7	21.1	20.3	21.1	20.8	21.5	22.0
	6H	20.0	20.7	20.5	21.1	21.7	21.0	21.6	21.5	22.1	22.6
	8H	20.3	20.8	20.8	21.3	21.9	21.3	21.8	21.8	22.3	22.9

Maximum UGR = 23.0

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-L45-935-RA-DIM-UNV_.IES

POLAR GRAPH



Maximum Candela = 1351.044 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.