H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-24-L49-827-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] 2023-06-27
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 2 X 4 RECESSED LED LUMINAIRE WITH
[MORE] FROST SQUARED RIBBED LENS
[MORE] 0-10V DRIVER
[LUMCAT] PT-24-L49-827-SA-DIM-UNV
[LAMPCAT] 22 INCH LED ARRAYS
[_SEARCH_SOURCETYPE] LED
[_SEARCH_APPLICATION] INDOOR
[_SEARCH_MOUNTING] RECESSED

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	5074
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	138
Total Luminaire Watts	36.7
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	4533	4393	4360
55	4079	4103	4194
65	3564	3944	4321
75	2878	3983	4969
85	1334	4299	5194

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-L49-827-SA-DIM-UNV_.IES

CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1975.818	1975.818	1975.818	1975.818	1975.818
5	1985.635	1963.820	1952.913	1925.646	1950.732
10	1947.460	1924.010	1909.830	1907.104	1910.921
15	1883.108	1860.203	1847.660	1843.297	1840.025
20	1797.487	1775.128	1754.404	1744.043	1745.679
25	1690.598	1672.056	1663.330	1636.063	1625.701
30	1565.712	1546.624	1526.992	1512.267	1504.087
35	1435.918	1418.466	1395.016	1374.838	1363.385
40	1287.036	1272.857	1248.316	1232.500	1223.229
45	1143.062	1126.702	1107.614	1098.889	1099.434
50	990.909	986.000	965.277	969.094	974.003
55	834.392	834.392	839.300	852.389	857.842
60	688.782	692.054	714.414	736.774	750.407
65	537.174	556.807	594.436	633.156	651.153
70	391.564	424.286	478.276	530.084	551.353
75	265.587	299.399	367.569	434.647	458.643
80	139.065	196.873	267.769	338.665	361.024
85	41.447	93.256	133.612	151.608	161.425
90	0.000	1.636	2.181	3.817	2.181

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-L49-827-SA-DIM-UNV_.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	706.97	N.A.	13.90
0-30	1468.92	N.A.	29.00
0-40	2341.97	N.A.	46.20
0-60	3957.96	N.A.	78.00
0-80	4936.06	N.A.	97.30
0-90	5073.66	N.A.	100.00
10-90	4888.25	N.A.	96.30
20-40	1635.00	N.A.	32.20
20-50	2495.22	N.A.	49.20
40-70	2205.64	N.A.	43.50
60-80	978.10	N.A.	19.30
70-80	388.45	N.A.	7.70
80-90	137.60	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	5073.66	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	185.41
10-20	521.56
20-30	761.95
30-40	873.05
40-50	860.23
50-60	755.76
60-70	589.65
70-80	388.45
80-90	137.60
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-L49-827-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	103	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	82	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	36	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	55	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-24-L49-827-SA-DIM-UNV_.IES

UGR TABLE - CORRECTED

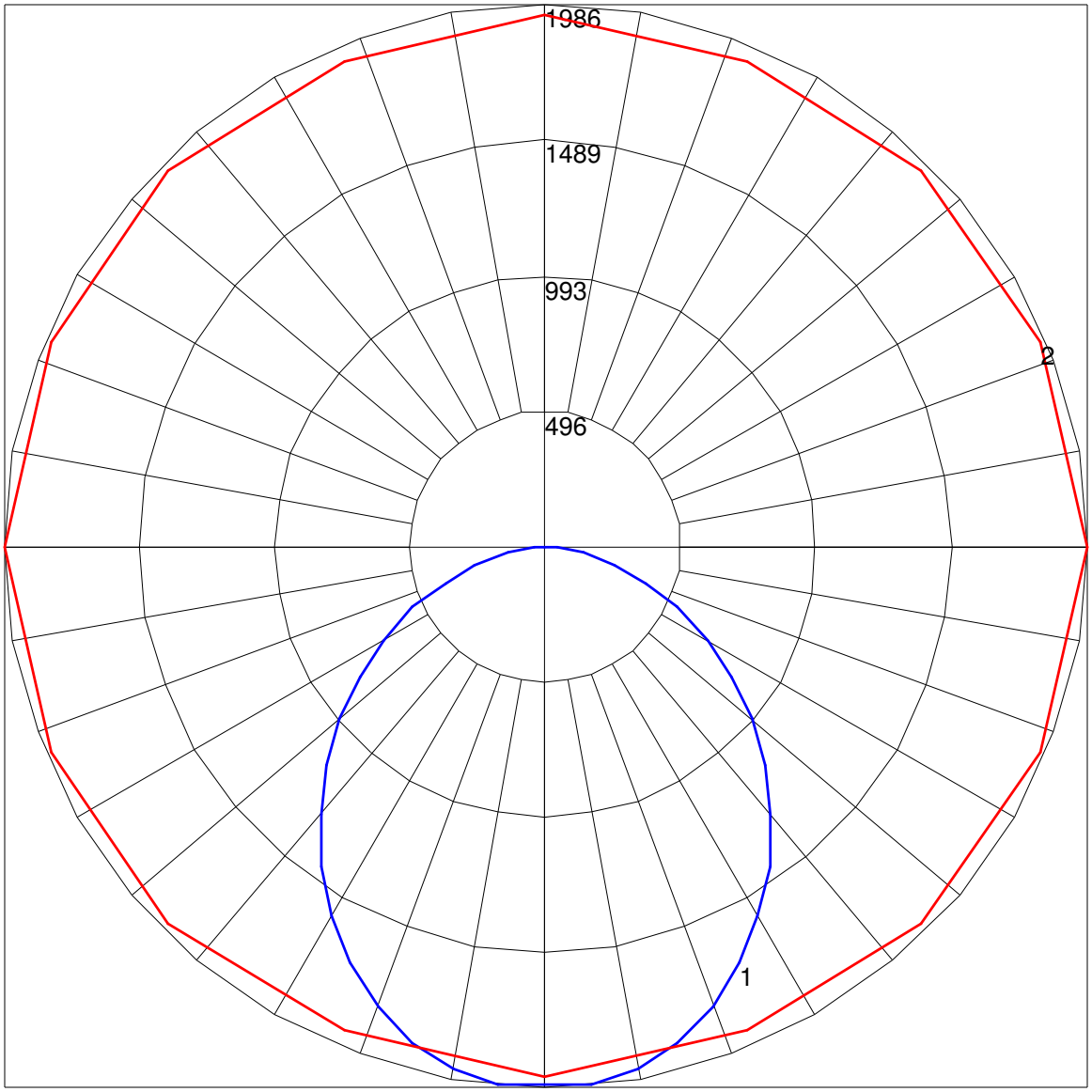
Reflectances											
Ceiling Cavity		70	70	50	50	30	70	70	50	50	30
Walls		50	30	50	30	30	50	30	50	30	30
Floor Cavity		20	20	20	20	20	20	20	20	20	20
Room Size		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H	Y=2H	16.6	18.2	17.0	18.6	18.9	16.9	18.5	17.3	18.9	19.2
	3H	18.3	19.7	18.6	20.1	20.4	19.2	20.7	19.6	21.0	21.3
	4H	18.9	20.2	19.3	20.6	21.0	20.3	21.7	20.7	22.0	22.4
	6H	19.2	20.5	19.7	20.9	21.3	21.3	22.6	21.7	23.0	23.4
	8H	19.3	20.6	19.8	21.0	21.4	21.7	23.0	22.1	23.4	23.8
	12H	19.4	20.6	19.8	21.0	21.4	22.0	23.2	22.4	23.6	24.0
4H	2H	17.3	18.7	17.7	19.1	19.4	17.6	18.9	18.0	19.3	19.7
	3H	19.2	20.4	19.6	20.8	21.2	20.1	21.2	20.5	21.6	22.0
	4H	20.0	21.0	20.4	21.4	21.9	21.3	22.4	21.8	22.8	23.2
	6H	20.5	21.4	21.0	21.9	22.3	22.6	23.5	23.0	24.0	24.4
	8H	20.7	21.5	21.1	22.0	22.4	23.1	23.9	23.5	24.4	24.9
	12H	20.7	21.5	21.2	22.0	22.5	23.4	24.2	23.9	24.7	25.1
8H	4H	20.5	21.4	20.9	21.8	22.3	21.7	22.5	22.1	23.0	23.4
	6H	21.2	21.9	21.7	22.4	22.9	23.1	23.9	23.6	24.3	24.8
	8H	21.5	22.1	22.0	22.6	23.1	23.7	24.4	24.2	24.9	25.4
	12H	21.6	22.2	22.1	22.7	23.3	24.2	24.8	24.7	25.3	25.8
12H	4H	20.6	21.4	21.1	21.9	22.3	21.7	22.5	22.2	23.0	23.4
	6H	21.4	22.1	21.9	22.5	23.1	23.2	23.9	23.7	24.3	24.9
	8H	21.7	22.3	22.3	22.8	23.4	23.9	24.4	24.4	24.9	25.5

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-L49-827-SA-DIM-UNV_.IES

POLAR GRAPH



Maximum Candela = 1985.635 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.