H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-24-L38-835-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-L38-835-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	3896
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	137
Total Luminaire Watts	28.5
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	3481	3373	3348
55	3132	3151	3220
65	2737	3029	3318
75	2210	3058	3816
85	1024	3301	3988

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-L38-835-SA-DIM-UNV_.IES

CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1517.065	1517.065	1517.065	1517.065	1517.065
5	1524.602	1507.852	1499.478	1478.541	1497.803
10	1495.291	1477.285	1466.398	1464.304	1467.236
15	1445.880	1428.293	1418.663	1415.313	1412.800
20	1380.139	1362.971	1347.060	1339.104	1340.360
25	1298.068	1283.831	1277.131	1256.195	1248.239
30	1202.178	1187.523	1172.448	1161.143	1154.862
35	1102.520	1089.121	1071.115	1055.622	1046.829
40	988.207	977.320	958.477	946.333	939.215
45	877.661	865.099	850.444	843.744	844.163
50	760.835	757.067	741.155	744.086	747.855
55	640.659	640.659	644.428	654.477	658.665
60	528.858	531.370	548.538	565.706	576.175
65	412.451	427.525	456.417	486.147	499.966
70	300.649	325.773	367.228	407.007	423.338
75	203.922	229.884	282.225	333.729	352.153
80	106.777	151.162	205.597	260.032	277.200
85	31.824	71.603	102.589	116.407	123.945
90	0.000	1.256	1.675	2.931	1.675

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-L38-835-SA-DIM-UNV_.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	542.82	N.A.	13.90
0-30	1127.86	N.A.	29.00
0-40	1798.2	N.A.	46.20
0-60	3038.98	N.A.	78.00
0-80	3789.98	N.A.	97.30
0-90	3895.64	N.A.	100.00
10-90	3753.27	N.A.	96.30
20-40	1255.38	N.A.	32.20
20-50	1915.87	N.A.	49.20
40-70	1693.52	N.A.	43.50
60-80	751.00	N.A.	19.30
70-80	298.26	N.A.	7.70
80-90	105.65	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	3895.64	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	142.36
10-20	400.46
20-30	585.04
30-40	670.34
40-50	660.50
50-60	580.29
60-70	452.74
70-80	298.26
80-90	105.65
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-L38-835-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-L38-835-SA-DIM-UNV_.IES

UGR TABLE - CORRECTED

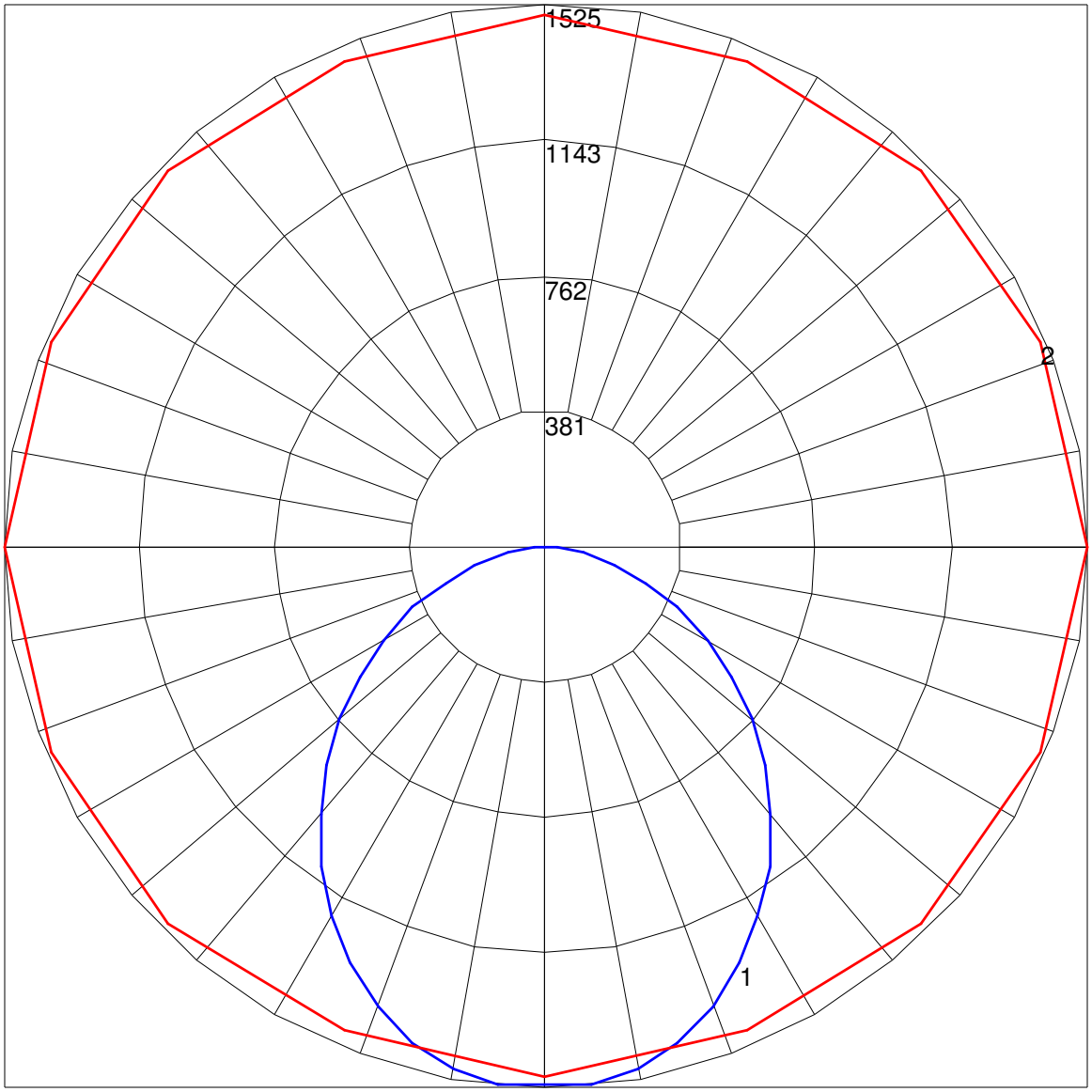
Reflectances											
Ceiling Cavity		70	70	50	50	30	70	70	50	50	30
Walls		50	30	50	30	30	50	30	50	30	30
Floor Cavity		20	20	20	20	20	20	20	20	20	20
Room Size		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H	Y=2H	15.7	17.3	16.1	17.7	18.0	16.0	17.6	16.4	18.0	18.3
	3H	17.4	18.8	17.7	19.2	19.5	18.3	19.8	18.7	20.1	20.4
	4H	18.0	19.3	18.4	19.7	20.1	19.4	20.8	19.8	21.1	21.5
	6H	18.3	19.6	18.8	20.0	20.4	20.4	21.7	20.8	22.1	22.5
	8H	18.4	19.7	18.9	20.1	20.5	20.8	22.1	21.2	22.5	22.9
	12H	18.5	19.7	18.9	20.1	20.5	21.1	22.3	21.5	22.7	23.1
4H	2H	16.4	17.8	16.8	18.2	18.5	16.7	18.0	17.1	18.4	18.8
	3H	18.3	19.5	18.7	19.9	20.3	19.2	20.3	19.6	20.7	21.1
	4H	19.1	20.1	19.5	20.5	21.0	20.4	21.5	20.9	21.9	22.3
	6H	19.6	20.5	20.1	21.0	21.4	21.7	22.6	22.1	23.1	23.5
	8H	19.8	20.6	20.2	21.1	21.5	22.2	23.0	22.6	23.5	24.0
	12H	19.8	20.6	20.3	21.1	21.6	22.5	23.3	23.0	23.8	24.2
8H	4H	19.6	20.5	20.0	20.9	21.4	20.8	21.6	21.2	22.1	22.5
	6H	20.3	21.0	20.8	21.5	22.0	22.2	23.0	22.7	23.4	23.9
	8H	20.6	21.2	21.1	21.7	22.2	22.8	23.5	23.3	24.0	24.5
	12H	20.7	21.3	21.2	21.8	22.4	23.3	23.9	23.8	24.4	24.9
12H	4H	19.7	20.5	20.2	21.0	21.4	20.8	21.6	21.3	22.1	22.5
	6H	20.5	21.2	21.0	21.6	22.2	22.3	23.0	22.8	23.4	24.0
	8H	20.8	21.4	21.4	21.9	22.5	23.0	23.5	23.5	24.0	24.6

Maximum UGR = 24.9

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-L38-835-SA-DIM-UNV_.IES

POLAR GRAPH



Maximum Candela = 1524.602 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.