H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-24-L38-927-RA-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] GEN FROM BALLABS TEST NO. 19235.0
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
[ISSUEDATE] 2023-06-27
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 2x4' RECESSED LED LUMINAIRE
[MORE] WHITE REFLECTOR w/RIBBED FROSTED ACRYLIC CENTER DIFFUSER
[MORE] 0-10V DRIVER
[LUMCAT] PT-24-L38-927-RA-DIM-UNV
[LAMPCAT] 22 INCH HLM 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	3101
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	109
Total Luminaire Watts	28.5
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.14
Spacing Criterion (90-270)	1.18
Spacing Criterion (Diagonal)	1.28
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	3.92 ft
Luminous Width (90-270)	1.92 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	1330	1403	1475
55	1192	1305	1409
65	1048	1242	1411
75	811	1245	1542
85	490	1634	1872

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1186.467	1186.467	1186.467	1186.467	1186.467
5	1168.350	1166.739	1166.739	1162.713	1160.700
10	1164.726	1164.726	1166.739	1168.350	1168.350
15	1134.129	1135.739	1137.752	1140.570	1142.583
20	1059.245	1063.271	1068.102	1074.544	1076.557
25	999.257	1002.881	1012.543	1020.998	1025.024
30	875.658	848.684	958.997	927.191	922.360
35	807.619	815.268	833.385	848.684	854.723
40	718.644	728.306	748.436	768.566	776.216
45	656.643	665.098	692.877	718.644	728.306
50	570.486	583.772	614.370	641.344	650.604
55	477.485	491.979	522.577	553.175	564.447
60	389.316	404.615	439.238	470.641	482.317
65	309.198	329.328	366.367	403.004	416.290
70	227.873	251.626	295.510	334.159	347.445
75	146.547	175.937	225.054	264.107	278.600
80	80.520	118.767	175.132	213.379	225.054
85	29.793	68.040	99.443	111.923	113.936
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	430.09	N.A.	13.90
0-30	891.36	N.A.	28.70
0-40	1411.34	N.A.	45.50
0-60	2410.27	N.A.	77.70
0-80	3008.57	N.A.	97.00
0-90	3101.32	N.A.	100.00
10-90	2989.79	N.A.	96.40
20-40	981.25	N.A.	31.60
20-50	1511.61	N.A.	48.70
40-70	1360.63	N.A.	43.90
60-80	598.31	N.A.	19.30
70-80	236.60	N.A.	7.60
80-90	92.75	N.A.	3.00
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	3101.32	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	111.53
10-20	318.56
20-30	461.27
30-40	519.98
40-50	530.36
50-60	468.56
60-70	361.70
70-80	236.60
80-90	92.75
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

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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	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	85	79	74	81	77	73	78	74	71	69
3	90	79	71	64	87	78	70	64	75	68	63	72	66	61	69	64	60	58
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	50
5	76	63	54	47	74	62	53	47	60	52	46	58	51	46	56	50	45	43
6	70	57	48	41	68	56	47	41	54	46	41	52	46	40	51	45	40	38
7	65	52	43	37	63	51	42	37	49	42	36	48	41	36	46	40	36	34
8	61	47	39	33	59	46	38	33	45	38	33	44	37	32	43	37	32	30
9	57	43	35	30	55	43	35	30	42	34	29	41	34	29	40	33	29	27
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	27	25

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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	12.2	13.9	12.6	14.2	14.5	13.3	14.9	13.6	15.2	15.5
	3H	13.9	15.4	14.3	15.7	16.1	15.4	16.9	15.8	17.3	17.6
	4H	14.5	15.9	14.9	16.2	16.6	16.4	17.8	16.8	18.2	18.6
	6H	14.8	16.2	15.3	16.5	16.9	17.5	18.8	17.9	19.1	19.5
	8H	15.0	16.2	15.4	16.6	17.0	17.9	19.1	18.3	19.5	19.9
	12H	15.0	16.2	15.5	16.6	17.0	18.2	19.4	18.7	19.8	20.2
4H	2H	13.0	14.4	13.4	14.8	15.2	13.8	15.2	14.2	15.6	15.9
	3H	14.9	16.1	15.4	16.5	16.9	16.3	17.5	16.7	17.8	18.2
	4H	15.6	16.7	16.1	17.1	17.6	17.4	18.5	17.9	18.9	19.4
	6H	16.2	17.1	16.6	17.6	18.0	18.7	19.6	19.1	20.1	20.5
	8H	16.3	17.2	16.8	17.7	18.1	19.2	20.1	19.7	20.5	21.0
	12H	16.5	17.3	17.0	17.7	18.2	19.6	20.4	20.1	20.9	21.4
8H	4H	16.2	17.1	16.7	17.6	18.0	17.8	18.7	18.2	19.1	19.6
	6H	17.0	17.7	17.5	18.2	18.7	19.2	20.0	19.7	20.5	20.9
	8H	17.3	17.9	17.8	18.4	18.9	19.9	20.6	20.4	21.1	21.5
	12H	17.5	18.1	18.0	18.6	19.1	20.5	21.0	21.0	21.5	22.1
12H	4H	16.4	17.2	16.9	17.7	18.1	17.8	18.6	18.3	19.1	19.6
	6H	17.2	17.9	17.8	18.4	18.9	19.3	20.0	19.9	20.5	21.0
	8H	17.6	18.2	18.1	18.7	19.3	20.1	20.6	20.6	21.1	21.7

Maximum UGR = 22.1

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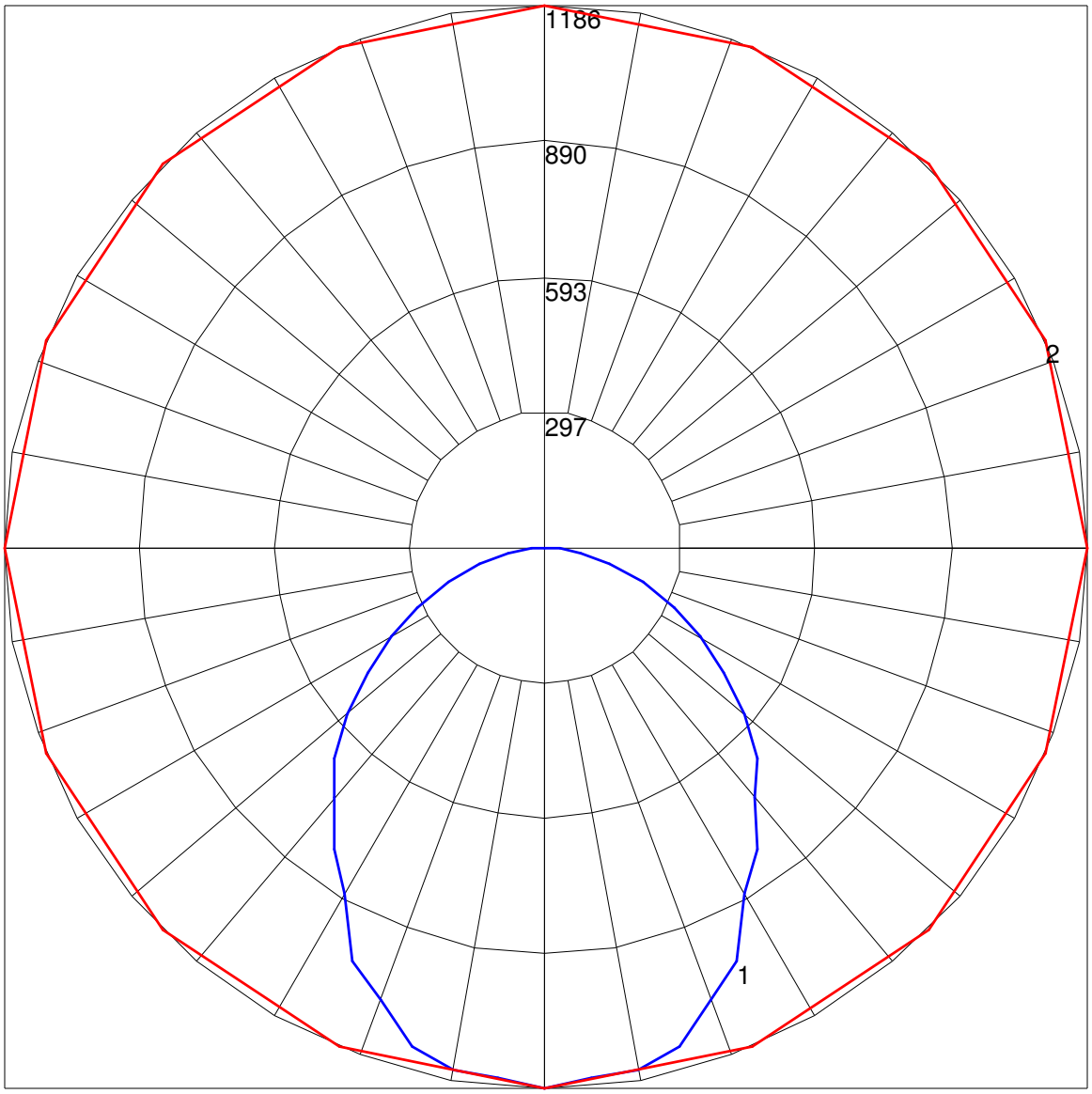
POLAR GRAPH



Maximum Candela = 1186.467 Located At Horizontal Angle = 0, Vertical Angle = 0
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)

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