H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-24-L38-830-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-L38-830-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	3857
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	135
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	3446	3339	3314
55	3101	3119	3188
65	2709	2998	3284
75	2187	3027	3777
85	1014	3268	3948

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1501.894	1501.894	1501.894	1501.894	1501.894
5	1509.356	1492.774	1484.483	1463.756	1482.825
10	1480.338	1462.512	1451.734	1449.661	1452.563
15	1431.422	1414.011	1404.476	1401.160	1398.673
20	1366.338	1349.342	1333.589	1325.713	1326.956
25	1285.087	1270.993	1264.360	1243.633	1235.757
30	1190.157	1175.648	1160.724	1149.531	1143.313
35	1091.495	1078.230	1060.404	1045.066	1036.361
40	978.325	967.546	948.892	936.870	929.823
45	868.885	856.449	841.940	835.307	835.721
50	753.227	749.496	733.743	736.645	740.376
55	634.253	634.253	637.984	647.933	652.078
60	523.569	526.057	543.053	560.049	570.413
65	408.326	423.250	451.853	481.286	494.966
70	297.643	322.515	363.555	402.937	419.104
75	201.883	227.585	279.403	330.392	348.632
80	105.709	149.650	203.541	257.432	274.428
85	31.505	70.887	101.563	115.243	122.705
90	0.000	1.244	1.658	2.902	1.658

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	537.40	N.A.	13.90
0-30	1116.58	N.A.	29.00
0-40	1780.22	N.A.	46.20
0-60	3008.59	N.A.	78.00
0-80	3752.08	N.A.	97.30
0-90	3856.68	N.A.	100.00
10-90	3715.74	N.A.	96.30
20-40	1242.82	N.A.	32.20
20-50	1896.71	N.A.	49.20
40-70	1676.59	N.A.	43.50
60-80	743.49	N.A.	19.30
70-80	295.28	N.A.	7.70
80-90	104.60	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	3856.68	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	140.94
10-20	396.46
20-30	579.19
30-40	663.64
40-50	653.89
50-60	574.48
60-70	448.21
70-80	295.28
80-90	104.60
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

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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	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

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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	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

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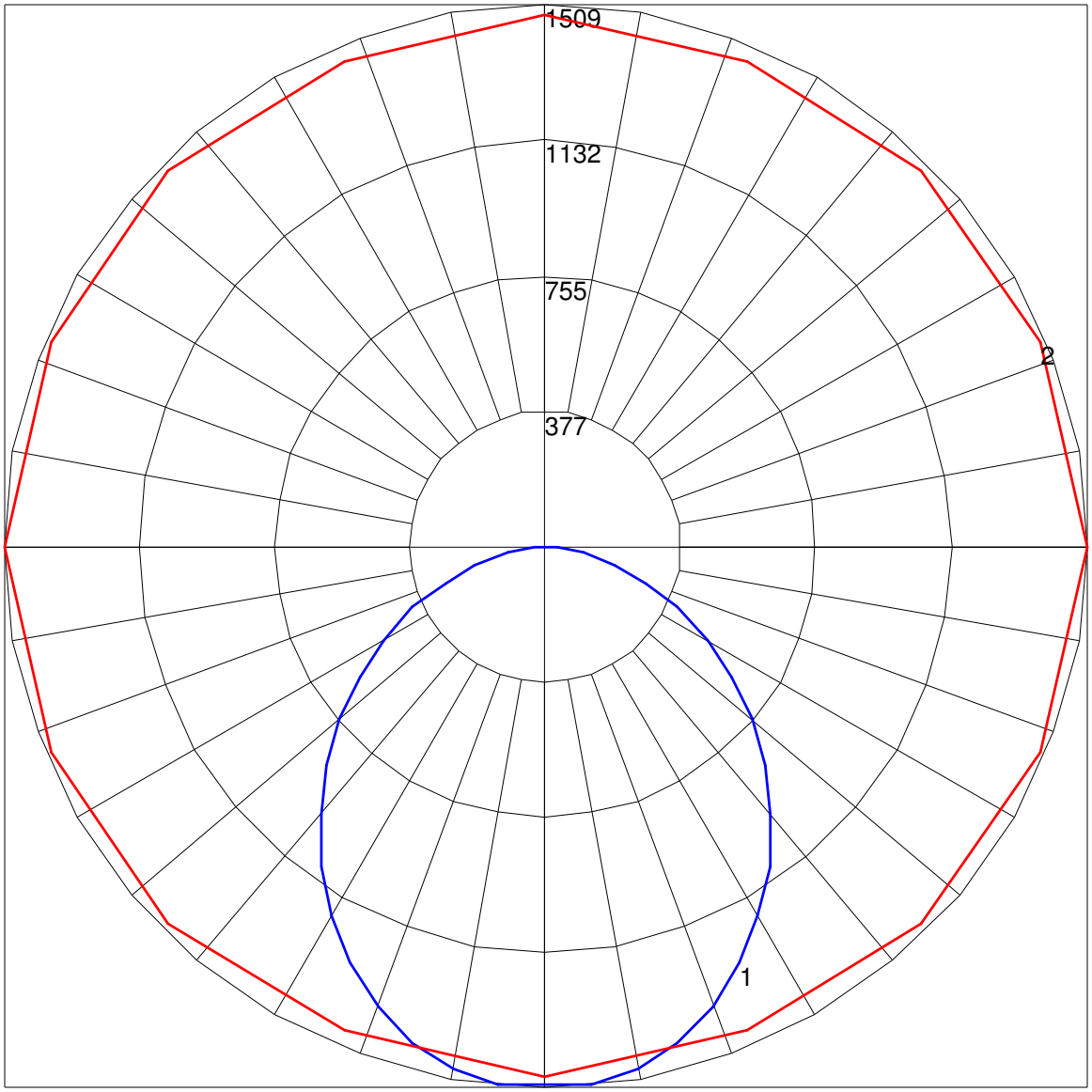
POLAR GRAPH



Maximum Candela = 1509.356 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.)

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