H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-24-L61-827-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-L61-827-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	6176
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	136
Total Luminaire Watts	45.5
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	5518	5347	5307
55	4966	4995	5105
65	4339	4801	5259
75	3503	4848	6049
85	1623	5233	6322

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	2404.989	2404.989	2404.989	2404.989	2404.989
5	2416.937	2390.385	2377.109	2343.918	2374.453
10	2370.470	2341.927	2324.667	2321.348	2325.995
15	2292.141	2264.261	2248.993	2243.682	2239.700
20	2187.922	2160.706	2135.481	2122.869	2124.860
25	2057.815	2035.246	2024.625	1991.434	1978.822
30	1905.802	1882.569	1858.672	1840.749	1830.792
35	1747.815	1726.573	1698.030	1673.469	1659.528
40	1566.595	1549.336	1519.464	1500.214	1488.929
45	1391.349	1371.434	1348.201	1337.580	1338.244
50	1206.145	1200.171	1174.946	1179.593	1185.567
55	1015.631	1015.631	1021.606	1037.537	1044.175
60	838.394	842.377	869.593	896.809	913.404
65	653.854	677.751	723.554	770.685	792.591
70	476.617	516.445	582.163	645.225	671.113
75	323.276	364.432	447.409	529.058	558.265
80	169.272	239.636	325.931	412.227	439.443
85	50.450	113.512	162.634	184.540	196.488
90	0.000	1.991	2.655	4.647	2.655

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	860.53	N.A.	13.90
0-30	1787.99	N.A.	29.00
0-40	2850.67	N.A.	46.20
0-60	4817.67	N.A.	78.00
0-80	6008.22	N.A.	97.30
0-90	6175.72	N.A.	100.00
10-90	5950.03	N.A.	96.30
20-40	1990.14	N.A.	32.20
20-50	3037.22	N.A.	49.20
40-70	2684.73	N.A.	43.50
60-80	1190.55	N.A.	19.30
70-80	472.83	N.A.	7.70
80-90	167.49	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	6175.72	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	225.69
10-20	634.85
20-30	927.45
30-40	1062.68
40-50	1047.08
50-60	919.92
60-70	717.73
70-80	472.83
80-90	167.49
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	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

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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	17.3	18.9	17.7	19.3	19.6	17.6	19.2	18.0	19.6	19.9
	3H	19.0	20.4	19.3	20.8	21.1	19.9	21.4	20.3	21.7	22.0
	4H	19.6	20.9	20.0	21.3	21.7	21.0	22.4	21.4	22.7	23.1
	6H	19.9	21.2	20.4	21.6	22.0	22.0	23.3	22.4	23.7	24.1
	8H	20.0	21.3	20.5	21.7	22.1	22.4	23.7	22.8	24.1	24.5
	12H	20.1	21.3	20.5	21.7	22.1	22.7	23.9	23.1	24.3	24.7
4H	2H	18.0	19.4	18.4	19.8	20.1	18.3	19.6	18.7	20.0	20.4
	3H	19.9	21.1	20.3	21.5	21.9	20.8	21.9	21.2	22.3	22.7
	4H	20.7	21.7	21.1	22.1	22.6	22.0	23.1	22.5	23.5	23.9
	6H	21.2	22.1	21.7	22.6	23.0	23.3	24.2	23.7	24.7	25.1
	8H	21.4	22.2	21.8	22.7	23.1	23.8	24.6	24.2	25.1	25.6
	12H	21.4	22.2	21.9	22.7	23.2	24.1	24.9	24.6	25.4	25.9
8H	4H	21.2	22.1	21.6	22.5	23.0	22.4	23.2	22.8	23.7	24.1
	6H	21.9	22.6	22.4	23.1	23.6	23.8	24.6	24.3	25.0	25.5
	8H	22.2	22.8	22.7	23.3	23.8	24.4	25.1	24.9	25.6	26.1
	12H	22.3	22.9	22.8	23.4	24.0	24.9	25.5	25.4	26.0	26.5
12H	4H	21.3	22.1	21.8	22.6	23.0	22.4	23.2	22.9	23.7	24.1
	6H	22.1	22.8	22.6	23.2	23.8	23.9	24.6	24.4	25.0	25.6
	8H	22.4	23.0	23.0	23.5	24.1	24.6	25.1	25.1	25.6	26.2

Maximum UGR = 26.5

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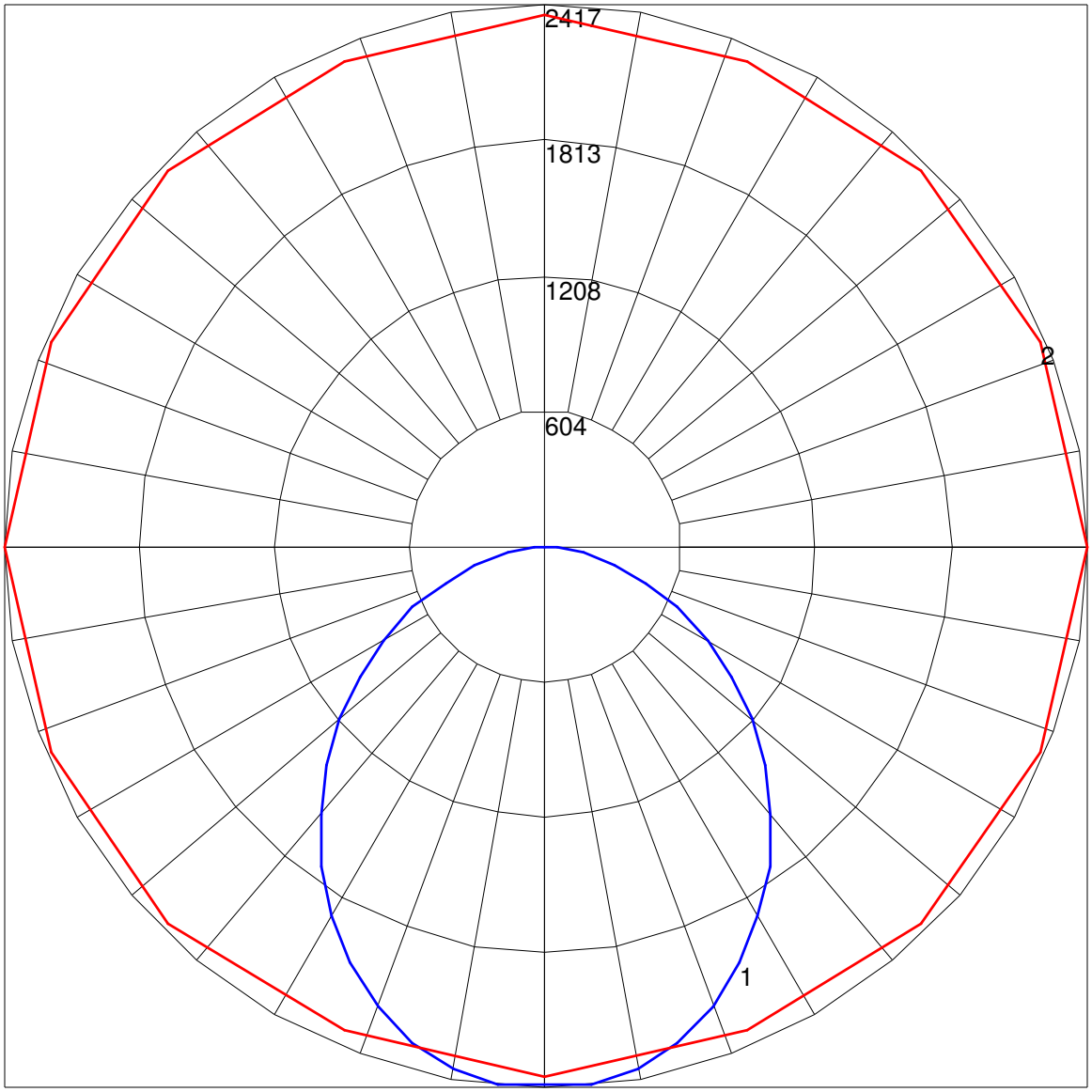
POLAR GRAPH



Maximum Candela = 2416.937 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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