H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-24-L61-850-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] 27-JUN-2023
[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-L61-850-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	6552
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	144
Total Luminaire Watts	45.5
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	2810	2965	3116
55	2519	2757	2978
65	2214	2623	2980
75	1713	2631	3257
85	1034	3452	3955

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	2506.614	2506.614	2506.614	2506.614	2506.614
5	2468.339	2464.937	2464.937	2456.431	2452.178
10	2460.684	2460.684	2464.937	2468.339	2468.339
15	2396.041	2399.443	2403.696	2409.650	2413.903
20	2237.836	2246.341	2256.548	2270.157	2274.410
25	2111.102	2118.757	2139.170	2157.032	2165.538
30	1849.978	1792.990	2026.045	1958.851	1948.644
35	1706.233	1722.394	1760.669	1792.990	1805.749
40	1518.258	1538.672	1581.200	1623.728	1639.889
45	1387.271	1405.133	1463.822	1518.258	1538.672
50	1205.250	1233.319	1297.962	1354.950	1374.513
55	1008.770	1039.390	1104.033	1168.676	1192.492
60	822.496	854.818	927.966	994.310	1018.977
65	653.234	695.762	774.014	851.415	879.484
70	481.420	531.603	624.315	705.969	734.037
75	309.606	371.697	475.466	557.970	588.591
80	170.113	250.917	369.996	450.799	475.466
85	62.942	143.745	210.089	236.457	240.710
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	908.64	N.A.	13.90
0-30	1883.16	N.A.	28.70
0-40	2981.7	N.A.	45.50
0-60	5092.1	N.A.	77.70
0-80	6356.13	N.A.	97.00
0-90	6552.07	N.A.	100.00
10-90	6316.45	N.A.	96.40
20-40	2073.06	N.A.	31.60
20-50	3193.54	N.A.	48.70
40-70	2874.56	N.A.	43.90
60-80	1264.03	N.A.	19.30
70-80	499.86	N.A.	7.60
80-90	195.94	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	6552.07	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	235.62
10-20	673.02
20-30	974.51
30-40	1098.54
40-50	1120.48
50-60	989.92
60-70	764.16
70-80	499.86
80-90	195.94
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	32	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	14.8	16.5	15.2	16.8	17.1	15.9	17.5	16.2	17.8	18.1
	3H	16.5	18.0	16.9	18.3	18.7	18.0	19.5	18.4	19.9	20.2
	4H	17.1	18.5	17.5	18.8	19.2	19.0	20.4	19.4	20.8	21.2
	6H	17.4	18.8	17.9	19.1	19.5	20.1	21.4	20.5	21.7	22.1
	8H	17.6	18.8	18.0	19.2	19.6	20.5	21.7	20.9	22.1	22.5
	12H	17.6	18.8	18.1	19.2	19.6	20.8	22.0	21.3	22.4	22.8
4H	2H	15.6	17.0	16.0	17.4	17.8	16.4	17.8	16.8	18.2	18.5
	3H	17.5	18.7	18.0	19.1	19.5	18.9	20.1	19.3	20.5	20.8
	4H	18.2	19.3	18.7	19.7	20.2	20.0	21.1	20.5	21.5	22.0
	6H	18.8	19.7	19.2	20.2	20.6	21.3	22.2	21.7	22.7	23.1
	8H	18.9	19.8	19.4	20.3	20.7	21.8	22.7	22.3	23.1	23.6
	12H	19.1	19.9	19.6	20.3	20.8	22.2	23.0	22.7	23.5	24.0
8H	4H	18.8	19.7	19.3	20.2	20.6	20.4	21.3	20.8	21.7	22.2
	6H	19.6	20.3	20.1	20.8	21.3	21.8	22.6	22.3	23.1	23.5
	8H	19.9	20.5	20.4	21.0	21.5	22.5	23.2	23.0	23.7	24.1
	12H	20.1	20.7	20.6	21.2	21.7	23.1	23.6	23.6	24.1	24.7
12H	4H	19.0	19.8	19.5	20.3	20.7	20.4	21.2	20.9	21.7	22.2
	6H	19.8	20.5	20.4	21.0	21.5	21.9	22.6	22.5	23.1	23.6
	8H	20.2	20.8	20.7	21.3	21.9	22.7	23.2	23.2	23.7	24.3

Maximum UGR = 24.7

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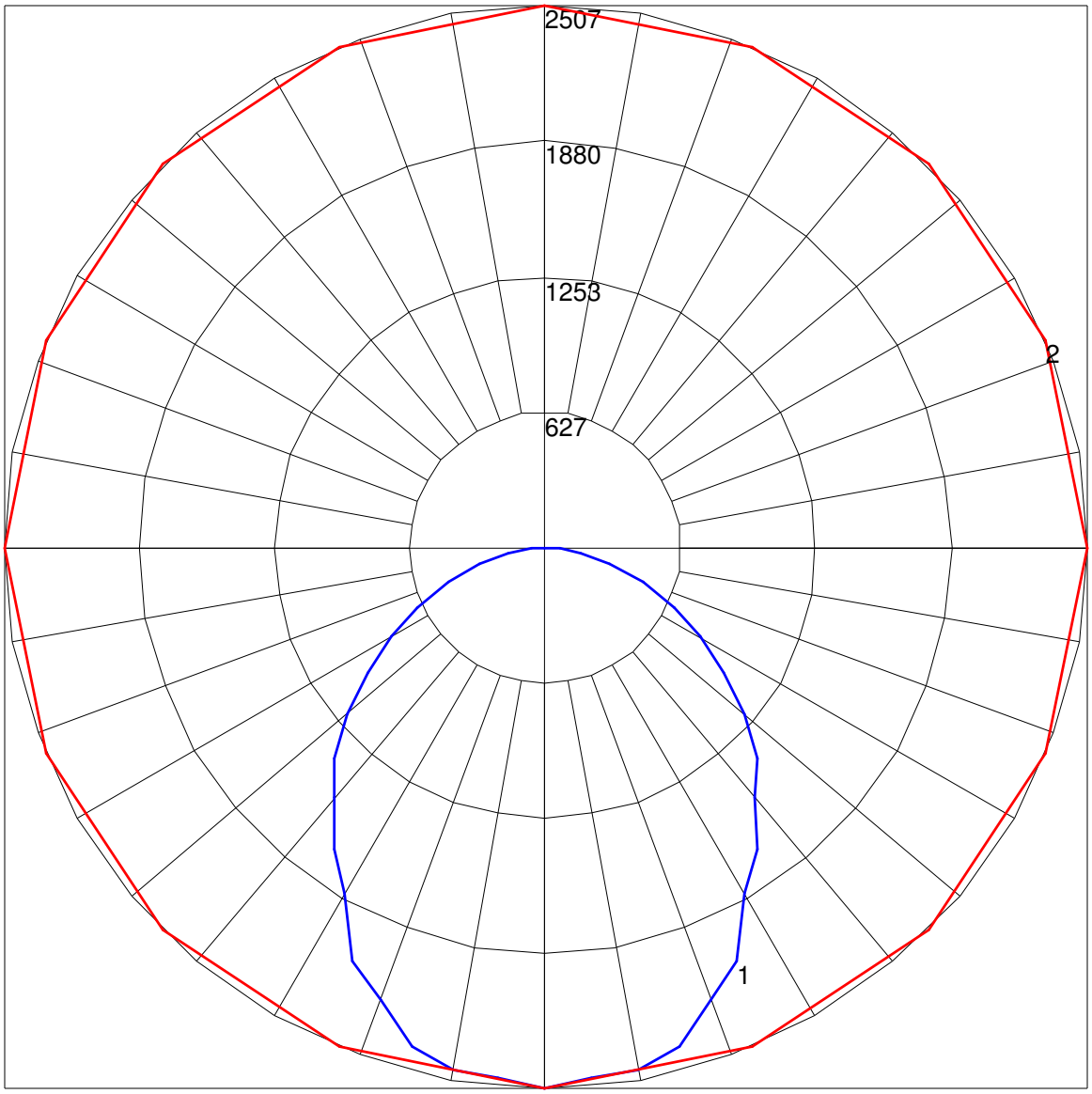
POLAR GRAPH



Maximum Candela = 2506.614 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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