H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-24-L61-827-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-L61-827-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	5996
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	132
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	2571	2713	2852
55	2305	2523	2725
65	2026	2400	2727
75	1568	2408	2980
85	946	3159	3620

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	2293.774	2293.774	2293.774	2293.774	2293.774
5	2258.749	2255.636	2255.636	2247.852	2243.961
10	2251.744	2251.744	2255.636	2258.749	2258.749
15	2192.590	2195.703	2199.595	2205.043	2208.935
20	2047.818	2055.602	2064.942	2077.395	2081.287
25	1931.845	1938.850	1957.531	1973.876	1981.659
30	1692.894	1640.745	1854.011	1792.522	1783.182
35	1561.354	1576.143	1611.168	1640.745	1652.420
40	1389.341	1408.021	1446.938	1485.855	1500.644
45	1269.476	1285.821	1339.527	1389.341	1408.021
50	1102.911	1128.596	1187.750	1239.899	1257.801
55	923.114	951.134	1010.288	1069.442	1091.236
60	752.657	782.234	849.171	909.882	932.454
65	597.767	636.684	708.291	779.121	804.806
70	440.542	486.464	571.303	646.024	671.709
75	283.317	340.136	435.093	510.592	538.613
80	155.668	229.611	338.579	412.521	435.093
85	57.597	131.540	192.251	216.379	220.271
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	831.49	N.A.	13.90
0-30	1723.26	N.A.	28.70
0-40	2728.52	N.A.	45.50
0-60	4659.72	N.A.	77.70
0-80	5816.42	N.A.	97.00
0-90	5995.72	N.A.	100.00
10-90	5780.11	N.A.	96.40
20-40	1897.03	N.A.	31.60
20-50	2922.37	N.A.	48.70
40-70	2630.48	N.A.	43.90
60-80	1156.7	N.A.	19.30
70-80	457.42	N.A.	7.60
80-90	179.30	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	5995.72	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	215.61
10-20	615.87
20-30	891.77
30-40	1005.26
40-50	1025.34
50-60	905.86
60-70	699.28
70-80	457.42
80-90	179.30
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	14.6	16.2	14.9	16.5	16.8	15.6	17.2	15.9	17.5	17.8
	3H	16.2	17.7	16.6	18.0	18.4	17.7	19.2	18.1	19.6	19.9
	4H	16.8	18.2	17.2	18.5	18.9	18.7	20.1	19.1	20.5	20.9
	6H	17.1	18.5	17.6	18.8	19.2	19.8	21.1	20.2	21.4	21.8
	8H	17.3	18.5	17.7	18.9	19.3	20.2	21.4	20.6	21.8	22.2
	12H	17.3	18.5	17.8	18.9	19.3	20.5	21.7	21.0	22.1	22.5
4H	2H	15.3	16.7	15.7	17.1	17.5	16.1	17.5	16.5	17.9	18.2
	3H	17.2	18.4	17.7	18.8	19.2	18.6	19.8	19.0	20.2	20.6
	4H	17.9	19.0	18.4	19.4	19.9	19.7	20.8	20.2	21.2	21.7
	6H	18.5	19.4	18.9	19.9	20.3	21.0	21.9	21.4	22.4	22.8
	8H	18.6	19.5	19.1	20.0	20.4	21.5	22.4	22.0	22.8	23.3
	12H	18.8	19.6	19.3	20.0	20.5	21.9	22.7	22.4	23.2	23.7
8H	4H	18.5	19.4	19.0	19.9	20.3	20.1	21.0	20.5	21.4	21.9
	6H	19.3	20.0	19.8	20.5	21.0	21.5	22.3	22.0	22.8	23.2
	8H	19.6	20.2	20.1	20.7	21.2	22.2	22.9	22.7	23.4	23.8
	12H	19.8	20.4	20.3	20.9	21.4	22.8	23.3	23.3	23.8	24.4
12H	4H	18.7	19.5	19.2	20.0	20.4	20.1	20.9	20.6	21.4	21.9
	6H	19.5	20.2	20.1	20.7	21.2	21.6	22.3	22.2	22.8	23.3
	8H	19.9	20.5	20.4	21.0	21.6	22.4	22.9	22.9	23.4	24.0

Maximum UGR = 24.4

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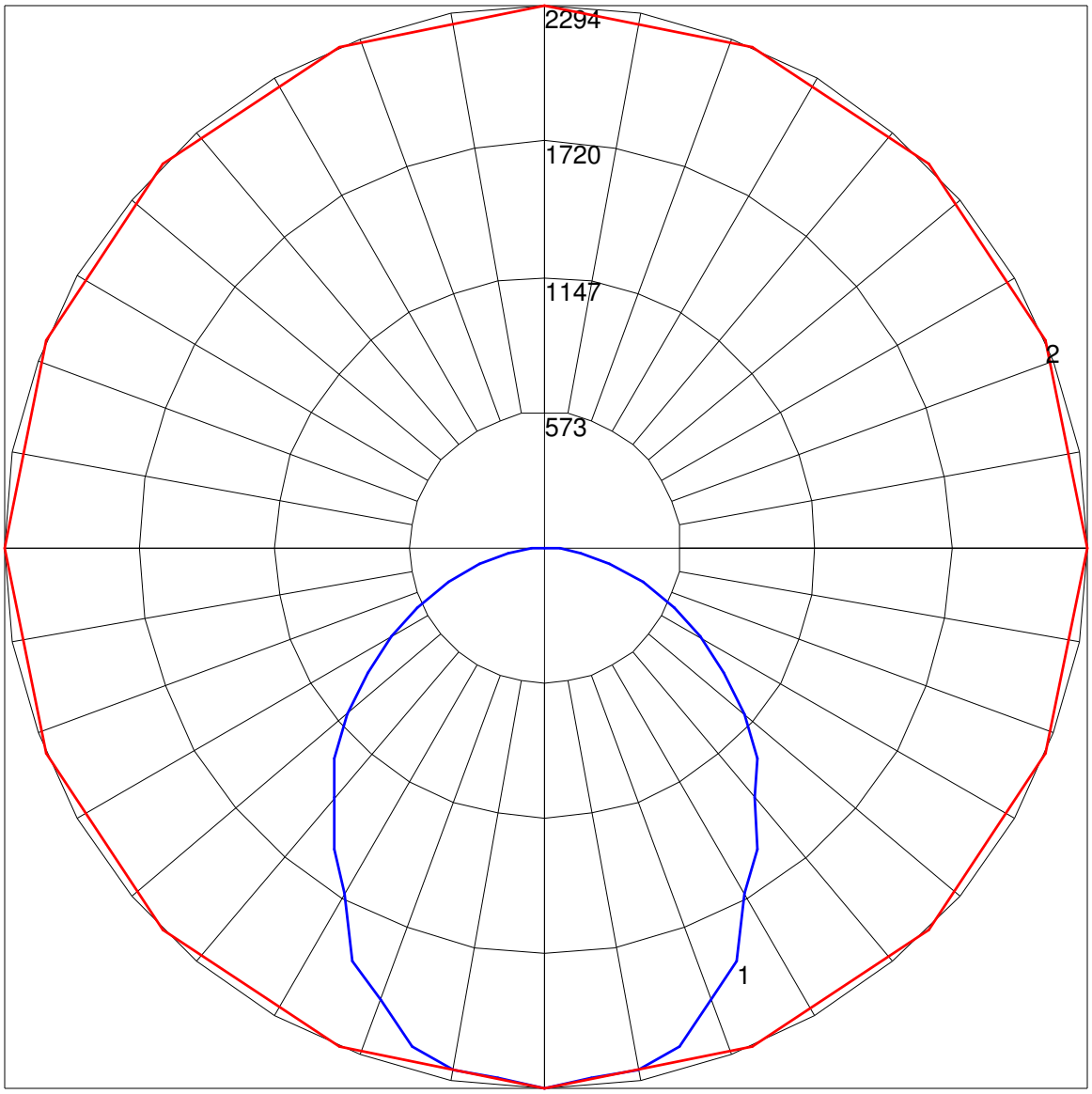
POLAR GRAPH



Maximum Candela = 2293.774 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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