H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-24-L90-950-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-L90-950-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	8154
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	122
Total Luminaire Watts	66.6
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	3497	3690	3878
55	3135	3431	3706
65	2755	3264	3709
75	2132	3274	4053
85	1287	4296	4923

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	3119.544	3119.544	3119.544	3119.544	3119.544
5	3071.909	3067.675	3067.675	3057.090	3051.797
10	3062.382	3062.382	3067.675	3071.909	3071.909
15	2981.933	2986.167	2991.460	2998.869	3004.162
20	2785.043	2795.628	2808.331	2825.267	2830.560
25	2627.319	2636.846	2662.251	2684.480	2695.066
30	2302.344	2231.421	2521.464	2437.838	2425.136
35	2123.449	2143.562	2191.197	2231.421	2247.300
40	1889.510	1914.915	1967.843	2020.770	2040.883
45	1726.493	1748.723	1821.763	1889.510	1914.915
50	1499.964	1534.896	1615.346	1686.269	1710.615
55	1255.439	1293.547	1373.997	1454.446	1484.086
60	1023.617	1063.842	1154.877	1237.444	1268.142
65	812.966	865.893	963.280	1059.608	1094.540
70	599.139	661.593	776.975	878.596	913.528
75	385.312	462.586	591.729	694.408	732.516
80	211.710	312.272	460.469	561.031	591.729
85	78.333	178.895	261.462	294.277	299.569
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1130.83	N.A.	13.90
0-30	2343.64	N.A.	28.70
0-40	3710.8	N.A.	45.50
0-60	6337.24	N.A.	77.70
0-80	7910.36	N.A.	97.00
0-90	8154.21	N.A.	100.00
10-90	7860.97	N.A.	96.40
20-40	2579.97	N.A.	31.60
20-50	3974.44	N.A.	48.70
40-70	3577.46	N.A.	43.90
60-80	1573.11	N.A.	19.30
70-80	622.09	N.A.	7.60
80-90	243.85	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	8154.21	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	293.24
10-20	837.59
20-30	1212.81
30-40	1367.16
40-50	1394.47
50-60	1231.98
60-70	951.02
70-80	622.09
80-90	243.85
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	15.6	17.3	16.0	17.6	17.9	16.7	18.3	17.0	18.6	18.9
	3H	17.3	18.8	17.7	19.1	19.5	18.8	20.3	19.2	20.7	21.0
	4H	17.9	19.3	18.3	19.6	20.0	19.8	21.2	20.2	21.6	22.0
	6H	18.2	19.6	18.7	19.9	20.3	20.9	22.2	21.3	22.5	22.9
	8H	18.4	19.6	18.8	20.0	20.4	21.3	22.5	21.7	22.9	23.3
	12H	18.4	19.6	18.9	20.0	20.4	21.6	22.8	22.1	23.2	23.6
4H	2H	16.4	17.8	16.8	18.2	18.6	17.2	18.6	17.6	19.0	19.3
	3H	18.3	19.5	18.8	19.9	20.3	19.7	20.9	20.1	21.3	21.7
	4H	19.0	20.1	19.5	20.5	21.0	20.8	21.9	21.3	22.3	22.8
	6H	19.6	20.5	20.0	21.0	21.4	22.1	23.0	22.5	23.5	23.9
	8H	19.7	20.6	20.2	21.1	21.5	22.6	23.5	23.1	23.9	24.4
	12H	19.9	20.7	20.4	21.1	21.6	23.0	23.8	23.5	24.3	24.8
8H	4H	19.6	20.5	20.1	21.0	21.4	21.2	22.1	21.6	22.5	23.0
	6H	20.4	21.1	20.9	21.6	22.1	22.6	23.4	23.1	23.9	24.3
	8H	20.7	21.3	21.2	21.8	22.3	23.3	24.0	23.8	24.5	24.9
	12H	20.9	21.5	21.4	22.0	22.5	23.9	24.4	24.4	24.9	25.5
12H	4H	19.8	20.6	20.3	21.1	21.5	21.2	22.0	21.7	22.5	23.0
	6H	20.6	21.3	21.2	21.8	22.3	22.7	23.4	23.3	23.9	24.4
	8H	21.0	21.6	21.5	22.1	22.7	23.5	24.0	24.0	24.5	25.1

Maximum UGR = 25.5

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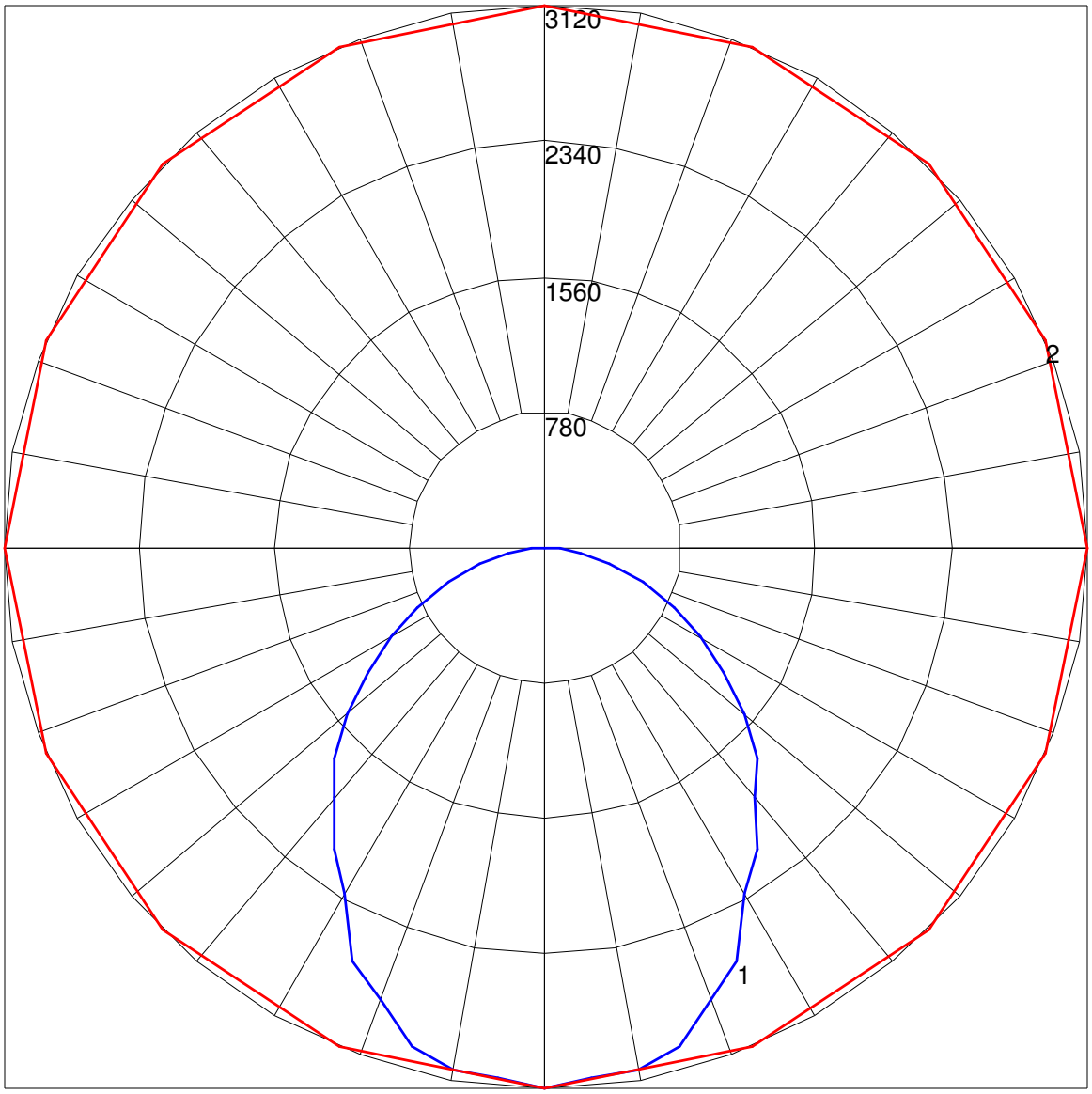
POLAR GRAPH



Maximum Candela = 3119.544 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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