H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-24-L61-940-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-L61-940-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	5316
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	117
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	2280	2405	2528
55	2044	2236	2416
65	1796	2128	2418
75	1390	2135	2642
85	839	2801	3209

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	2033.656	2033.656	2033.656	2033.656	2033.656
5	2002.602	1999.842	1999.842	1992.941	1989.491
10	1996.392	1996.392	1999.842	2002.602	2002.602
15	1943.946	1946.706	1950.156	1954.987	1958.437
20	1815.592	1822.492	1830.773	1841.814	1845.265
25	1712.770	1718.981	1735.543	1750.034	1756.935
30	1500.917	1454.681	1643.762	1589.246	1580.965
35	1384.294	1397.405	1428.459	1454.681	1465.033
40	1231.787	1248.349	1282.852	1317.356	1330.468
45	1125.515	1140.007	1187.622	1231.787	1248.349
50	977.839	1000.611	1053.057	1099.292	1115.164
55	818.431	843.274	895.719	948.165	967.487
60	667.304	693.527	752.874	806.700	826.712
65	529.979	564.483	627.970	690.767	713.539
70	390.583	431.298	506.516	572.764	595.536
75	251.188	301.563	385.753	452.690	477.533
80	138.015	203.573	300.183	365.741	385.753
85	51.066	116.623	170.449	191.841	195.292
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	737.20	N.A.	13.90
0-30	1527.83	N.A.	28.70
0-40	2419.1	N.A.	45.50
0-60	4131.3	N.A.	77.70
0-80	5156.82	N.A.	97.00
0-90	5315.8	N.A.	100.00
10-90	5124.63	N.A.	96.40
20-40	1681.9	N.A.	31.60
20-50	2590.97	N.A.	48.70
40-70	2332.18	N.A.	43.90
60-80	1025.52	N.A.	19.30
70-80	405.55	N.A.	7.60
80-90	158.97	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	5315.8	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	191.16
10-20	546.03
20-30	790.64
30-40	891.27
40-50	909.06
50-60	803.14
60-70	619.98
70-80	405.55
80-90	158.97
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	14.2	15.8	14.5	16.1	16.4	15.2	16.8	15.5	17.1	17.4
	3H	15.8	17.3	16.2	17.6	18.0	17.3	18.8	17.7	19.2	19.5
	4H	16.4	17.8	16.8	18.1	18.5	18.3	19.7	18.7	20.1	20.5
	6H	16.7	18.1	17.2	18.4	18.8	19.4	20.7	19.8	21.0	21.4
	8H	16.9	18.1	17.3	18.5	18.9	19.8	21.0	20.2	21.4	21.8
	12H	16.9	18.1	17.4	18.5	18.9	20.1	21.3	20.6	21.7	22.1
4H	2H	14.9	16.3	15.3	16.7	17.1	15.7	17.1	16.1	17.5	17.8
	3H	16.8	18.0	17.3	18.4	18.8	18.2	19.4	18.6	19.8	20.2
	4H	17.5	18.6	18.0	19.0	19.5	19.3	20.4	19.8	20.8	21.3
	6H	18.1	19.0	18.5	19.5	19.9	20.6	21.5	21.0	22.0	22.4
	8H	18.2	19.1	18.7	19.6	20.0	21.1	22.0	21.6	22.4	22.9
	12H	18.4	19.2	18.9	19.6	20.1	21.5	22.3	22.0	22.8	23.3
8H	4H	18.1	19.0	18.6	19.5	19.9	19.7	20.6	20.1	21.0	21.5
	6H	18.9	19.6	19.4	20.1	20.6	21.1	21.9	21.6	22.4	22.8
	8H	19.2	19.8	19.7	20.3	20.8	21.8	22.5	22.3	23.0	23.4
	12H	19.4	20.0	19.9	20.5	21.0	22.4	22.9	22.9	23.4	24.0
12H	4H	18.3	19.1	18.8	19.6	20.0	19.7	20.5	20.2	21.0	21.5
	6H	19.1	19.8	19.7	20.3	20.8	21.2	21.9	21.8	22.4	22.9
	8H	19.5	20.1	20.0	20.6	21.2	22.0	22.5	22.5	23.0	23.6

Maximum UGR = 24.0

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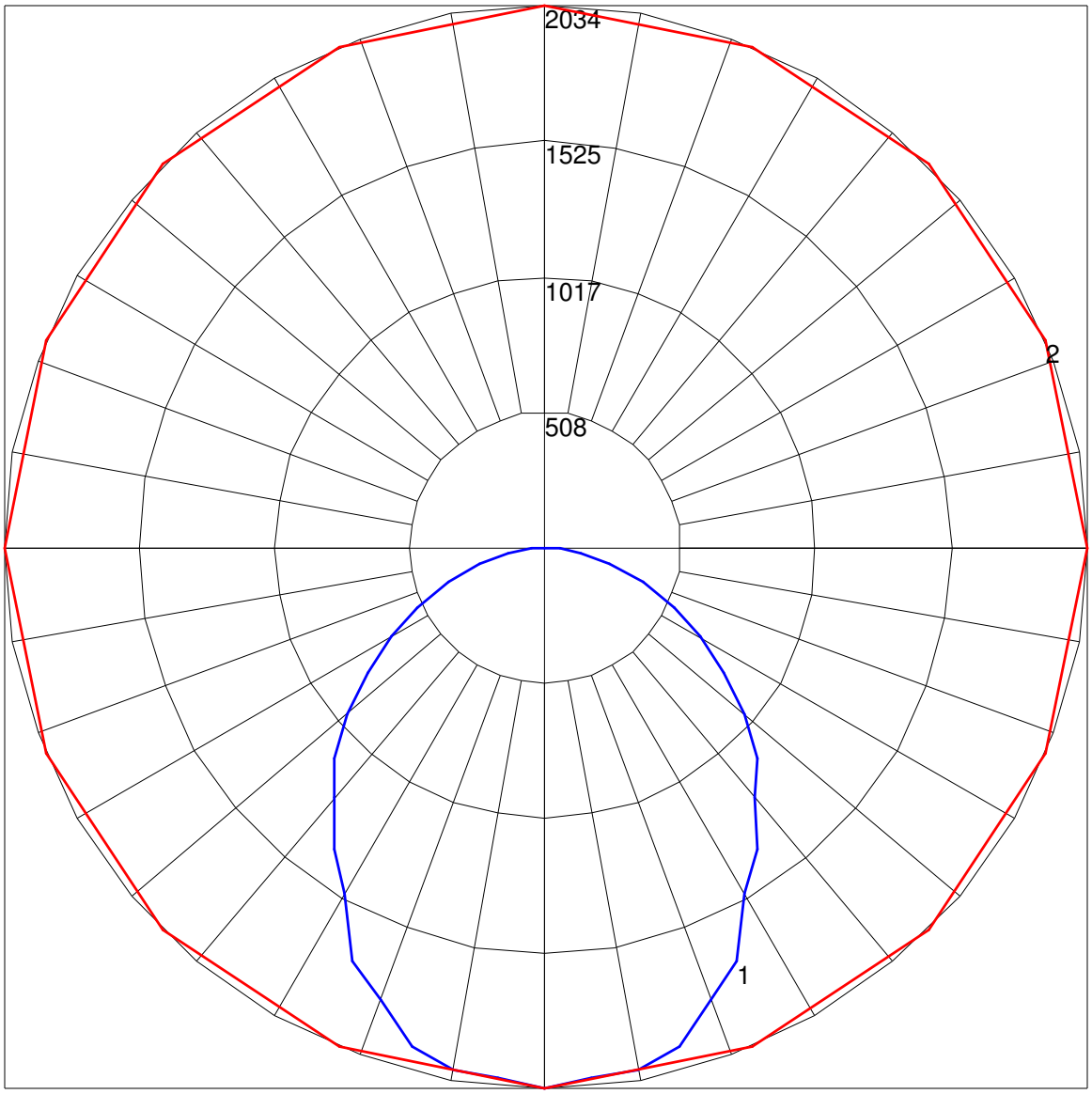
POLAR GRAPH



Maximum Candela = 2033.656 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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