H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-24-L61-935-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-L61-935-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	5192
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	114
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	2227	2349	2470
55	1996	2184	2360
65	1754	2079	2362
75	1358	2085	2581
85	820	2736	3134

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1986.361	1986.361	1986.361	1986.361	1986.361
5	1956.030	1953.334	1953.334	1946.594	1943.224
10	1949.964	1949.964	1953.334	1956.030	1956.030
15	1898.738	1901.434	1904.804	1909.522	1912.892
20	1773.368	1780.109	1788.197	1798.981	1802.352
25	1672.938	1679.004	1695.181	1709.336	1716.076
30	1466.012	1420.852	1605.535	1552.287	1544.199
35	1352.101	1364.907	1395.239	1420.852	1430.962
40	1203.140	1219.317	1253.019	1286.720	1299.527
45	1099.340	1113.495	1160.003	1203.140	1219.317
50	955.098	977.341	1028.567	1073.727	1089.230
55	799.398	823.663	874.889	926.115	944.988
60	651.785	677.398	735.365	787.939	807.486
65	517.654	551.355	613.366	674.702	696.945
70	381.500	421.268	494.737	559.443	581.686
75	245.346	294.550	376.782	442.163	466.428
80	134.806	198.838	293.202	357.235	376.782
85	49.878	113.911	166.485	187.380	190.750
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	720.05	N.A.	13.90
0-30	1492.3	N.A.	28.70
0-40	2362.84	N.A.	45.50
0-60	4035.22	N.A.	77.70
0-80	5036.9	N.A.	97.00
0-90	5192.17	N.A.	100.00
10-90	5005.45	N.A.	96.40
20-40	1642.79	N.A.	31.60
20-50	2530.71	N.A.	48.70
40-70	2277.94	N.A.	43.90
60-80	1001.67	N.A.	19.30
70-80	396.12	N.A.	7.60
80-90	155.27	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	5192.17	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	186.72
10-20	533.33
20-30	772.25
30-40	870.54
40-50	887.92
50-60	784.46
60-70	605.56
70-80	396.12
80-90	155.27
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	14.0	15.7	14.4	16.0	16.3	15.1	16.7	15.4	17.0	17.3
	3H	15.7	17.2	16.1	17.5	17.9	17.2	18.7	17.6	19.1	19.4
	4H	16.3	17.7	16.7	18.0	18.4	18.2	19.6	18.6	20.0	20.4
	6H	16.6	18.0	17.1	18.3	18.7	19.3	20.6	19.7	20.9	21.3
	8H	16.8	18.0	17.2	18.4	18.8	19.7	20.9	20.1	21.3	21.7
	12H	16.8	18.0	17.3	18.4	18.8	20.0	21.2	20.5	21.6	22.0
4H	2H	14.8	16.2	15.2	16.6	17.0	15.6	17.0	16.0	17.4	17.7
	3H	16.7	17.9	17.2	18.3	18.7	18.1	19.3	18.5	19.7	20.0
	4H	17.4	18.5	17.9	18.9	19.4	19.2	20.3	19.7	20.7	21.2
	6H	18.0	18.9	18.4	19.4	19.8	20.5	21.4	20.9	21.9	22.3
	8H	18.1	19.0	18.6	19.5	19.9	21.0	21.9	21.5	22.3	22.8
	12H	18.3	19.1	18.8	19.5	20.0	21.4	22.2	21.9	22.7	23.2
8H	4H	18.0	18.9	18.5	19.4	19.8	19.6	20.5	20.0	20.9	21.4
	6H	18.8	19.5	19.3	20.0	20.5	21.0	21.8	21.5	22.3	22.7
	8H	19.1	19.7	19.6	20.2	20.7	21.7	22.4	22.2	22.9	23.3
	12H	19.3	19.9	19.8	20.4	20.9	22.3	22.8	22.8	23.3	23.9
12H	4H	18.2	19.0	18.7	19.5	19.9	19.6	20.4	20.1	20.9	21.4
	6H	19.0	19.7	19.6	20.2	20.7	21.1	21.8	21.7	22.3	22.8
	8H	19.4	20.0	19.9	20.5	21.1	21.9	22.4	22.4	22.9	23.5

Maximum UGR = 23.9

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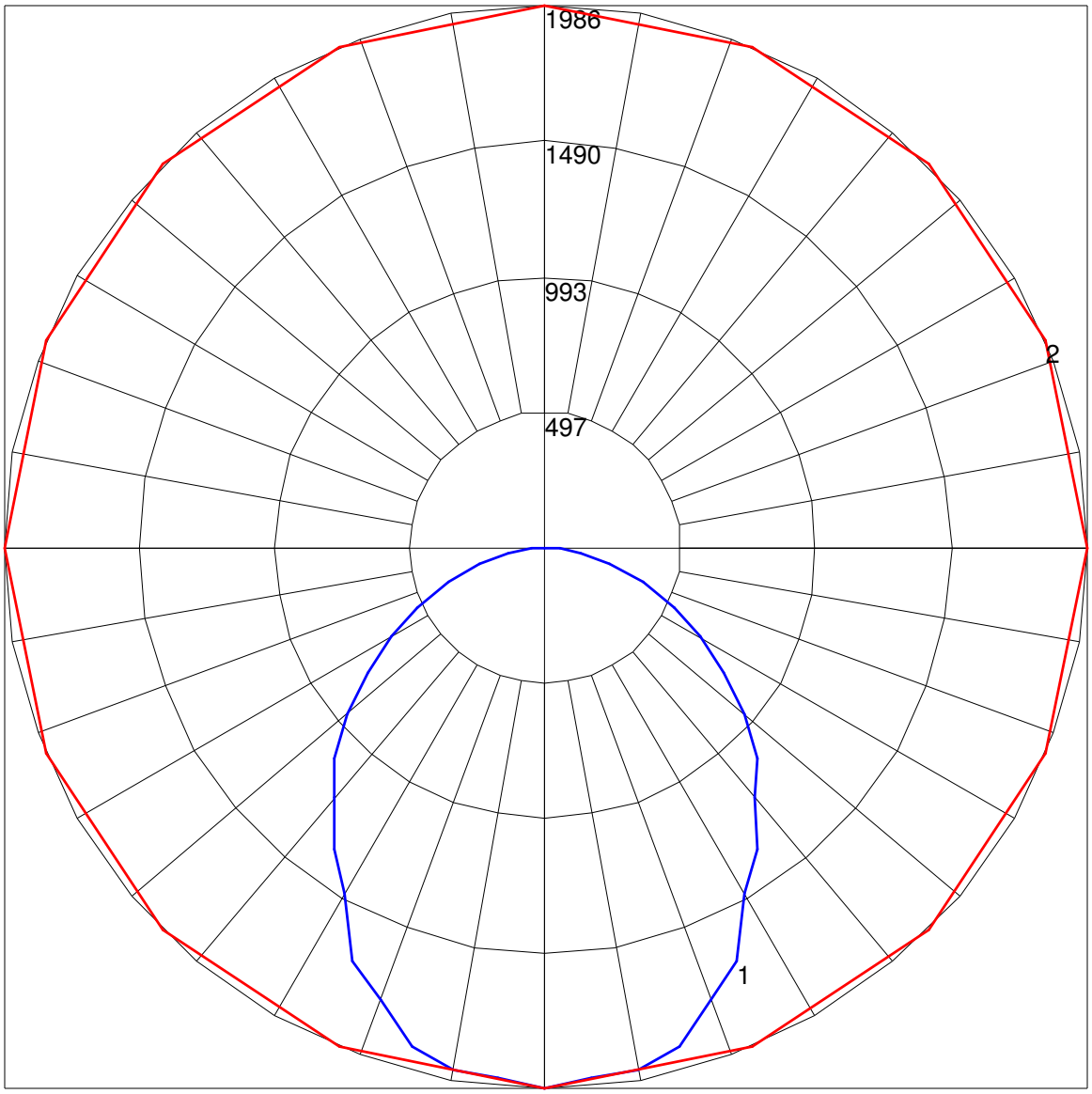
POLAR GRAPH



Maximum Candela = 1986.361 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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