H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-24-L49-940-SA-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] GEN FROM BALLABS TEST NO. 20790.0
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
[ISSUEDATE] 2023-06-27
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 2 X 4 RECESSED LED LUMINAIRE WITH
[MORE] FROST SQUARED RIBBED LENS
[MORE] 0-10V DRIVER
[LUMCAT] PT-24-L49-940-SA-DIM-UNV
[LAMPCAT] 22 INCH LED ARRAYS
[_SEARCH_SOURCETYPE] LED
[_SEARCH_APPLICATION] INDOOR
[_SEARCH_MOUNTING] RECESSED

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4498
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	123
Total Luminaire Watts	36.7
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.20
Spacing Criterion (90-270)	1.16
Spacing Criterion (Diagonal)	1.28
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	3.92 ft
Luminous Width (90-270)	0.98 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	4019	3895	3866
55	3617	3638	3719
65	3160	3497	3831
75	2551	3531	4406
85	1182	3812	4605

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1751.756	1751.756	1751.756	1751.756	1751.756
5	1760.460	1741.119	1731.449	1707.273	1729.515
10	1726.614	1705.823	1693.252	1690.834	1694.219
15	1669.560	1649.252	1638.132	1634.263	1631.362
20	1593.649	1573.825	1555.451	1546.265	1547.715
25	1498.881	1482.441	1474.705	1450.530	1441.343
30	1388.157	1371.234	1353.828	1340.773	1333.520
35	1273.082	1257.609	1236.818	1218.928	1208.775
40	1141.083	1128.512	1106.754	1092.732	1084.513
45	1013.437	998.931	982.009	974.272	974.756
50	878.537	874.186	855.813	859.197	863.549
55	739.770	739.770	744.122	755.726	760.561
60	610.673	613.574	633.398	653.222	665.310
65	476.257	493.664	527.026	561.355	577.311
70	347.160	376.171	424.038	469.972	488.829
75	235.469	265.447	325.886	385.357	406.632
80	123.295	174.547	237.403	300.260	320.084
85	36.747	82.680	118.460	134.416	143.119
90	0.000	1.451	1.934	3.385	1.934

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	626.80	N.A.	13.90
0-30	1302.34	N.A.	29.00
0-40	2076.38	N.A.	46.20
0-60	3509.12	N.A.	78.00
0-80	4376.3	N.A.	97.30
0-90	4498.3	N.A.	100.00
10-90	4333.91	N.A.	96.30
20-40	1449.59	N.A.	32.20
20-50	2212.26	N.A.	49.20
40-70	1955.51	N.A.	43.50
60-80	867.18	N.A.	19.30
70-80	344.40	N.A.	7.70
80-90	122.00	N.A.	2.70
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	4498.3	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	164.39
10-20	462.41
20-30	675.54
30-40	774.04
40-50	762.68
50-60	670.06
60-70	522.78
70-80	344.40
80-90	122.00
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	104	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	99	90	83	77	96	88	82	77	85	79	75	81	77	73	78	75	71	69
3	90	79	71	65	87	78	70	64	75	68	63	72	66	62	69	65	61	58
4	83	70	62	55	80	69	61	55	67	59	54	64	58	53	62	57	52	50
5	76	63	54	47	74	62	54	47	60	52	47	58	51	46	56	50	46	44
6	70	57	48	42	68	56	48	41	54	47	41	53	46	41	51	45	40	38
7	65	52	43	37	64	51	43	37	49	42	37	48	41	36	47	41	36	34
8	61	47	39	33	59	47	39	33	45	38	33	44	37	33	43	37	32	30
9	57	44	35	30	56	43	35	30	42	35	30	41	34	29	40	34	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	16.2	17.8	16.6	18.2	18.5	16.5	18.1	16.9	18.5	18.8
	3H	17.9	19.3	18.2	19.7	20.0	18.8	20.3	19.2	20.6	20.9
	4H	18.5	19.8	18.9	20.2	20.6	19.9	21.3	20.3	21.6	22.0
	6H	18.8	20.1	19.3	20.5	20.9	20.9	22.2	21.3	22.6	23.0
	8H	18.9	20.2	19.4	20.6	21.0	21.3	22.6	21.7	23.0	23.4
	12H	19.0	20.2	19.4	20.6	21.0	21.6	22.8	22.0	23.2	23.6
4H	2H	16.9	18.3	17.3	18.7	19.0	17.2	18.5	17.6	18.9	19.3
	3H	18.8	20.0	19.2	20.4	20.8	19.7	20.8	20.1	21.2	21.6
	4H	19.6	20.6	20.0	21.0	21.5	20.9	22.0	21.4	22.4	22.8
	6H	20.1	21.0	20.6	21.5	21.9	22.2	23.1	22.6	23.6	24.0
	8H	20.3	21.1	20.7	21.6	22.0	22.7	23.6	23.1	24.0	24.5
	12H	20.3	21.1	20.8	21.6	22.1	23.0	23.8	23.5	24.3	24.8
8H	4H	20.1	21.0	20.5	21.4	21.9	21.3	22.1	21.7	22.6	23.0
	6H	20.8	21.5	21.3	22.0	22.5	22.7	23.5	23.2	23.9	24.4
	8H	21.1	21.7	21.6	22.2	22.7	23.3	24.0	23.8	24.5	25.0
	12H	21.2	21.8	21.7	22.3	22.9	23.8	24.4	24.3	24.9	25.4
12H	4H	20.2	21.0	20.7	21.5	21.9	21.3	22.1	21.8	22.6	23.0
	6H	21.0	21.7	21.5	22.1	22.7	22.8	23.5	23.3	23.9	24.5
	8H	21.3	21.9	21.9	22.4	23.0	23.5	24.0	24.0	24.5	25.1

Maximum UGR = 25.4

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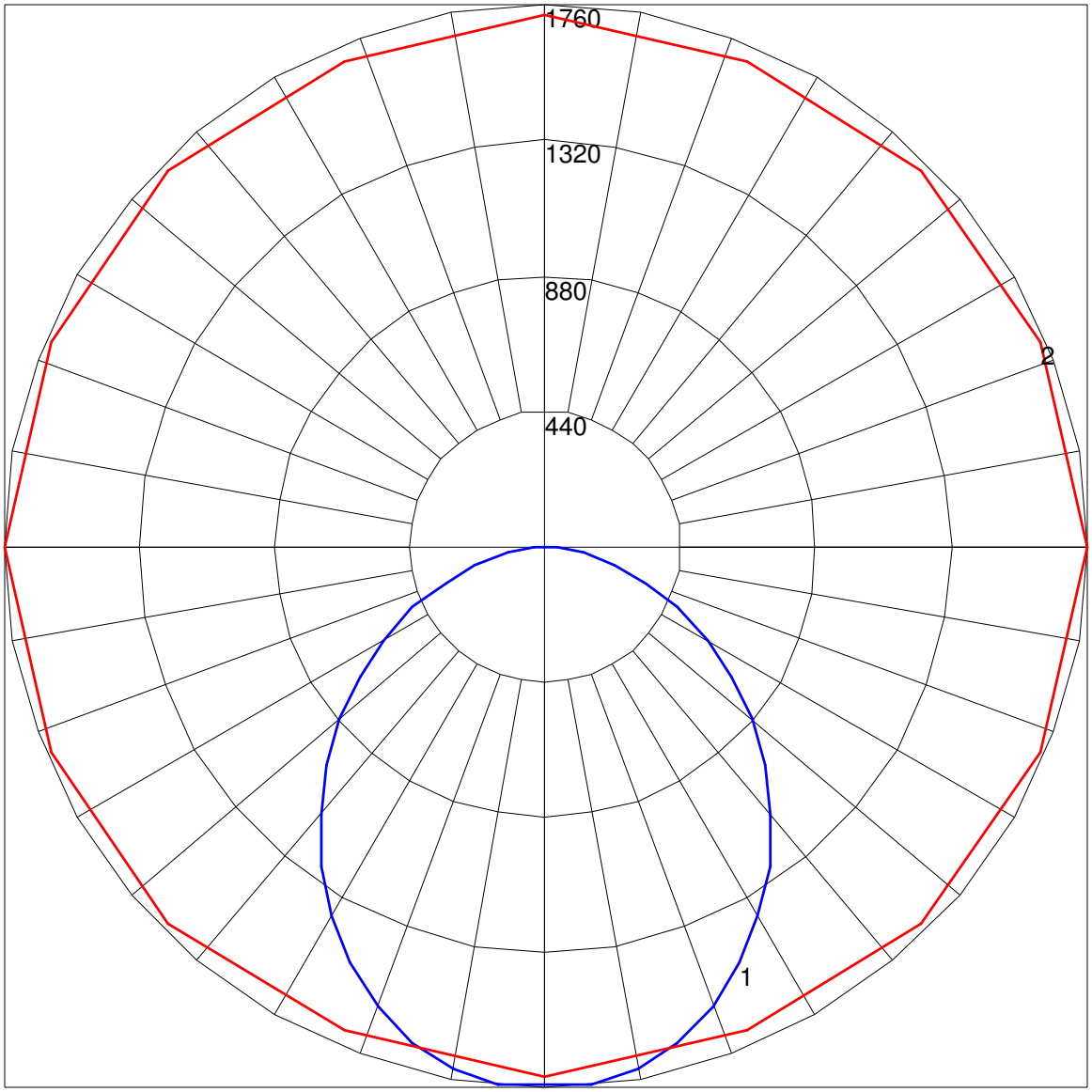
POLAR GRAPH



Maximum Candela = 1760.46 Located At Horizontal Angle = 0, Vertical Angle = 5
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)

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