H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-24-L61-940-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-L61-940-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	5475
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	120
Total Luminaire Watts	45.5
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	4892	4740	4705
55	4402	4428	4526
65	3847	4257	4663
75	3105	4298	5363
85	1439	4639	5605

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	2132.258	2132.258	2132.258	2132.258	2132.258
5	2142.852	2119.310	2107.540	2078.113	2105.185
10	2101.654	2076.347	2061.045	2058.103	2062.223
15	2032.207	2007.489	1993.953	1989.244	1985.713
20	1939.807	1915.678	1893.313	1882.131	1883.897
25	1824.455	1804.445	1795.028	1765.601	1754.419
30	1689.681	1669.082	1647.895	1632.004	1623.176
35	1549.610	1530.776	1505.470	1483.694	1471.335
40	1388.940	1373.638	1347.154	1330.086	1320.081
45	1233.567	1215.911	1195.312	1185.896	1186.484
50	1069.366	1064.069	1041.705	1045.825	1051.121
55	900.457	900.457	905.754	919.878	925.764
60	743.318	746.849	770.979	795.109	809.823
65	579.706	600.893	641.502	683.288	702.709
70	422.567	457.879	516.144	572.055	595.008
75	286.616	323.105	396.672	469.061	494.957
80	150.076	212.461	288.970	365.480	389.609
85	44.729	100.639	144.191	163.612	174.206
90	0.000	1.766	2.354	4.120	2.354

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	762.95	N.A.	13.90
0-30	1585.23	N.A.	29.00
0-40	2527.4	N.A.	46.20
0-60	4271.34	N.A.	78.00
0-80	5326.88	N.A.	97.30
0-90	5475.38	N.A.	100.00
10-90	5275.29	N.A.	96.30
20-40	1764.45	N.A.	32.20
20-50	2692.79	N.A.	49.20
40-70	2380.27	N.A.	43.50
60-80	1055.54	N.A.	19.30
70-80	419.21	N.A.	7.70
80-90	148.50	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	5475.38	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	200.09
10-20	562.86
20-30	822.28
30-40	942.17
40-50	928.34
50-60	815.60
60-70	636.33
70-80	419.21
80-90	148.50
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	16.9	18.5	17.3	18.9	19.2	17.2	18.8	17.6	19.2	19.5
	3H	18.6	20.0	18.9	20.4	20.7	19.5	21.0	19.9	21.3	21.6
	4H	19.2	20.5	19.6	20.9	21.3	20.6	22.0	21.0	22.3	22.7
	6H	19.5	20.8	20.0	21.2	21.6	21.6	22.9	22.0	23.3	23.7
	8H	19.6	20.9	20.1	21.3	21.7	22.0	23.3	22.4	23.7	24.1
	12H	19.7	20.9	20.1	21.3	21.7	22.3	23.5	22.7	23.9	24.3
4H	2H	17.6	19.0	18.0	19.4	19.7	17.9	19.2	18.3	19.6	20.0
	3H	19.5	20.7	19.9	21.1	21.5	20.4	21.5	20.8	21.9	22.3
	4H	20.3	21.3	20.7	21.7	22.2	21.6	22.7	22.1	23.1	23.5
	6H	20.8	21.7	21.3	22.2	22.6	22.9	23.8	23.3	24.3	24.7
	8H	21.0	21.8	21.4	22.3	22.7	23.4	24.2	23.8	24.7	25.2
	12H	21.0	21.8	21.5	22.3	22.8	23.7	24.5	24.2	25.0	25.4
8H	4H	20.8	21.7	21.2	22.1	22.6	22.0	22.8	22.4	23.3	23.7
	6H	21.5	22.2	22.0	22.7	23.2	23.4	24.2	23.9	24.6	25.1
	8H	21.8	22.4	22.3	22.9	23.4	24.0	24.7	24.5	25.2	25.7
	12H	21.9	22.5	22.4	23.0	23.6	24.5	25.1	25.0	25.6	26.1
12H	4H	20.9	21.7	21.4	22.2	22.6	22.0	22.8	22.5	23.3	23.7
	6H	21.7	22.4	22.2	22.8	23.4	23.5	24.2	24.0	24.6	25.2
	8H	22.0	22.6	22.6	23.1	23.7	24.2	24.7	24.7	25.2	25.8

Maximum UGR = 26.1

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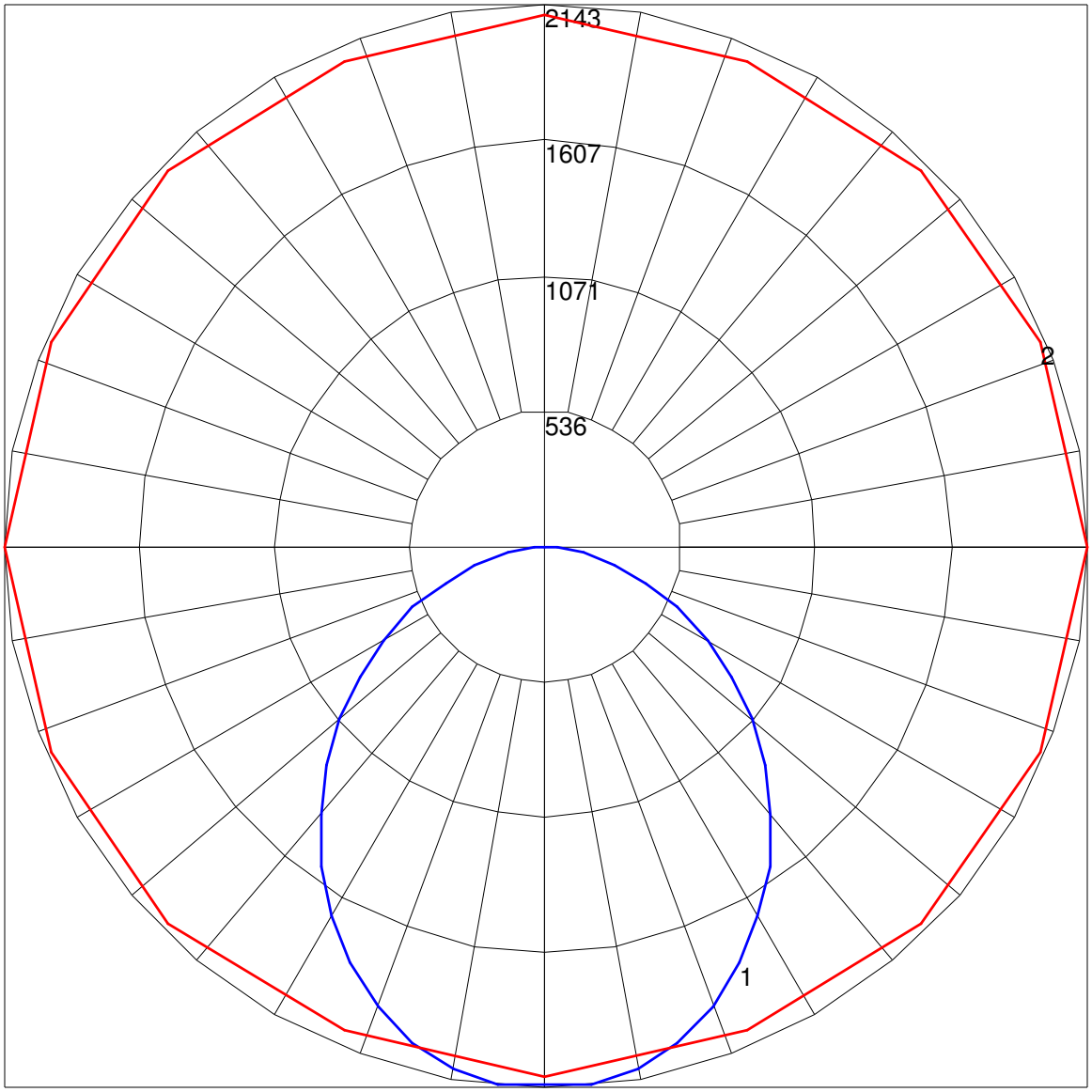
POLAR GRAPH



Maximum Candela = 2142.852 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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