H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-24-L61-840-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-L61-840-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	6558
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	144
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	5859	5678	5636
55	5273	5304	5421
65	4607	5098	5585
75	3719	5148	6423
85	1724	5557	6713

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	2553.750	2553.750	2553.750	2553.750	2553.750
5	2566.438	2538.243	2524.146	2488.902	2521.326
10	2517.097	2486.788	2468.461	2464.937	2469.871
15	2433.922	2404.318	2388.106	2382.467	2378.237
20	2323.257	2294.358	2267.572	2254.180	2256.295
25	2185.102	2161.137	2149.859	2114.615	2101.223
30	2023.687	1999.016	1973.641	1954.609	1944.036
35	1855.927	1833.371	1803.062	1776.982	1762.179
40	1663.497	1645.171	1613.451	1593.010	1581.027
45	1477.411	1456.265	1431.595	1420.317	1421.021
50	1280.752	1274.408	1247.623	1252.557	1258.901
55	1078.454	1078.454	1084.798	1101.715	1108.763
60	890.253	894.482	923.382	952.282	969.904
65	694.299	719.674	768.310	818.356	841.617
70	506.098	548.390	618.173	685.135	712.625
75	343.273	386.975	475.084	561.783	592.797
80	179.742	254.459	346.092	437.725	466.625
85	53.570	120.533	172.694	195.954	208.642
90	0.000	2.115	2.819	4.934	2.819

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	913.76	N.A.	13.90
0-30	1898.59	N.A.	29.00
0-40	3027.00	N.A.	46.20
0-60	5115.67	N.A.	78.00
0-80	6379.86	N.A.	97.30
0-90	6557.72	N.A.	100.00
10-90	6318.07	N.A.	96.30
20-40	2113.24	N.A.	32.20
20-50	3225.08	N.A.	49.20
40-70	2850.79	N.A.	43.50
60-80	1264.19	N.A.	19.30
70-80	502.07	N.A.	7.70
80-90	177.85	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	6557.72	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	239.65
10-20	674.12
20-30	984.82
30-40	1128.42
40-50	1111.85
50-60	976.82
60-70	762.12
70-80	502.07
80-90	177.85
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	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	82	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	36	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	17.5	19.1	17.9	19.5	19.8	17.8	19.4	18.2	19.8	20.1
	3H	19.2	20.6	19.5	21.0	21.3	20.1	21.6	20.5	21.9	22.2
	4H	19.8	21.1	20.2	21.5	21.9	21.2	22.6	21.6	22.9	23.3
	6H	20.1	21.4	20.6	21.8	22.2	22.2	23.5	22.6	23.9	24.3
	8H	20.2	21.5	20.7	21.9	22.3	22.6	23.9	23.0	24.3	24.7
	12H	20.3	21.5	20.7	21.9	22.3	22.9	24.1	23.3	24.5	24.9
4H	2H	18.2	19.6	18.6	20.0	20.3	18.5	19.8	18.9	20.2	20.6
	3H	20.1	21.3	20.5	21.7	22.1	21.0	22.1	21.4	22.5	22.9
	4H	20.9	21.9	21.3	22.3	22.8	22.2	23.3	22.7	23.7	24.1
	6H	21.4	22.3	21.9	22.8	23.2	23.5	24.4	23.9	24.9	25.3
	8H	21.6	22.4	22.0	22.9	23.3	24.0	24.8	24.4	25.3	25.8
	12H	21.6	22.4	22.1	22.9	23.4	24.3	25.1	24.8	25.6	26.1
8H	4H	21.4	22.3	21.8	22.7	23.2	22.6	23.4	23.0	23.9	24.3
	6H	22.1	22.8	22.6	23.3	23.8	24.0	24.8	24.5	25.2	25.7
	8H	22.4	23.0	22.9	23.5	24.0	24.6	25.3	25.1	25.8	26.3
	12H	22.5	23.1	23.0	23.6	24.2	25.1	25.7	25.6	26.2	26.7
12H	4H	21.5	22.3	22.0	22.8	23.2	22.6	23.4	23.1	23.9	24.3
	6H	22.3	23.0	22.8	23.4	24.0	24.1	24.8	24.6	25.2	25.8
	8H	22.6	23.2	23.2	23.7	24.3	24.8	25.3	25.3	25.8	26.4

Maximum UGR = 26.7

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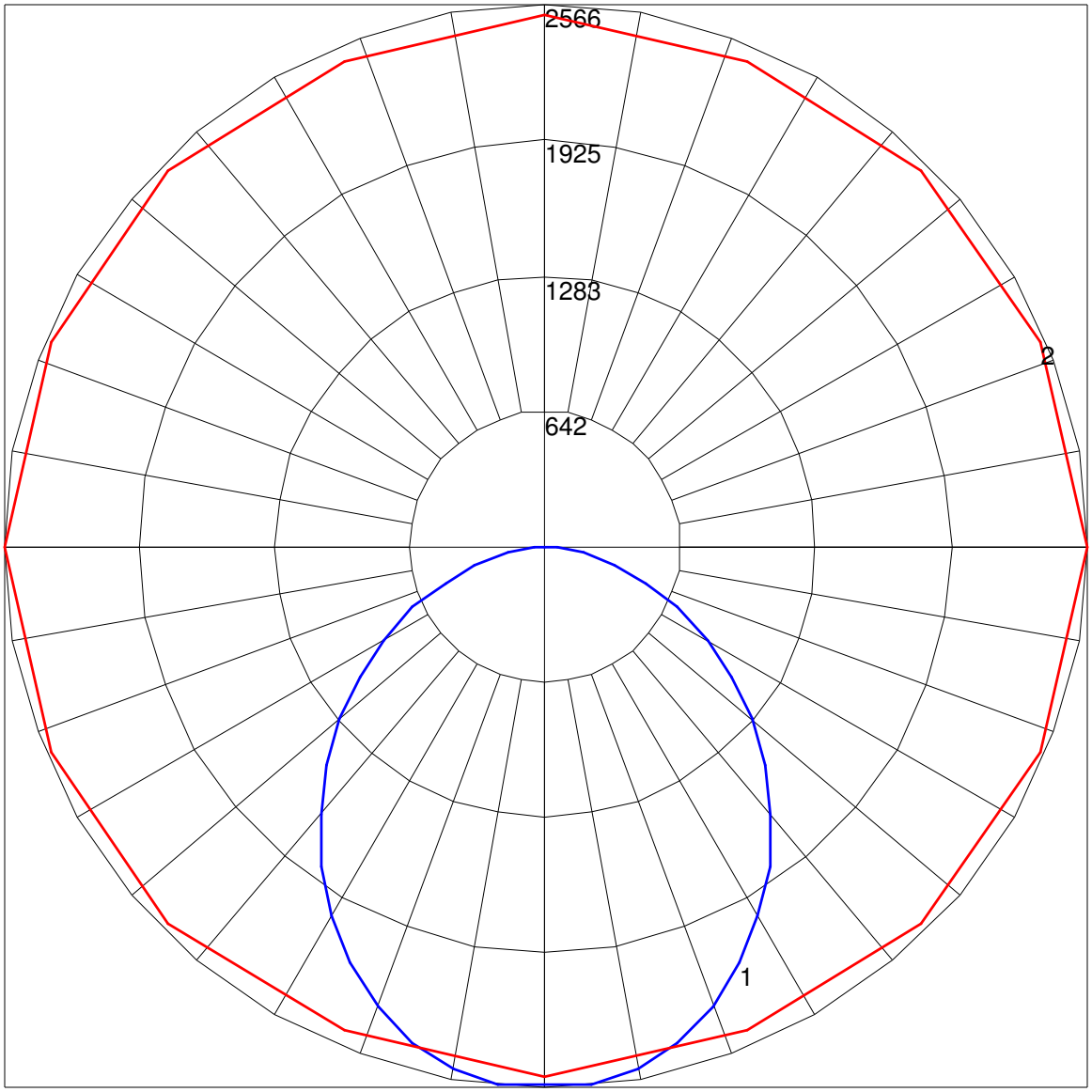
POLAR GRAPH



Maximum Candela = 2566.438 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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