H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-22-L26-940-RA-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] GEN FROM BALLABS TEST NO. 19562.0
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
[ISSUEDATE] 2023-06-23
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 2x2'RECESSED LED LUMINAIRE
[MORE] WHITE REFLECTOR w/CENTER FROSTED RIBBED ACRYLIC LENS
[MORE] ELECTRONIC 0-10V LED DRIVER
[LUMCAT] PT-22-L26-940-RA-DIM-UNV
[LAMPCAT] 22 INCH HLM LED ARRAY

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2515
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	117
Total Luminaire Watts	21.5
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.24
Spacing Criterion (90-270)	1.24
Spacing Criterion (Diagonal)	1.34
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	1.92 ft
Luminous Width (90-270)	1.93 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	2363	2450	2530
55	1998	2201	2349
65	1527	1910	2123
75	1061	1694	2093
85	604	1382	1727

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	961.005	961.005	961.005	961.005	961.005
5	964.236	958.420	957.127	953.896	953.896
10	951.311	945.494	944.848	941.617	940.970
15	928.691	922.229	921.582	920.290	919.643
20	896.378	890.561	889.915	890.561	890.561
25	851.139	845.322	849.200	851.785	849.200
30	795.559	792.974	796.852	801.376	798.145
35	731.579	730.932	739.334	742.565	745.797
40	657.904	657.904	672.122	677.938	683.108
45	573.889	573.889	595.215	608.787	614.604
50	485.349	485.996	514.432	532.527	540.929
55	393.579	400.688	433.648	453.036	462.730
60	303.747	317.965	350.925	372.252	382.592
65	221.671	240.413	277.250	300.516	308.271
70	149.289	172.554	209.392	233.304	242.352
75	94.356	116.975	150.581	174.493	186.126
80	51.055	70.444	100.172	116.975	128.608
85	18.096	31.667	41.361	41.361	51.702
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	351.12	N.A.	14.00
0-30	741.96	N.A.	29.50
0-40	1202.81	N.A.	47.80
0-60	2043.4	N.A.	81.30
0-80	2468.51	N.A.	98.20
0-90	2514.51	N.A.	100.00
10-90	2423.55	N.A.	96.40
20-40	851.69	N.A.	33.90
20-50	1308.68	N.A.	52.00
40-70	1110.46	N.A.	44.20
60-80	425.12	N.A.	16.90
70-80	155.25	N.A.	6.20
80-90	46.00	N.A.	1.80
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	2514.51	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	90.96
10-20	260.16
20-30	390.84
30-40	460.85
40-50	456.98
50-60	383.61
60-70	269.87
70-80	155.25
80-90	46.00
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	109	104	100	97	106	102	98	95	98	95	92	94	91	89	90	88	86	84
2	99	91	85	79	97	90	83	78	86	81	76	83	78	75	80	76	73	71
3	91	81	73	66	88	79	72	66	76	70	65	73	68	63	71	66	62	60
4	83	72	63	57	81	70	62	56	68	61	55	66	60	55	63	58	54	52
5	77	64	55	49	75	63	55	49	61	54	48	59	53	48	57	52	47	45
6	71	58	49	43	69	57	49	43	55	48	42	54	47	42	52	46	42	40
7	66	53	44	38	64	52	44	38	50	43	38	49	42	37	48	42	37	35
8	61	48	40	34	60	47	39	34	46	39	34	45	38	33	44	38	33	31
9	58	44	36	31	56	44	36	31	43	35	30	41	35	30	40	34	30	28
10	54	41	33	28	53	40	33	28	39	32	28	38	32	28	38	32	27	26

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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	15.6	14.3	15.9	16.2	15.0	16.6	15.4	16.9	17.2
	3H	15.3	16.7	15.6	17.0	17.4	16.8	18.3	17.2	18.6	19.0
	4H	15.7	17.0	16.1	17.4	17.8	17.6	19.0	18.0	19.3	19.7
	6H	15.9	17.2	16.4	17.6	18.0	18.3	19.6	18.7	19.9	20.3
	8H	16.0	17.2	16.4	17.6	18.0	18.5	19.7	19.0	20.1	20.5
	12H	16.0	17.2	16.5	17.6	18.0	18.7	19.8	19.1	20.2	20.7
4H	2H	14.7	16.0	15.1	16.4	16.8	15.5	16.9	15.9	17.2	17.6
	3H	16.2	17.3	16.6	17.7	18.1	17.6	18.7	18.0	19.1	19.5
	4H	16.8	17.8	17.2	18.2	18.6	18.5	19.5	18.9	19.9	20.4
	6H	17.1	18.0	17.6	18.5	18.9	19.4	20.3	19.8	20.7	21.2
	8H	17.2	18.1	17.7	18.5	19.0	19.7	20.5	20.1	20.9	21.4
	12H	17.3	18.1	17.8	18.5	19.0	19.9	20.6	20.3	21.1	21.6
8H	4H	17.2	18.0	17.7	18.5	19.0	18.8	19.6	19.2	20.0	20.5
	6H	17.7	18.4	18.2	18.9	19.4	19.7	20.4	20.2	20.9	21.4
	8H	17.9	18.5	18.4	19.1	19.5	20.1	20.8	20.7	21.3	21.8
	12H	18.0	18.6	18.5	19.1	19.6	20.4	21.0	20.9	21.4	22.0
12H	4H	17.3	18.0	17.8	18.5	19.0	18.8	19.5	19.2	20.0	20.5
	6H	17.9	18.5	18.4	19.0	19.5	19.8	20.4	20.3	20.9	21.4
	8H	18.1	18.7	18.6	19.2	19.7	20.2	20.8	20.7	21.3	21.8

Maximum UGR = 22.0

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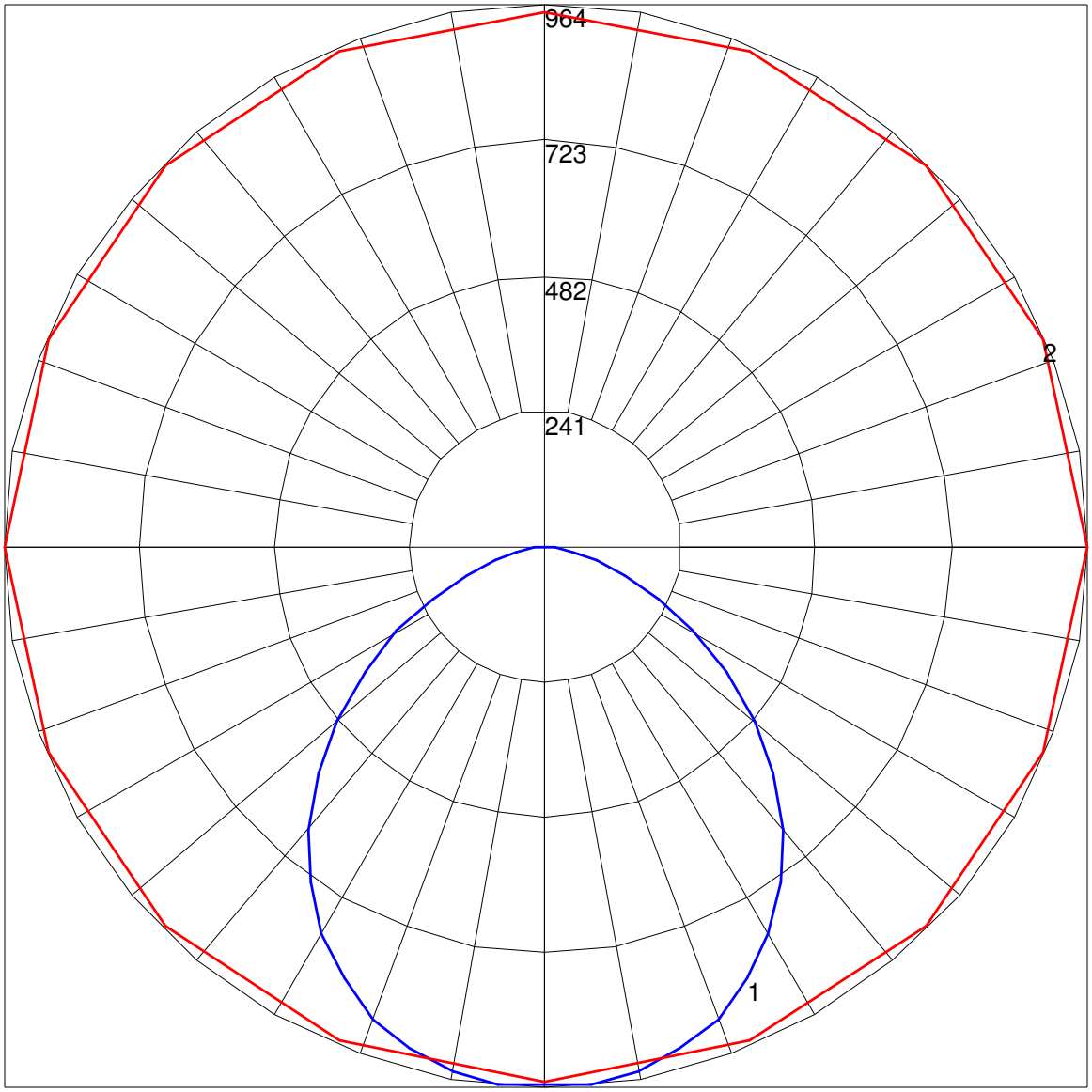
POLAR GRAPH



Maximum Candela = 964.236 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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