H.E. WILLIAMS, INC.

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

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] BALLABS TEST NO. 20789.0
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
[ISSUEDATE] 2023-06-23
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 1-84 LED 22"ARRAY 2x2 LUMINAIRE
[MORE] WHITE REFLECTOR w/FROST SQUARED RIBBED LENS
[MORE] ADVANCE #C1042C092V045CNN1
[LUMCAT] PT-22-L26-940-SA-DIM-UNV
[LAMPCAT] HLM 80 CRI 3500K CCT

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2590
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	120
Total Luminaire Watts	21.5
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.18
Spacing Criterion (90-270)	1.14
Spacing Criterion (Diagonal)	1.28
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	1.92 ft
Luminous Width (90-270)	1.98 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	2316	2281	2249
55	2081	2099	2158
65	1821	1986	2231
75	1420	2000	2585
85	739	1862	2508

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1026.570	1026.570	1026.570	1026.570	1026.570
5	1026.570	1019.947	1015.689	1016.163	1015.216
10	1004.809	999.605	995.347	993.455	992.036
15	969.328	965.544	960.813	957.028	956.082
20	929.117	922.967	911.613	909.248	906.882
25	870.456	868.090	854.844	848.221	843.964
30	803.752	799.968	790.979	780.572	773.476
35	728.534	729.480	718.126	707.718	703.461
40	651.423	653.788	642.434	635.338	632.500
45	577.623	576.204	569.108	566.742	561.066
50	499.093	500.512	493.889	499.566	494.835
55	421.036	425.293	424.820	436.647	436.647
60	344.398	347.236	359.536	375.621	382.717
65	271.544	278.640	296.144	319.325	332.571
70	197.745	210.045	239.375	269.179	285.264
75	129.622	151.384	182.606	217.141	236.064
80	68.596	93.196	128.203	162.264	179.768
85	22.708	37.846	57.242	70.015	77.111
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	367.37	N.A.	14.20
0-30	761.73	N.A.	29.40
0-40	1210.88	N.A.	46.70
0-60	2035.61	N.A.	78.60
0-80	2526.45	N.A.	97.50
0-90	2590.27	N.A.	100.00
10-90	2493.75	N.A.	96.30
20-40	843.50	N.A.	32.60
20-50	1284.06	N.A.	49.60
40-70	1121.8	N.A.	43.30
60-80	490.84	N.A.	18.90
70-80	193.77	N.A.	7.50
80-90	63.82	N.A.	2.50
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	2590.27	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	96.52
10-20	270.85
20-30	394.35
30-40	449.15
40-50	440.55
50-60	384.18
60-70	297.07
70-80	193.77
80-90	63.82
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	99	95	106	101	97	94	97	94	91	93	91	88	90	87	85	83
2	99	91	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	70
3	90	80	72	65	88	78	71	64	75	69	63	72	67	62	70	65	61	59
4	83	71	62	55	80	69	61	55	67	60	54	65	58	53	62	57	53	51
5	76	63	55	48	74	62	54	48	60	53	47	58	52	47	56	51	46	44
6	71	57	48	42	69	56	48	42	55	47	41	53	46	41	51	45	41	39
7	66	52	43	37	64	51	43	37	50	42	37	48	42	37	47	41	36	34
8	61	48	39	33	60	47	39	33	46	38	33	44	38	33	43	37	33	31
9	57	44	36	30	56	43	35	30	42	35	30	41	34	30	40	34	30	28
10	54	41	33	27	52	40	32	27	39	32	27	38	32	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	14.3	15.9	14.7	16.2	16.5	14.7	16.3	15.0	16.6	16.9
	3H	15.9	17.4	16.3	17.7	18.1	16.9	18.4	17.3	18.7	19.1
	4H	16.5	17.9	16.9	18.2	18.6	18.0	19.4	18.4	19.7	20.1
	6H	16.8	18.1	17.3	18.5	18.9	19.0	20.3	19.4	20.7	21.1
	8H	17.0	18.2	17.4	18.6	19.0	19.4	20.6	19.8	21.0	21.4
	12H	17.0	18.2	17.4	18.6	19.0	19.7	20.8	20.1	21.2	21.7
4H	2H	15.0	16.3	15.4	16.7	17.1	15.3	16.7	15.7	17.0	17.4
	3H	16.8	18.0	17.3	18.4	18.8	17.8	18.9	18.2	19.3	19.7
	4H	17.6	18.6	18.0	19.0	19.5	19.0	20.1	19.5	20.5	20.9
	6H	18.1	19.0	18.5	19.5	19.9	20.2	21.2	20.7	21.6	22.1
	8H	18.2	19.1	18.7	19.5	20.0	20.7	21.6	21.1	22.0	22.5
	12H	18.3	19.1	18.8	19.6	20.0	21.0	21.8	21.5	22.3	22.7
8H	4H	18.1	19.0	18.5	19.4	19.9	19.3	20.2	19.8	20.7	21.1
	6H	18.8	19.5	19.3	20.0	20.5	20.7	21.5	21.2	21.9	22.4
	8H	19.0	19.6	19.5	20.1	20.6	21.3	21.9	21.8	22.5	22.9
	12H	19.1	19.7	19.6	20.2	20.8	21.7	22.3	22.2	22.8	23.3
12H	4H	18.2	19.0	18.7	19.5	19.9	19.4	20.2	19.8	20.6	21.1
	6H	18.9	19.6	19.5	20.1	20.6	20.8	21.5	21.3	21.9	22.4
	8H	19.2	19.8	19.7	20.3	20.9	21.4	22.0	21.9	22.5	23.0

Maximum UGR = 23.3

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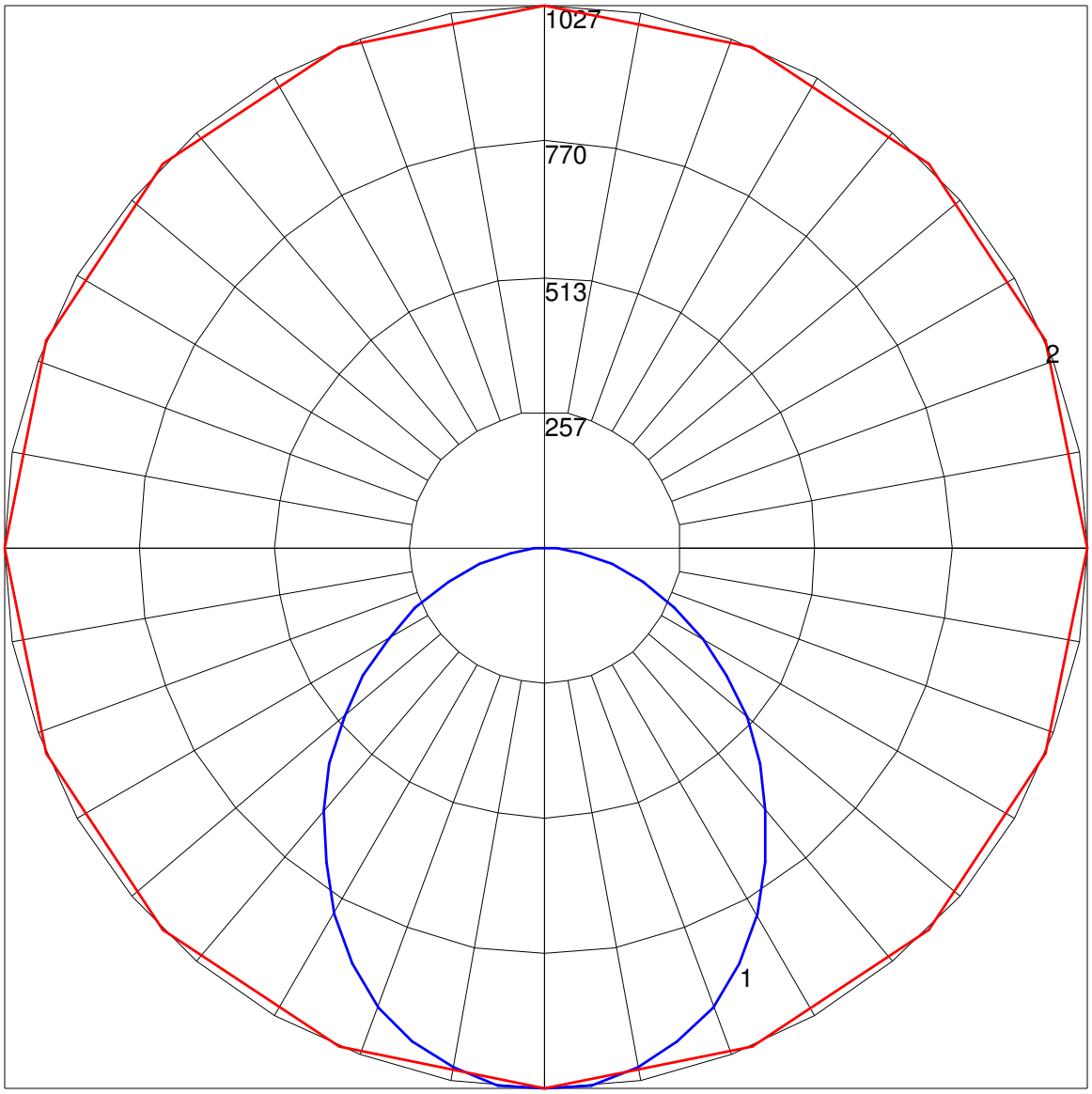
POLAR GRAPH



Maximum Candela = 1026.57 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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