H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-22-L26-927-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-L26-927-RA-DIM-UNV
[LAMPCAT] 22 INCH HLM LED ARRAY

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2398
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	112
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	2253	2336	2413
55	1905	2099	2239
65	1456	1821	2025
75	1012	1615	1996
85	576	1317	1647

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	916.307	916.307	916.307	916.307	916.307
5	919.388	913.842	912.610	909.529	909.529
10	907.064	901.518	900.902	897.821	897.204
15	885.496	879.334	878.718	877.486	876.869
20	854.686	849.140	848.524	849.140	849.140
25	811.551	806.005	809.702	812.167	809.702
30	758.557	756.092	759.789	764.103	761.022
35	697.552	696.936	704.946	708.027	711.108
40	627.304	627.304	640.860	646.406	651.336
45	547.196	547.196	567.531	580.471	586.017
50	462.775	463.391	490.505	507.759	515.769
55	375.273	382.051	413.478	431.964	441.208
60	289.620	303.176	334.603	354.938	364.797
65	211.361	229.231	264.355	286.538	293.933
70	142.345	164.529	199.653	222.452	231.079
75	89.967	111.534	143.577	166.377	177.469
80	48.681	67.167	95.513	111.534	122.626
85	17.254	30.194	39.438	39.438	49.297
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	334.79	N.A.	14.00
0-30	707.45	N.A.	29.50
0-40	1146.87	N.A.	47.80
0-60	1948.36	N.A.	81.30
0-80	2353.7	N.A.	98.20
0-90	2397.56	N.A.	100.00
10-90	2310.83	N.A.	96.40
20-40	812.08	N.A.	33.90
20-50	1247.81	N.A.	52.00
40-70	1058.81	N.A.	44.20
60-80	405.34	N.A.	16.90
70-80	148.03	N.A.	6.20
80-90	43.86	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	2397.56	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	86.73
10-20	248.06
20-30	372.66
30-40	439.42
40-50	435.73
50-60	365.76
60-70	257.32
70-80	148.03
80-90	43.86
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	13.8	15.4	14.1	15.7	16.0	14.8	16.4	15.2	16.7	17.0
	3H	15.1	16.5	15.4	16.8	17.2	16.6	18.1	17.0	18.4	18.8
	4H	15.5	16.8	15.9	17.2	17.6	17.4	18.8	17.8	19.1	19.5
	6H	15.7	17.0	16.2	17.4	17.8	18.1	19.4	18.5	19.7	20.1
	8H	15.8	17.0	16.2	17.4	17.8	18.3	19.5	18.8	19.9	20.3
	12H	15.8	17.0	16.3	17.4	17.8	18.5	19.6	18.9	20.0	20.5
4H	2H	14.5	15.8	14.9	16.2	16.6	15.3	16.7	15.7	17.0	17.4
	3H	16.0	17.1	16.4	17.5	17.9	17.4	18.5	17.8	18.9	19.3
	4H	16.6	17.6	17.0	18.0	18.4	18.3	19.3	18.7	19.7	20.2
	6H	16.9	17.8	17.4	18.3	18.7	19.2	20.1	19.6	20.5	21.0
	8H	17.0	17.9	17.5	18.3	18.8	19.5	20.3	19.9	20.7	21.2
	12H	17.1	17.9	17.6	18.3	18.8	19.7	20.4	20.1	20.9	21.4
8H	4H	17.0	17.8	17.5	18.3	18.8	18.6	19.4	19.0	19.8	20.3
	6H	17.5	18.2	18.0	18.7	19.2	19.5	20.2	20.0	20.7	21.2
	8H	17.7	18.3	18.2	18.9	19.3	19.9	20.6	20.5	21.1	21.6
	12H	17.8	18.4	18.3	18.9	19.4	20.2	20.8	20.7	21.2	21.8
12H	4H	17.1	17.8	17.6	18.3	18.8	18.6	19.3	19.0	19.8	20.3
	6H	17.7	18.3	18.2	18.8	19.3	19.6	20.2	20.1	20.7	21.2
	8H	17.9	18.5	18.4	19.0	19.5	20.0	20.6	20.5	21.1	21.6

Maximum UGR = 21.8

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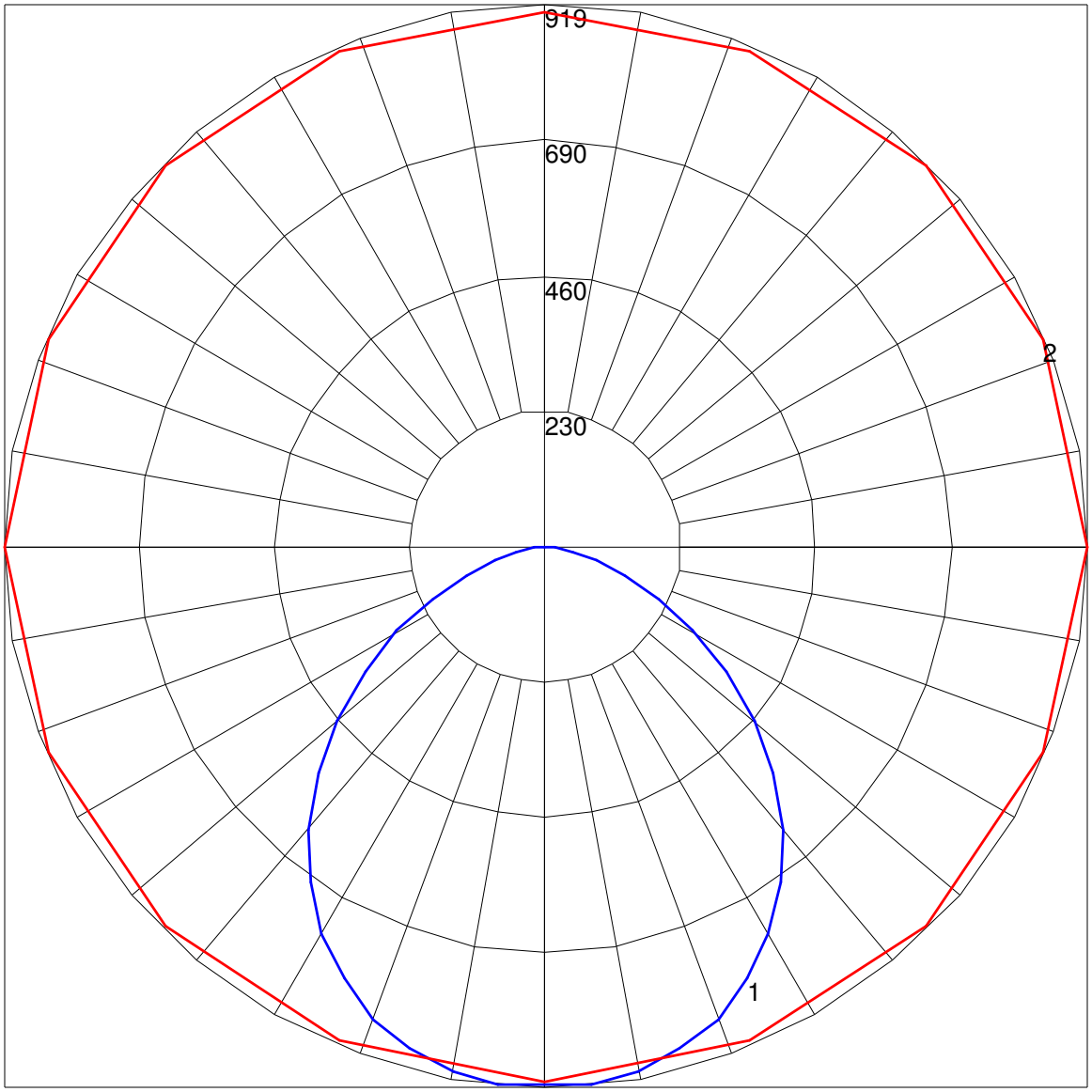
POLAR GRAPH



Maximum Candela = 919.388 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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