H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-24-L61-950-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-L61-950-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	5730
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	126
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	5120	4961	4924
55	4607	4634	4737
65	4026	4455	4880
75	3250	4498	5612
85	1506	4855	5866

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	2231.432	2231.432	2231.432	2231.432	2231.432
5	2242.519	2217.882	2205.564	2174.769	2203.101
10	2199.405	2172.921	2156.908	2153.828	2158.139
15	2126.728	2100.860	2086.694	2081.767	2078.071
20	2030.031	2004.778	1981.374	1969.672	1971.519
25	1909.313	1888.372	1878.517	1847.722	1836.020
30	1768.270	1746.713	1724.541	1707.911	1698.673
35	1621.684	1601.975	1575.491	1552.702	1539.768
40	1453.541	1437.528	1409.812	1391.951	1381.480
45	1290.942	1272.465	1250.908	1241.053	1241.669
50	1119.104	1113.561	1090.156	1094.467	1100.011
55	942.338	942.338	947.881	962.663	968.822
60	777.891	781.586	806.839	832.091	847.489
65	606.669	628.841	671.339	715.068	735.393
70	442.221	479.176	540.151	598.662	622.682
75	299.947	338.133	415.122	490.878	517.978
80	157.056	222.343	302.411	382.478	407.731
85	46.809	105.320	150.897	171.222	182.309
90	0.000	1.848	2.464	4.311	2.464

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	798.43	N.A.	13.90
0-30	1658.96	N.A.	29.00
0-40	2644.95	N.A.	46.20
0-60	4470.00	N.A.	78.00
0-80	5574.64	N.A.	97.30
0-90	5730.04	N.A.	100.00
10-90	5520.65	N.A.	96.30
20-40	1846.52	N.A.	32.20
20-50	2818.04	N.A.	49.20
40-70	2490.98	N.A.	43.50
60-80	1104.64	N.A.	19.30
70-80	438.70	N.A.	7.70
80-90	155.41	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	5730.04	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	209.40
10-20	589.03
20-30	860.52
30-40	985.99
40-50	971.52
50-60	853.53
60-70	665.93
70-80	438.70
80-90	155.41
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	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	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	17.1	18.7	17.5	19.1	19.4	17.4	19.0	17.8	19.4	19.7
	3H	18.8	20.2	19.1	20.6	20.9	19.7	21.2	20.1	21.5	21.8
	4H	19.4	20.7	19.8	21.1	21.5	20.8	22.2	21.2	22.5	22.9
	6H	19.7	21.0	20.2	21.4	21.8	21.8	23.1	22.2	23.5	23.9
	8H	19.8	21.1	20.3	21.5	21.9	22.2	23.5	22.6	23.9	24.3
	12H	19.9	21.1	20.3	21.5	21.9	22.5	23.7	22.9	24.1	24.5
4H	2H	17.8	19.2	18.2	19.6	19.9	18.1	19.4	18.5	19.8	20.2
	3H	19.7	20.9	20.1	21.3	21.7	20.6	21.7	21.0	22.1	22.5
	4H	20.5	21.5	20.9	21.9	22.4	21.8	22.9	22.3	23.3	23.7
	6H	21.0	21.9	21.5	22.4	22.8	23.1	24.0	23.5	24.5	24.9
	8H	21.2	22.0	21.6	22.5	22.9	23.6	24.5	24.0	24.9	25.4
	12H	21.2	22.0	21.7	22.5	23.0	23.9	24.7	24.4	25.2	25.7
8H	4H	21.0	21.9	21.4	22.3	22.8	22.2	23.0	22.6	23.5	23.9
	6H	21.7	22.4	22.2	22.9	23.4	23.6	24.4	24.1	24.8	25.3
	8H	22.0	22.6	22.5	23.1	23.6	24.2	24.9	24.7	25.4	25.9
	12H	22.1	22.7	22.6	23.2	23.8	24.7	25.3	25.2	25.8	26.3
12H	4H	21.1	21.9	21.6	22.4	22.8	22.2	23.0	22.7	23.5	23.9
	6H	21.9	22.6	22.4	23.0	23.6	23.7	24.4	24.2	24.8	25.4
	8H	22.2	22.8	22.8	23.3	23.9	24.4	24.9	24.9	25.4	26.0

Maximum UGR = 26.3

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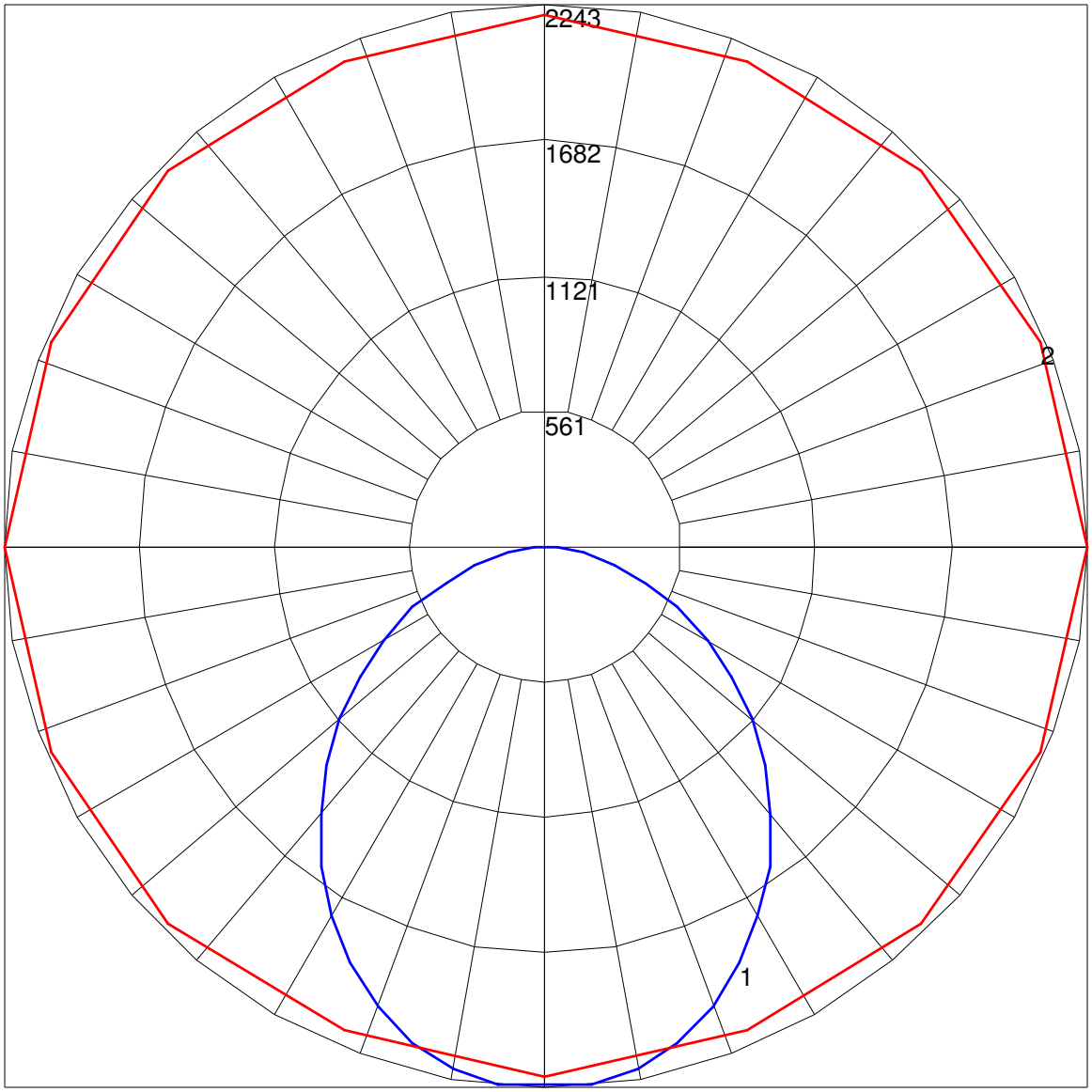
POLAR GRAPH



Maximum Candela = 2242.519 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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