H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-24-L61-927-RA-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] GEN FROM BALLABS TEST NO. 19235.0
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
[ISSUEDATE] 2023-06-27
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 2x4' RECESSED LED LUMINAIRE
[MORE] WHITE REFLECTOR w/RIBBED FROSTED ACRYLIC CENTER DIFFUSER
[MORE] 0-10V DRIVER
[LUMCAT] PT-24-L61-927-RA-DIM-UNV
[LAMPCAT] 22 INCH HLM LED ARRAYS
[_SEARCH_SOURCETYPE] LED
[_SEARCH_APPLICATION] Indoor, Architectural, Office, Direct
[_SEARCH_MOUNTING] Recessed

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	5069
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	111
Total Luminaire Watts	45.5
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.14
Spacing Criterion (90-270)	1.18
Spacing Criterion (Diagonal)	1.28
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	3.92 ft
Luminous Width (90-270)	1.92 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	2174	2293	2411
55	1948	2132	2303
65	1712	2029	2306
75	1325	2035	2519
85	800	2671	3060

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1939.067	1939.067	1939.067	1939.067	1939.067
5	1909.458	1906.826	1906.826	1900.246	1896.956
10	1903.536	1903.536	1906.826	1909.458	1909.458
15	1853.530	1856.162	1859.452	1864.057	1867.347
20	1731.145	1737.725	1745.621	1756.149	1759.439
25	1633.106	1639.028	1654.820	1668.637	1675.217
30	1431.107	1387.022	1567.308	1515.328	1507.432
35	1319.908	1332.410	1362.019	1387.022	1396.892
40	1174.494	1190.286	1223.185	1256.084	1268.585
45	1073.165	1086.983	1132.384	1174.494	1190.286
50	932.358	954.071	1004.078	1048.162	1063.296
55	780.364	804.052	854.058	904.065	922.488
60	636.267	661.270	717.856	769.179	788.260
65	505.329	538.228	598.762	658.638	680.351
70	372.417	411.238	482.957	546.123	567.837
75	239.505	287.537	367.811	431.635	455.322
80	131.596	194.104	286.221	348.729	367.811
85	48.691	111.199	162.521	182.918	186.208
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	702.91	N.A.	13.90
0-30	1456.77	N.A.	28.70
0-40	2306.58	N.A.	45.50
0-60	3939.15	N.A.	77.70
0-80	4916.97	N.A.	97.00
0-90	5068.55	N.A.	100.00
10-90	4886.28	N.A.	96.40
20-40	1603.68	N.A.	31.60
20-50	2470.46	N.A.	48.70
40-70	2223.7	N.A.	43.90
60-80	977.83	N.A.	19.30
70-80	386.68	N.A.	7.60
80-90	151.58	N.A.	3.00
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	5068.55	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	182.27
10-20	520.64
20-30	753.86
30-40	849.81
40-50	866.78
50-60	765.78
60-70	591.14
70-80	386.68
80-90	151.58
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	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	85	79	74	81	77	73	78	74	71	69
3	90	79	71	64	87	78	70	64	75	68	63	72	66	61	69	64	60	58
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	50
5	76	63	54	47	74	62	53	47	60	52	46	58	51	46	56	50	45	43
6	70	57	48	41	68	56	47	41	54	46	41	52	46	40	51	45	40	38
7	65	52	43	37	63	51	42	37	49	42	36	48	41	36	46	40	36	34
8	61	47	39	33	59	46	38	33	45	38	32	44	37	32	43	37	32	30
9	57	43	35	30	55	43	35	30	42	34	29	41	34	29	40	33	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	13.9	15.6	14.3	15.9	16.2	15.0	16.6	15.3	16.9	17.2
	3H	15.6	17.1	16.0	17.4	17.8	17.1	18.6	17.5	19.0	19.3
	4H	16.2	17.6	16.6	17.9	18.3	18.1	19.5	18.5	19.9	20.3
	6H	16.5	17.9	17.0	18.2	18.6	19.2	20.5	19.6	20.8	21.2
	8H	16.7	17.9	17.1	18.3	18.7	19.6	20.8	20.0	21.2	21.6
	12H	16.7	17.9	17.2	18.3	18.7	19.9	21.1	20.4	21.5	21.9
4H	2H	14.7	16.1	15.1	16.5	16.9	15.5	16.9	15.9	17.3	17.6
	3H	16.6	17.8	17.1	18.2	18.6	18.0	19.2	18.4	19.6	20.0
	4H	17.3	18.4	17.8	18.8	19.3	19.1	20.2	19.6	20.6	21.1
	6H	17.9	18.8	18.3	19.3	19.7	20.4	21.3	20.8	21.8	22.2
	8H	18.0	18.9	18.5	19.4	19.8	20.9	21.8	21.4	22.2	22.7
	12H	18.2	19.0	18.7	19.4	19.9	21.3	22.1	21.8	22.6	23.1
8H	4H	17.9	18.8	18.4	19.3	19.7	19.5	20.4	19.9	20.8	21.3
	6H	18.7	19.4	19.2	19.9	20.4	20.9	21.7	21.4	22.2	22.6
	8H	19.0	19.6	19.5	20.1	20.6	21.6	22.3	22.1	22.8	23.2
	12H	19.2	19.8	19.7	20.3	20.8	22.2	22.7	22.7	23.2	23.8
12H	4H	18.1	18.9	18.6	19.4	19.8	19.5	20.3	20.0	20.8	21.3
	6H	18.9	19.6	19.5	20.1	20.6	21.0	21.7	21.6	22.2	22.7
	8H	19.3	19.9	19.8	20.4	21.0	21.8	22.3	22.3	22.8	23.4

Maximum UGR = 23.8

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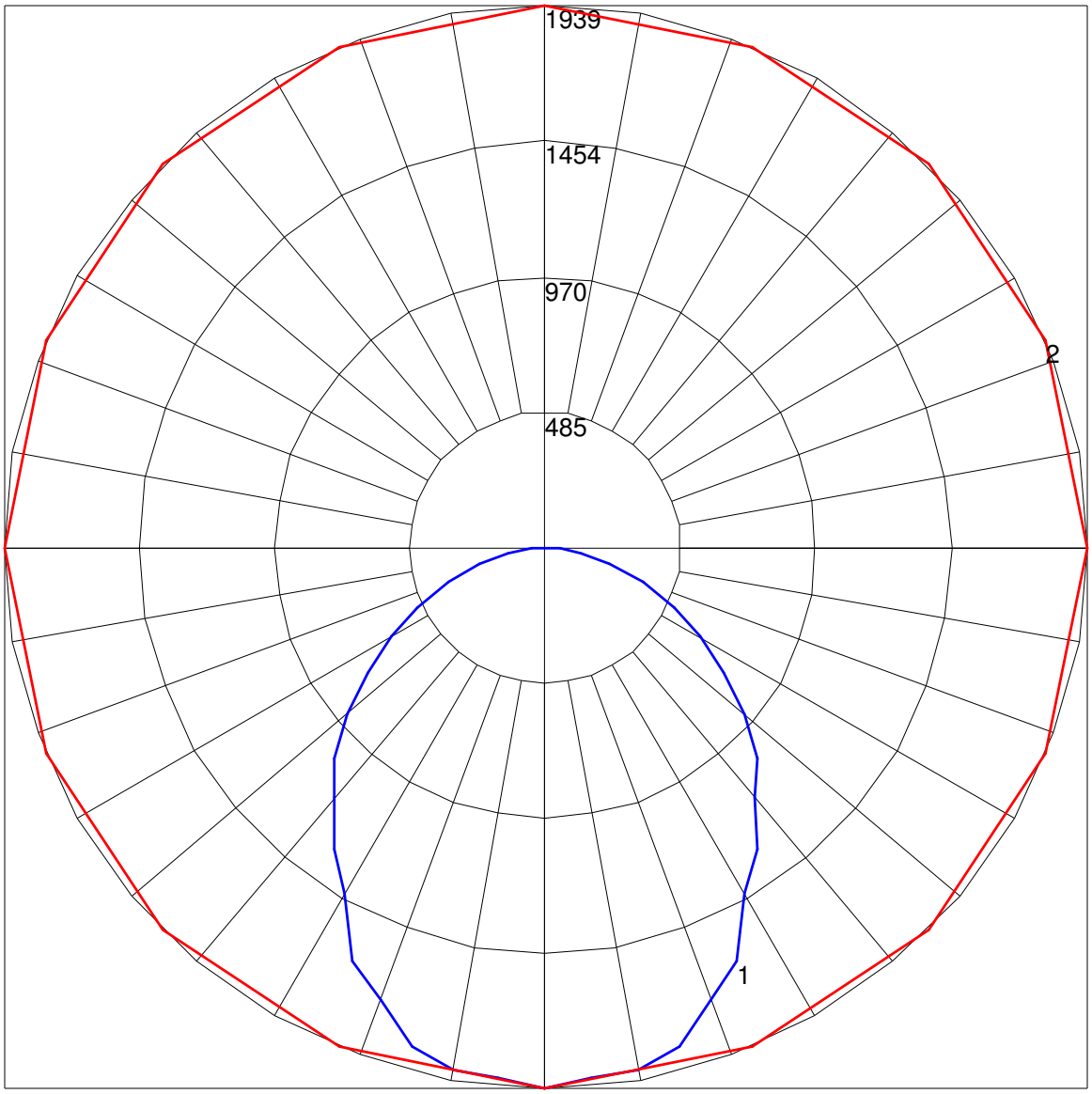
POLAR GRAPH



Maximum Candela = 1939.067 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.)