H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-14-L27-930-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] 2023-06-23
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 1 X 4 RECESSED LED LUMINAIRE
[MORE] W/ FROSTED SQUARE RIBBED LENS
[MORE] 0-10V LED DRIVER
[LUMCAT] PT-14-L27-930-SA-DIM-UNV
[LAMPCAT] HLM 22" LED ARRAYS

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2245
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	119
Total Luminaire Watts	18.8
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	2006	1944	1929
55	1805	1816	1856
65	1577	1745	1912
75	1273	1762	2199
85	590	1902	2298

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	874.290	874.290	874.290	874.290	874.290
5	878.633	868.981	864.154	852.089	863.189
10	861.741	851.365	845.090	843.884	845.573
15	833.266	823.131	817.580	815.650	814.202
20	795.379	785.485	776.315	771.730	772.454
25	748.081	739.876	736.015	723.949	719.364
30	692.820	684.374	675.686	669.171	665.551
35	635.386	627.664	617.288	608.359	603.291
40	569.507	563.233	552.373	545.375	541.273
45	505.799	498.560	490.114	486.253	486.494
50	438.472	436.300	427.130	428.819	430.991
55	369.214	369.214	371.386	377.178	379.591
60	304.783	306.231	316.125	326.019	332.052
65	237.697	246.384	263.035	280.168	288.132
70	173.265	187.744	211.635	234.560	243.971
75	117.521	132.483	162.647	192.329	202.947
80	61.536	87.115	118.486	149.858	159.752
85	18.340	41.265	59.123	67.086	71.430
90	0.000	0.724	0.965	1.689	0.965

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	312.83	N.A.	13.90
0-30	649.99	N.A.	29.00
0-40	1036.31	N.A.	46.20
0-60	1751.38	N.A.	78.00
0-80	2184.18	N.A.	97.30
0-90	2245.07	N.A.	100.00
10-90	2163.03	N.A.	96.30
20-40	723.48	N.A.	32.20
20-50	1104.12	N.A.	49.20
40-70	975.98	N.A.	43.50
60-80	432.80	N.A.	19.30
70-80	171.89	N.A.	7.70
80-90	60.89	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	2245.07	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	82.04
10-20	230.79
20-30	337.16
30-40	386.32
40-50	380.65
50-60	334.42
60-70	260.92
70-80	171.89
80-90	60.89
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	37	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	13.8	15.4	14.2	15.8	16.1	14.1	15.7	14.5	16.1	16.4
	3H	15.5	16.9	15.8	17.3	17.6	16.4	17.9	16.8	18.2	18.5
	4H	16.1	17.4	16.5	17.8	18.2	17.5	18.9	17.9	19.2	19.6
	6H	16.4	17.7	16.9	18.1	18.5	18.5	19.8	18.9	20.2	20.6
	8H	16.5	17.8	17.0	18.2	18.6	18.9	20.2	19.3	20.6	21.0
	12H	16.6	17.8	17.0	18.2	18.6	19.2	20.4	19.6	20.8	21.2
4H	2H	14.5	15.9	14.9	16.3	16.6	14.8	16.1	15.2	16.5	16.9
	3H	16.4	17.6	16.8	18.0	18.4	17.3	18.4	17.7	18.8	19.2
	4H	17.2	18.2	17.6	18.6	19.1	18.5	19.6	19.0	20.0	20.4
	6H	17.7	18.6	18.2	19.1	19.5	19.8	20.7	20.2	21.2	21.6
	8H	17.9	18.7	18.3	19.2	19.6	20.3	21.2	20.7	21.6	22.1
	12H	17.9	18.7	18.4	19.2	19.7	20.6	21.4	21.1	21.9	22.4
8H	4H	17.7	18.6	18.1	19.0	19.5	18.9	19.7	19.3	20.2	20.6
	6H	18.4	19.1	18.9	19.6	20.1	20.3	21.1	20.8	21.5	22.0
	8H	18.7	19.3	19.2	19.8	20.3	20.9	21.6	21.4	22.1	22.6
	12H	18.8	19.4	19.3	19.9	20.5	21.4	22.0	21.9	22.5	23.0
12H	4H	17.8	18.6	18.3	19.1	19.5	18.9	19.7	19.4	20.2	20.6
	6H	18.6	19.3	19.1	19.7	20.3	20.4	21.1	20.9	21.5	22.1
	8H	18.9	19.5	19.5	20.0	20.6	21.1	21.6	21.6	22.1	22.7

Maximum UGR = 23.0

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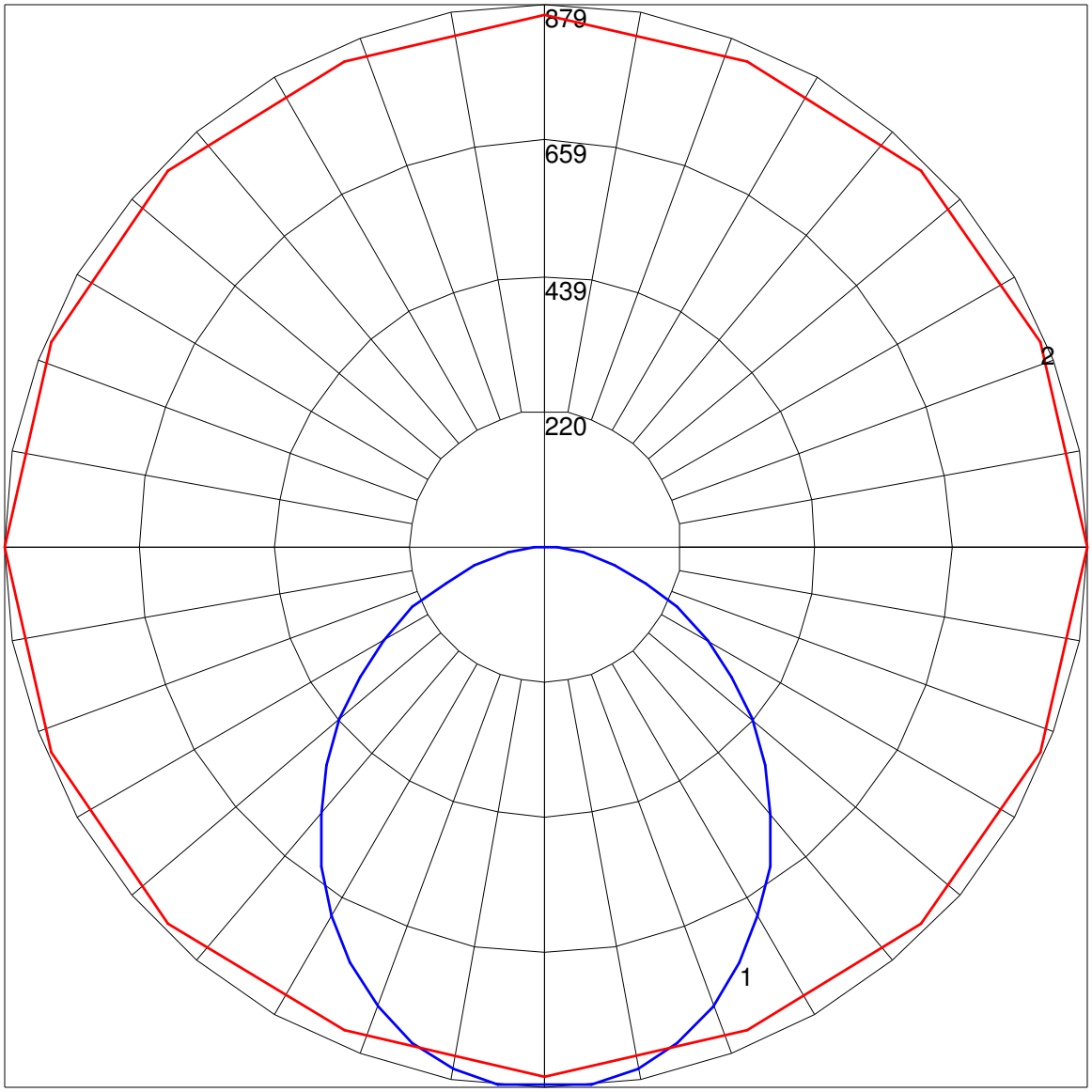
POLAR GRAPH



Maximum Candela = 878.633 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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