H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-14-L80-840-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-L80-840-SA-DIM-UNV
[LAMPCAT] HLM 22" LED ARRAYS

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	8464
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	137
Total Luminaire Watts	61.9
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	7563	7328	7274
55	6806	6846	6997
65	5946	6580	7208
75	4801	6644	8290
85	2225	7172	8665

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	3296.202	3296.202	3296.202	3296.202	3296.202
5	3312.578	3276.186	3257.990	3212.500	3254.351
10	3248.892	3209.771	3186.116	3181.567	3187.936
15	3141.536	3103.324	3082.399	3075.121	3069.662
20	2998.697	2961.396	2926.823	2909.537	2912.267
25	2820.377	2789.444	2774.887	2729.397	2712.111
30	2612.033	2580.190	2547.437	2522.873	2509.226
35	2395.501	2366.387	2327.266	2293.603	2274.497
40	2147.126	2123.471	2082.530	2056.146	2040.679
45	1906.939	1879.645	1847.802	1833.245	1834.155
50	1653.105	1644.917	1610.344	1616.713	1624.901
55	1391.992	1391.992	1400.181	1422.016	1431.114
60	1149.076	1154.535	1191.837	1229.138	1251.883
65	896.152	928.905	991.681	1056.277	1086.300
70	653.236	707.824	797.894	884.325	919.807
75	443.072	499.480	613.205	725.110	765.141
80	231.999	328.437	446.711	564.985	602.287
85	69.145	155.576	222.901	252.924	269.300
90	0.000	2.729	3.639	6.369	3.639

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1179.42	N.A.	13.90
0-30	2450.56	N.A.	29.00
0-40	3907.04	N.A.	46.20
0-60	6602.95	N.A.	78.00
0-80	8234.68	N.A.	97.30
0-90	8464.24	N.A.	100.00
10-90	8154.93	N.A.	96.30
20-40	2727.62	N.A.	32.20
20-50	4162.71	N.A.	49.20
40-70	3679.6	N.A.	43.50
60-80	1631.73	N.A.	19.30
70-80	648.04	N.A.	7.70
80-90	229.56	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	8464.24	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	309.32
10-20	870.10
20-30	1271.14
30-40	1456.48
40-50	1435.09
50-60	1260.81
60-70	983.69
70-80	648.04
80-90	229.56
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	18.4	20.0	18.8	20.4	20.7	18.7	20.3	19.1	20.7	21.0
	3H	20.1	21.5	20.4	21.9	22.2	21.0	22.5	21.4	22.8	23.1
	4H	20.7	22.0	21.1	22.4	22.8	22.1	23.5	22.5	23.8	24.2
	6H	21.0	22.3	21.5	22.7	23.1	23.1	24.4	23.5	24.8	25.2
	8H	21.1	22.4	21.6	22.8	23.2	23.5	24.8	23.9	25.2	25.6
	12H	21.2	22.4	21.6	22.8	23.2	23.8	25.0	24.2	25.4	25.8
4H	2H	19.1	20.5	19.5	20.9	21.2	19.4	20.7	19.8	21.1	21.5
	3H	21.0	22.2	21.4	22.6	23.0	21.9	23.0	22.3	23.4	23.8
	4H	21.8	22.8	22.2	23.2	23.7	23.1	24.2	23.6	24.6	25.0
	6H	22.3	23.2	22.8	23.7	24.1	24.4	25.3	24.8	25.8	26.2
	8H	22.5	23.3	22.9	23.8	24.2	24.9	25.7	25.3	26.2	26.7
	12H	22.5	23.3	23.0	23.8	24.3	25.2	26.0	25.7	26.5	26.9
8H	4H	22.3	23.2	22.7	23.6	24.1	23.5	24.3	23.9	24.8	25.2
	6H	23.0	23.7	23.5	24.2	24.7	24.9	25.7	25.4	26.1	26.6
	8H	23.3	23.9	23.8	24.4	24.9	25.5	26.2	26.0	26.7	27.2
	12H	23.4	24.0	23.9	24.5	25.1	26.0	26.6	26.5	27.1	27.6
12H	4H	22.4	23.2	22.9	23.7	24.1	23.5	24.3	24.0	24.8	25.2
	6H	23.2	23.9	23.7	24.3	24.9	25.0	25.7	25.5	26.1	26.7
	8H	23.5	24.1	24.1	24.6	25.2	25.7	26.2	26.2	26.7	27.3

Maximum UGR = 27.6

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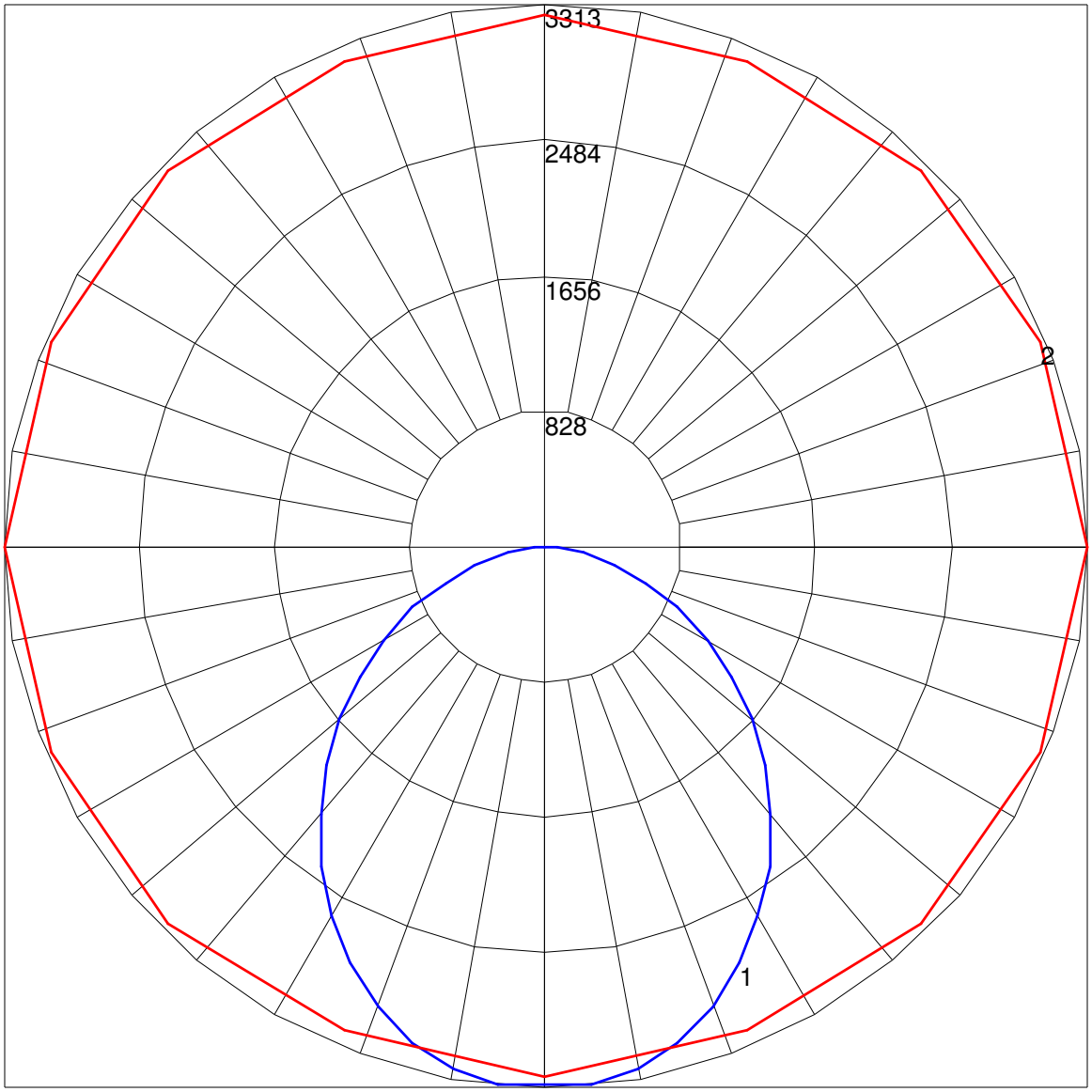
POLAR GRAPH



Maximum Candela = 3312.578 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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