H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-24-L38-935-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-L38-935-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	3272
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	115
Total Luminaire Watts	28.5
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	2924	2833	2812
55	2631	2647	2705
65	2299	2544	2787
75	1856	2569	3205
85	860	2773	3350

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1274.334	1274.334	1274.334	1274.334	1274.334
5	1280.665	1266.596	1259.561	1241.974	1258.154
10	1256.044	1240.919	1231.774	1230.016	1232.478
15	1214.539	1199.766	1191.676	1188.863	1186.752
20	1159.317	1144.896	1131.530	1124.847	1125.902
25	1090.377	1078.418	1072.790	1055.203	1048.521
30	1009.830	997.519	984.857	975.360	970.084
35	926.117	914.861	899.737	886.723	879.336
40	830.093	820.948	805.120	794.920	788.940
45	737.235	726.683	714.373	708.745	709.097
50	639.102	635.936	622.570	625.032	628.198
55	538.154	538.154	541.319	549.761	553.278
60	444.241	446.351	460.772	475.193	483.987
65	346.458	359.121	383.391	408.364	419.971
70	252.545	273.649	308.471	341.886	355.604
75	171.295	193.102	237.069	280.332	295.809
80	89.692	126.976	172.702	218.427	232.848
85	26.732	60.147	86.175	97.782	104.113
90	0.000	1.055	1.407	2.462	1.407

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	455.97	N.A.	13.90
0-30	947.40	N.A.	29.00
0-40	1510.49	N.A.	46.20
0-60	2552.74	N.A.	78.00
0-80	3183.58	N.A.	97.30
0-90	3272.33	N.A.	100.00
10-90	3152.75	N.A.	96.30
20-40	1054.52	N.A.	32.20
20-50	1609.33	N.A.	49.20
40-70	1422.56	N.A.	43.50
60-80	630.84	N.A.	19.30
70-80	250.54	N.A.	7.70
80-90	88.75	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	3272.33	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	119.58
10-20	336.39
20-30	491.43
30-40	563.09
40-50	554.82
50-60	487.44
60-70	380.30
70-80	250.54
80-90	88.75
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	104	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	15.1	16.7	15.5	17.1	17.4	15.4	17.0	15.8	17.4	17.7
	3H	16.8	18.2	17.1	18.6	18.9	17.7	19.2	18.1	19.5	19.8
	4H	17.4	18.7	17.8	19.1	19.5	18.8	20.2	19.2	20.5	20.9
	6H	17.7	19.0	18.2	19.4	19.8	19.8	21.1	20.2	21.5	21.9
	8H	17.8	19.1	18.3	19.5	19.9	20.2	21.5	20.6	21.9	22.3
	12H	17.9	19.1	18.3	19.5	19.9	20.5	21.7	20.9	22.1	22.5
4H	2H	15.8	17.2	16.2	17.6	17.9	16.1	17.4	16.5	17.8	18.2
	3H	17.7	18.9	18.1	19.3	19.7	18.6	19.7	19.0	20.1	20.5
	4H	18.5	19.5	18.9	19.9	20.4	19.8	20.9	20.3	21.3	21.7
	6H	19.0	19.9	19.5	20.4	20.8	21.1	22.0	21.5	22.5	22.9
	8H	19.2	20.0	19.6	20.5	20.9	21.6	22.5	22.0	22.9	23.4
	12H	19.2	20.0	19.7	20.5	21.0	21.9	22.7	22.4	23.2	23.7
8H	4H	19.0	19.9	19.4	20.3	20.8	20.2	21.0	20.6	21.5	21.9
	6H	19.7	20.4	20.2	20.9	21.4	21.6	22.4	22.1	22.8	23.3
	8H	20.0	20.6	20.5	21.1	21.6	22.2	22.9	22.7	23.4	23.9
	12H	20.1	20.7	20.6	21.2	21.8	22.7	23.3	23.2	23.8	24.3
12H	4H	19.1	19.9	19.6	20.4	20.8	20.2	21.0	20.7	21.5	21.9
	6H	19.9	20.6	20.4	21.0	21.6	21.7	22.4	22.2	22.8	23.4
	8H	20.2	20.8	20.8	21.3	21.9	22.4	22.9	22.9	23.4	24.0

Maximum UGR = 24.3

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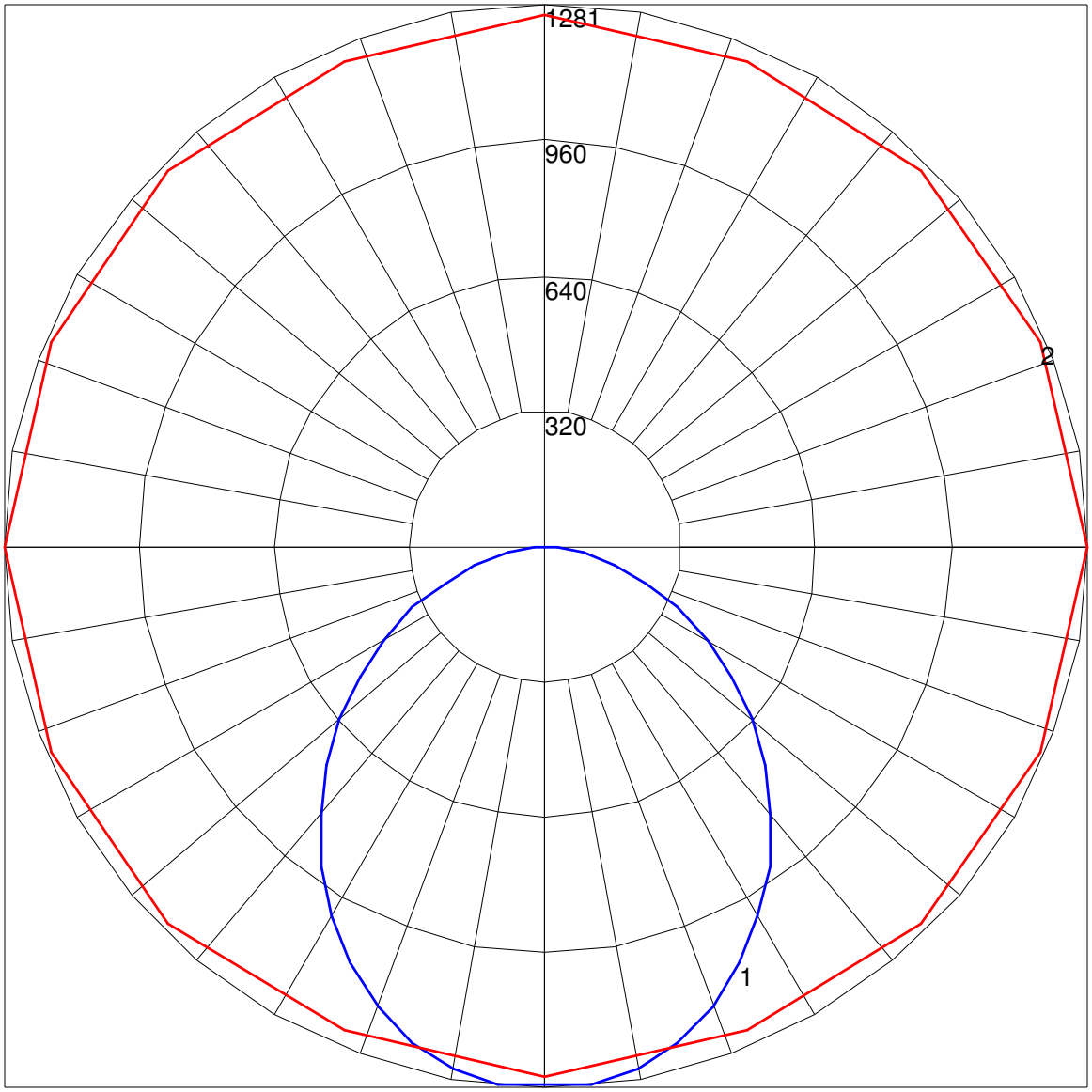
POLAR GRAPH



Maximum Candela = 1280.665 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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