H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-22-P31-8TW-RA-POE PR_4000K.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] GEN FROM BALLABS TEST NO. 19562.0
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
[ISSUEDATE] 04-MAY-2022
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] RECESSED 2x2 LED POE LUMINAIRE
[MORE] w/CENTER FROSTED RIBBED ACRYLIC LENS
[LUMCAT] PT-22-P31-8TW-RA-POE PR
[LAMPCAT] HLM 80 CRI TUNABLE WHITE CCT

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3234
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	129
Total Luminaire Watts	25
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.24
Spacing Criterion (90-270)	1.24
Spacing Criterion (Diagonal)	1.34
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	1.92 ft
Luminous Width (90-270)	1.93 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	3039	3151	3254
55	2569	2831	3020
65	1964	2456	2731
75	1365	2178	2692
85	777	1777	2221

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1235.918	1235.918	1235.918	1235.918	1235.918
5	1240.074	1232.594	1230.931	1226.776	1226.776
10	1223.451	1215.971	1215.140	1210.984	1210.153
15	1194.361	1186.049	1185.218	1183.556	1182.725
20	1152.803	1145.323	1144.492	1145.323	1145.323
25	1094.623	1087.143	1092.130	1095.454	1092.130
30	1023.144	1019.820	1024.806	1030.625	1026.469
35	940.860	940.029	950.834	954.990	959.146
40	846.109	846.109	864.395	871.875	878.524
45	738.060	738.060	765.488	782.942	790.423
50	624.193	625.024	661.594	684.867	695.672
55	506.170	515.312	557.701	582.635	595.103
60	390.640	408.925	451.314	478.742	492.040
65	285.084	309.187	356.563	386.484	396.458
70	191.995	221.917	269.292	300.045	311.681
75	121.348	150.438	193.658	224.410	239.371
80	65.661	90.595	128.828	150.438	165.399
85	23.272	40.726	53.194	53.194	66.492
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	451.56	N.A.	14.00
0-30	954.21	N.A.	29.50
0-40	1546.9	N.A.	47.80
0-60	2627.95	N.A.	81.30
0-80	3174.68	N.A.	98.20
0-90	3233.84	N.A.	100.00
10-90	3116.86	N.A.	96.40
20-40	1095.34	N.A.	33.90
20-50	1683.05	N.A.	52.00
40-70	1428.12	N.A.	44.20
60-80	546.73	N.A.	16.90
70-80	199.66	N.A.	6.20
80-90	59.16	N.A.	1.80
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	3233.84	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	116.98
10-20	334.58
20-30	502.65
30-40	592.69
40-50	587.71
50-60	493.34
60-70	347.07
70-80	199.66
80-90	59.16
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	109	104	100	97	106	102	98	95	98	95	92	94	91	89	90	88	86	84
2	100	91	85	79	97	90	83	78	86	81	76	83	79	75	80	76	73	71
3	91	81	73	66	89	79	72	66	76	70	65	73	68	63	71	66	62	60
4	83	72	63	57	81	70	62	56	68	61	55	66	60	55	63	58	54	52
5	77	64	55	49	75	63	55	49	61	54	48	59	53	48	57	52	47	45
6	71	58	49	43	69	57	49	43	55	48	42	54	47	42	52	46	42	40
7	66	53	44	38	64	52	44	38	50	43	38	49	42	37	48	42	37	35
8	62	48	40	34	60	47	39	34	46	39	34	45	38	33	44	38	33	31
9	58	44	36	31	56	44	36	31	43	35	30	41	35	30	40	34	30	28
10	54	41	33	28	53	40	33	28	39	32	28	38	32	28	38	32	27	26

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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	14.9	16.5	15.2	16.8	17.1	15.9	17.5	16.3	17.8	18.1
	3H	16.2	17.6	16.5	17.9	18.3	17.7	19.2	18.1	19.5	19.9
	4H	16.6	17.9	17.0	18.3	18.7	18.5	19.9	18.9	20.2	20.6
	6H	16.8	18.1	17.3	18.5	18.9	19.2	20.5	19.6	20.8	21.2
	8H	16.9	18.1	17.3	18.5	18.9	19.4	20.6	19.9	21.0	21.4
	12H	16.9	18.1	17.4	18.5	18.9	19.6	20.7	20.0	21.1	21.6
4H	2H	15.6	16.9	16.0	17.3	17.7	16.4	17.8	16.8	18.1	18.5
	3H	17.1	18.2	17.5	18.6	19.0	18.5	19.6	18.9	20.0	20.4
	4H	17.7	18.7	18.1	19.1	19.5	19.4	20.4	19.8	20.8	21.3
	6H	18.0	18.9	18.5	19.4	19.8	20.3	21.2	20.7	21.6	22.1
	8H	18.1	19.0	18.6	19.4	19.9	20.6	21.4	21.0	21.8	22.3
	12H	18.2	19.0	18.7	19.4	19.9	20.8	21.5	21.2	22.0	22.5
8H	4H	18.1	18.9	18.6	19.4	19.8	19.7	20.5	20.1	20.9	21.4
	6H	18.6	19.3	19.1	19.8	20.3	20.6	21.3	21.1	21.8	22.3
	8H	18.8	19.4	19.3	20.0	20.4	21.0	21.7	21.6	22.2	22.7
	12H	18.9	19.5	19.4	20.0	20.5	21.3	21.9	21.8	22.3	22.9
12H	4H	18.2	18.9	18.7	19.4	19.9	19.7	20.4	20.1	20.9	21.4
	6H	18.8	19.4	19.3	19.9	20.4	20.7	21.3	21.2	21.8	22.3
	8H	19.0	19.6	19.5	20.1	20.6	21.1	21.7	21.6	22.2	22.7

Maximum UGR = 22.9

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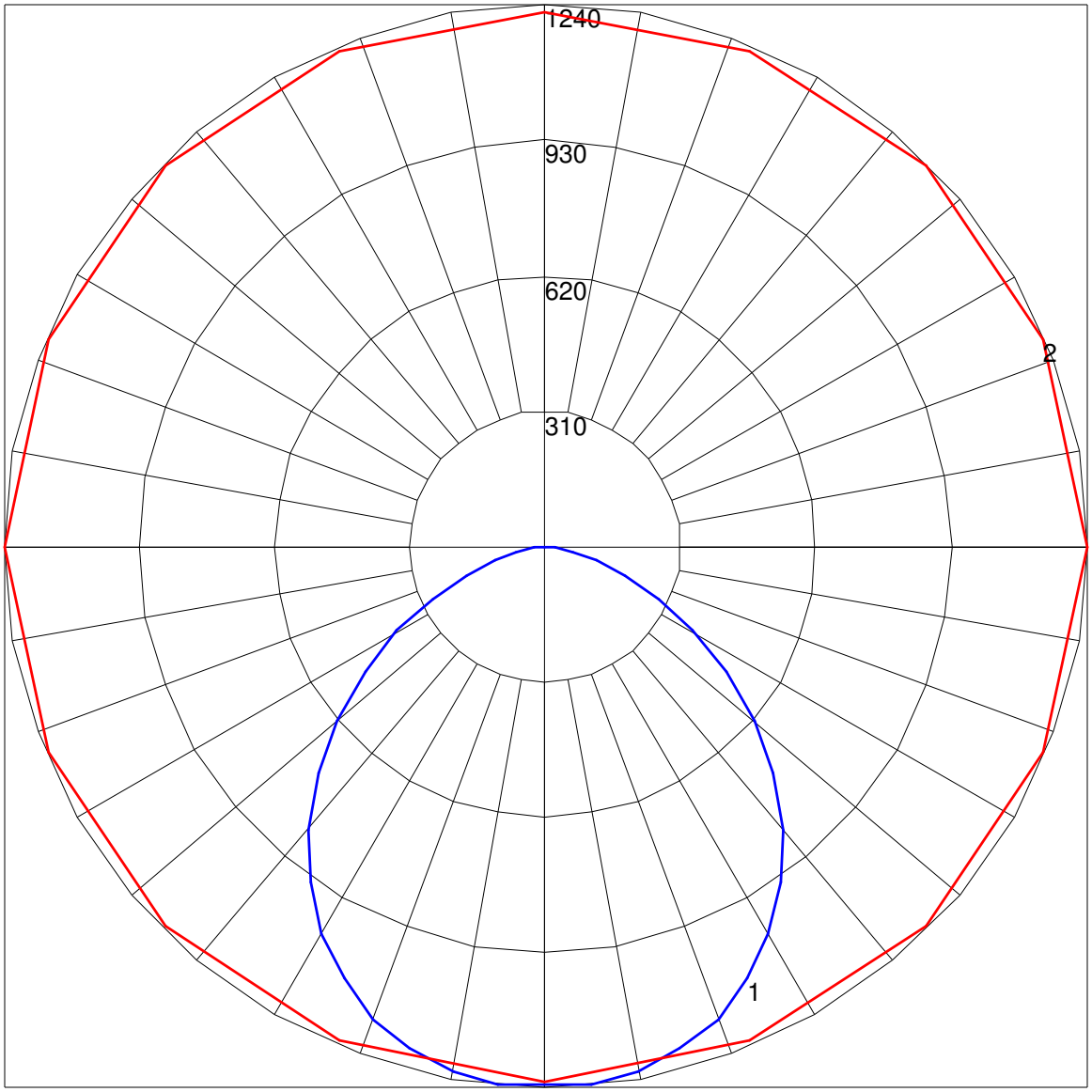
POLAR GRAPH



Maximum Candela = 1240.074 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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