H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-14-P21-8TW-SA-POE X_4000K.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] 16-MAY-2019
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 2-84 LED 22"ARRAYS w/WHITE REFLECTOR
[MORE] FROST SQUARED RIBBED LENS - 1x4 LUMINAIRE
[LUMCAT] PT-14-P21-8TW-SA-POEx
[LAMPCAT] HLM 80 CRI TUNABLE WHITE CCT

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2273
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	142
Total Luminaire Watts	16
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	2029	1966	1951
55	1826	1837	1877
65	1595	1765	1934
75	1288	1782	2224
85	597	1924	2325

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	885.207	885.207	885.207	885.207	885.207
5	889.605	879.832	874.945	862.729	873.968
10	872.502	861.996	855.643	854.421	856.132
15	843.671	833.409	827.789	825.835	824.369
20	805.311	795.293	786.009	781.367	782.100
25	757.422	749.115	745.206	732.989	728.347
30	701.471	692.919	684.123	677.527	673.862
35	643.320	635.502	624.996	615.955	610.824
40	576.618	570.266	559.271	552.185	548.032
45	512.115	504.785	496.234	492.325	492.569
50	443.947	441.748	432.464	434.174	436.373
55	373.825	373.825	376.024	381.887	384.331
60	308.589	310.055	320.072	330.090	336.198
65	240.665	249.461	266.319	283.667	291.730
70	175.429	190.089	214.277	237.489	247.017
75	118.989	134.137	164.678	194.731	205.481
80	62.304	88.203	119.966	151.729	161.746
85	18.569	41.780	59.861	67.924	72.322
90	0.000	0.733	0.977	1.710	0.977

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	316.74	N.A.	13.90
0-30	658.11	N.A.	29.00
0-40	1049.25	N.A.	46.20
0-60	1773.25	N.A.	78.00
0-80	2211.45	N.A.	97.30
0-90	2273.1	N.A.	100.00
10-90	2190.03	N.A.	96.30
20-40	732.51	N.A.	32.20
20-50	1117.91	N.A.	49.20
40-70	988.17	N.A.	43.50
60-80	438.21	N.A.	19.30
70-80	174.03	N.A.	7.70
80-90	61.65	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	2273.1	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	83.07
10-20	233.67
20-30	341.37
30-40	391.14
40-50	385.40
50-60	338.60
60-70	264.17
70-80	174.03
80-90	61.65
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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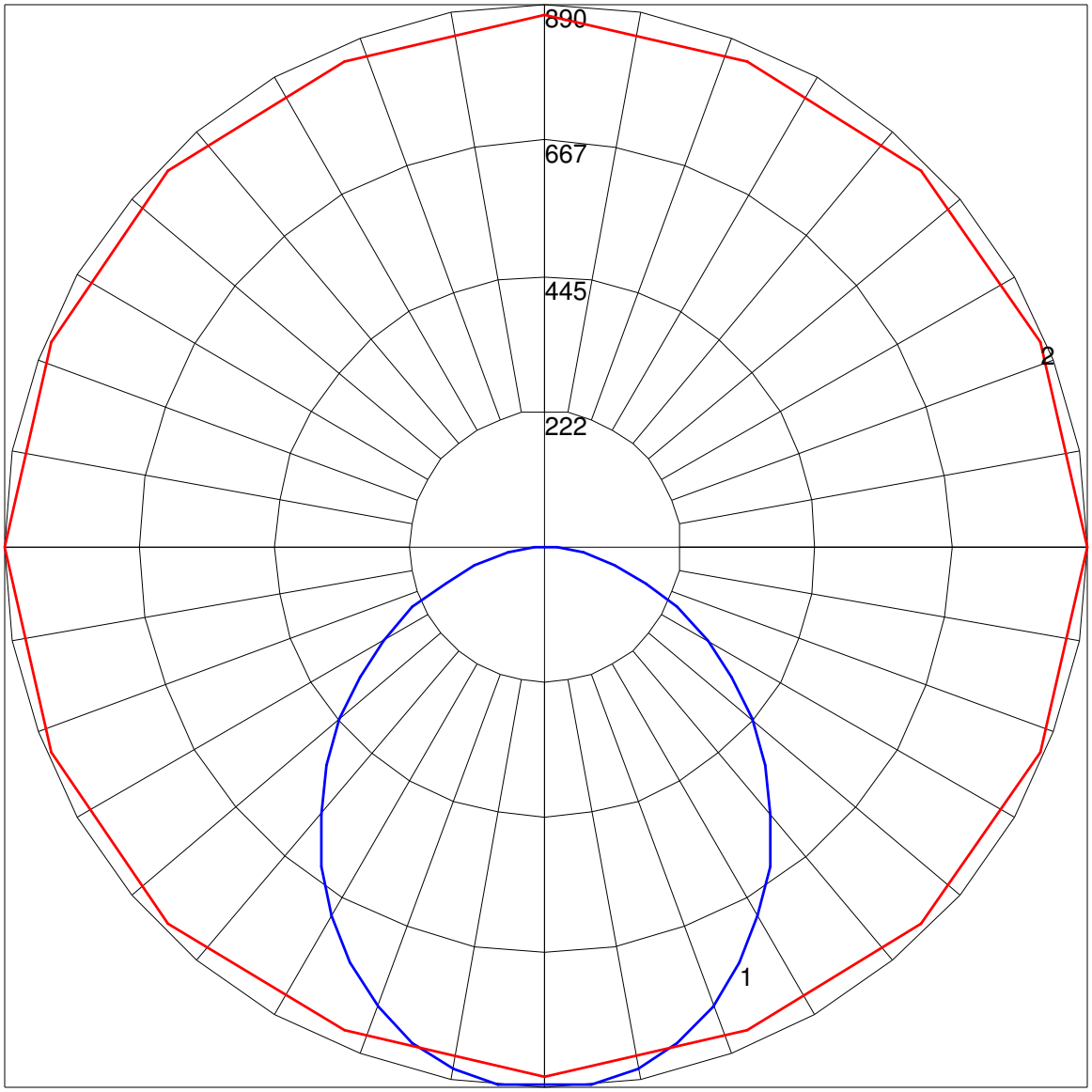
POLAR GRAPH



Maximum Candela = 889.605 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.)