H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 76R-8-L104-840-DRV-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] GEN FROM BALLABS TEST NO. 20990.0
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
[ISSUEDATE] 03-JUNE-2020
[MANUFAC] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 8' LENSED STRIP SURFACE LUMINAIRE
[MORE] WHITE REFLECTOR w/RADIAL RIBBED FROST ACRYLIC LENS
[MORE] EVERLINE #D21CC80UNVPW-C @ 1800mA
[LUMCAT] 76R-8-L104-840-DRV-UNV
[LAMPCAT] HLM MX 80 CRI 4000K CCT

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	10523
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	151
Total Luminaire Watts	69.5
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.20
Spacing Criterion (90-270)	1.28
Spacing Criterion (Diagonal)	1.36
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	8.00 ft
Luminous Width (90-270)	0.38 ft
Luminous Height	0.15 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	9323	8478	8612
55	8009	7369	7658
65	6520	6129	6631
75	5186	5228	5729
85	2685	4765	5334

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	3398.085	3398.085	3398.085	3398.085	3398.085
5	3426.576	3381.648	3372.882	3372.882	3363.019
10	3364.115	3325.762	3327.954	3336.720	3325.762
15	3251.248	3221.661	3245.769	3272.068	3268.780
20	3105.506	3093.452	3132.901	3181.116	3183.308
25	2903.878	2917.028	2988.255	3051.811	3068.248
30	2691.292	2714.304	2816.214	2898.399	2930.177
35	2426.108	2479.802	2614.586	2721.975	2759.232
40	2172.977	2231.055	2393.234	2543.359	2578.425
45	1872.727	1957.104	2154.349	2316.528	2360.360
50	1592.202	1696.303	1912.176	2090.792	2139.007
55	1314.964	1416.873	1664.525	1849.716	1906.697
60	1051.971	1167.030	1421.257	1592.202	1656.854
65	798.840	920.475	1169.222	1387.287	1434.406
70	589.542	696.931	957.732	1169.222	1225.108
75	399.968	519.411	783.499	973.073	1014.714
80	222.448	368.190	626.799	798.840	858.014
85	78.898	248.747	497.495	657.482	706.793
90	0.000	164.370	387.914	544.614	576.392
95	0.000	105.197	305.729	445.992	494.207
100	0.000	70.131	234.502	369.286	407.639
105	0.000	47.120	185.191	298.058	340.795
110	0.000	21.916	146.838	244.364	284.909
115	0.000	14.245	117.251	206.011	234.502
120	0.000	0.000	93.143	168.754	198.340
125	0.000	0.000	72.323	134.784	157.796
130	0.000	0.000	56.982	106.293	126.017
135	0.000	0.000	46.024	82.185	100.814
140	0.000	0.000	24.108	62.461	76.706
145	0.000	0.000	8.766	48.215	55.886
150	0.000	0.000	0.000	41.641	47.120
155	0.000	0.000	0.000	39.449	41.641
160	0.000	0.000	0.000	23.012	38.353
165	0.000	0.000	0.000	7.671	13.150
170	0.000	0.000	0.000	0.000	0.000
175	0.000	0.000	0.000	0.000	0.000
180	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1238.22	N.A.	11.80
0-30	2613.94	N.A.	24.80
0-40	4243.15	N.A.	40.30
0-60	7358.92	N.A.	69.90
0-80	9295.92	N.A.	88.30
0-90	9794.31	N.A.	93.10
10-90	9473.08	N.A.	90.00
20-40	3004.93	N.A.	28.60
20-50	4655.99	N.A.	44.20
40-70	4258.31	N.A.	40.50
60-80	1937.00	N.A.	18.40
70-80	794.46	N.A.	7.60
80-90	498.39	N.A.	4.70
90-110	492.70	N.A.	4.70
90-120	606.23	N.A.	5.80
90-130	671.47	N.A.	6.40
90-150	720.26	N.A.	6.80
90-180	728.29	N.A.	6.90
110-180	235.59	N.A.	2.20
0-180	10522.6	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	321.23
10-20	916.99
20-30	1375.72
30-40	1629.21
40-50	1651.06
50-60	1464.71
60-70	1142.54
70-80	794.46
80-90	498.39
90-100	305.01
100-110	187.69
110-120	113.54
120-130	65.24
130-140	34.50
140-150	14.28
150-160	6.66
160-170	1.37
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	117	117	117	117	114	114	114	114	107	107	107	101	101	101	96	96	96	93
1	106	101	96	92	102	98	93	90	92	89	85	87	84	82	82	80	78	75
2	96	87	80	74	93	85	78	73	80	75	70	76	71	67	72	68	65	62
3	88	77	68	61	84	74	67	60	70	64	58	67	61	57	63	59	55	52
4	80	68	59	52	77	66	58	51	63	55	50	59	53	48	57	51	47	45
5	74	61	51	45	71	59	51	44	56	49	43	53	47	42	51	45	41	39
6	68	55	46	39	66	53	45	39	51	43	38	48	42	37	46	40	36	34
7	63	49	41	34	61	48	40	34	46	39	33	44	38	33	42	36	32	30
8	59	45	37	31	57	44	36	30	42	35	30	40	34	29	39	33	29	27
9	55	41	33	28	53	41	33	27	39	32	27	37	31	26	36	30	26	24
10	51	38	30	25	50	37	30	25	36	29	24	35	28	24	33	28	24	22

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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	16.7	18.2	17.1	18.6	19.1	19.7	21.2	20.2	21.7	22.2
	3H	17.9	19.2	18.4	19.7	20.2	22.0	23.4	22.5	23.8	24.4
	4H	18.2	19.6	18.8	20.0	20.6	23.1	24.4	23.6	24.9	25.4
	6H	18.5	19.7	19.0	20.2	20.7	24.2	25.4	24.7	25.9	26.5
	8H	18.5	19.7	19.1	20.2	20.8	24.8	26.0	25.3	26.5	27.0
	12H	18.5	19.6	19.1	20.2	20.7	25.5	26.6	26.0	27.1	27.7
4H	2H	17.6	18.9	18.1	19.4	19.9	20.0	21.3	20.5	21.8	22.4
	3H	19.1	20.2	19.6	20.7	21.3	22.6	23.7	23.1	24.2	24.7
	4H	19.6	20.6	20.1	21.1	21.7	23.8	24.8	24.3	25.4	25.9
	6H	19.9	20.8	20.5	21.3	22.0	25.1	26.0	25.7	26.6	27.2
	8H	20.0	20.8	20.5	21.4	22.0	25.8	26.7	26.4	27.2	27.8
	12H	20.0	20.8	20.6	21.4	22.0	26.6	27.4	27.2	28.0	28.6
8H	4H	20.3	21.2	20.9	21.7	22.3	24.0	24.8	24.5	25.4	26.0
	6H	20.8	21.5	21.4	22.1	22.8	25.5	26.2	26.1	26.8	27.4
	8H	21.0	21.6	21.6	22.2	22.9	26.3	26.9	26.9	27.5	28.2
	12H	21.1	21.7	21.7	22.3	23.0	27.3	27.8	27.9	28.4	29.1
12H	4H	20.5	21.3	21.1	21.9	22.5	24.0	24.7	24.5	25.3	25.9
	6H	21.2	21.8	21.8	22.4	23.1	25.5	26.1	26.1	26.7	27.4
	8H	21.4	22.0	22.0	22.6	23.3	26.4	26.9	27.0	27.6	28.3

Maximum UGR = 29.1

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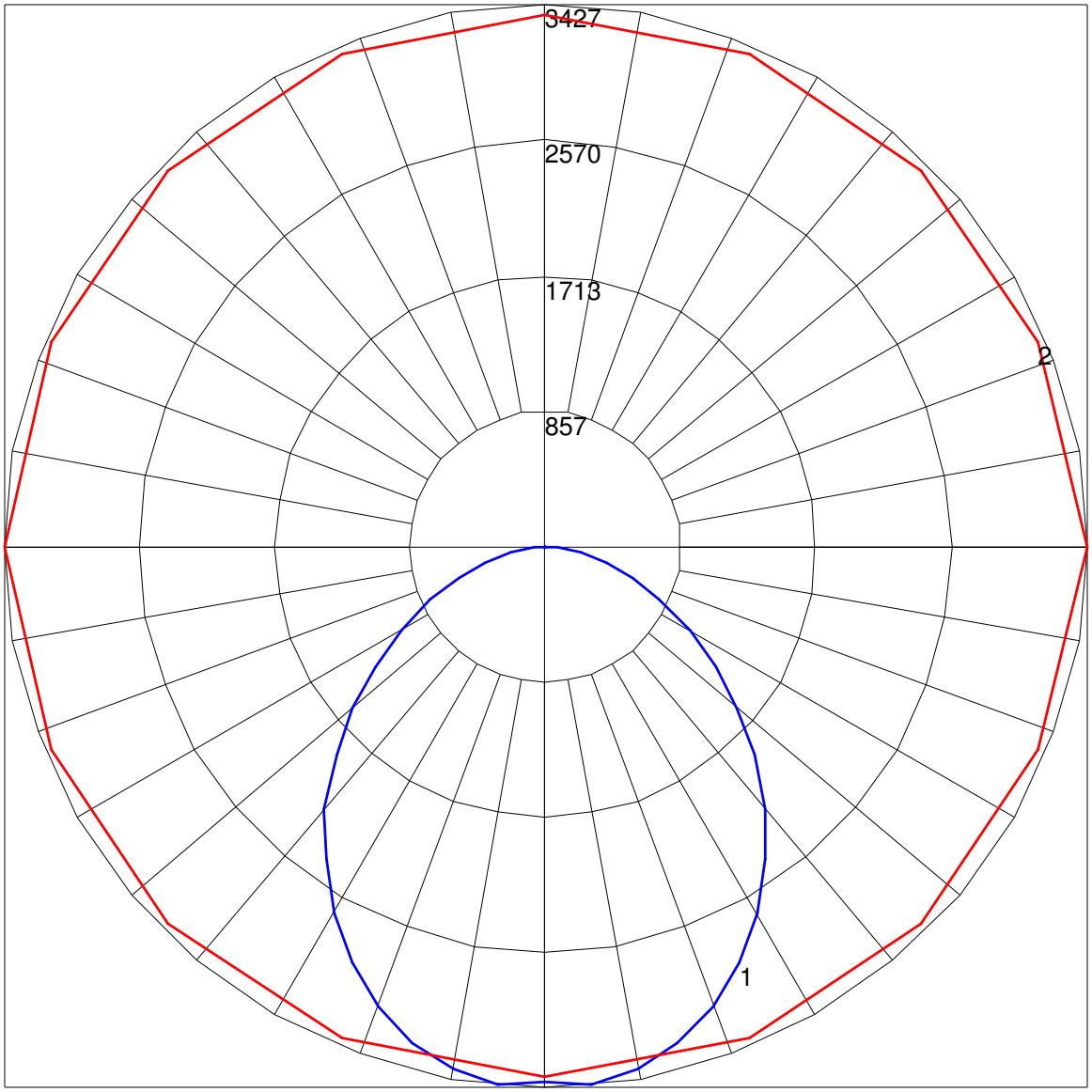
POLAR GRAPH



Maximum Candela = 3426.576 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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