IES INDOOR REPORT
PHOTOMETRIC FILENAME : 76R-4-L72-940-(L61)-DIM-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] 05/15/2023
[MANUFAC] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 72 LED 23.75", 68 LED 22.375"ARRAYS 4' 76R SURFACE LUMINAIRE
[MORE] WHITE REFLECTOR w/RADIAL RIBBED FROST ACRYLIC LENS
[LUMCAT] 76R-4-L72-940-(L61)-DIM1-UNV

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	5163
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	124
Total Luminaire Watts	41.59
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)	3.98 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	9034	8279	8496
55	7703	7175	7554
65	6196	5943	6541
75	4806	5039	5652
85	2255	4543	5262

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1667.236	1667.236	1667.236	1667.236	1667.236
5	1681.214	1659.171	1654.870	1654.870	1650.031
10	1650.569	1631.751	1632.826	1637.128	1631.751
15	1595.191	1580.675	1592.503	1605.406	1603.794
20	1523.685	1517.770	1537.126	1560.782	1561.857
25	1424.758	1431.210	1466.157	1497.340	1505.405
30	1320.455	1331.745	1381.746	1422.070	1437.661
35	1190.345	1216.690	1282.820	1335.509	1353.789
40	1066.149	1094.644	1174.216	1247.873	1265.078
45	918.834	960.233	1057.009	1136.580	1158.086
50	781.197	832.274	938.190	1025.826	1049.482
55	645.173	695.174	816.682	907.544	935.501
60	516.139	572.591	697.325	781.197	812.918
65	391.943	451.621	573.667	680.658	703.777
70	289.253	341.942	469.901	573.667	601.087
75	196.240	254.843	384.416	477.428	497.859
80	109.142	180.649	307.533	391.943	420.976
85	38.710	122.045	244.091	322.587	346.781
90	0.000	80.647	190.326	267.209	282.801
95	0.000	51.614	150.003	218.821	242.478
100	0.000	34.409	115.056	181.186	200.004
105	0.000	23.119	90.862	146.239	167.207
110	0.000	10.753	72.044	119.895	139.788
115	0.000	6.989	57.528	101.077	115.056
120	0.000	0.000	45.700	82.797	97.314
125	0.000	0.000	35.485	66.130	77.421
130	0.000	0.000	27.958	52.152	61.829
135	0.000	0.000	22.581	40.323	49.463
140	0.000	0.000	11.828	30.646	37.635
145	0.000	0.000	4.301	23.656	27.420
150	0.000	0.000	0.000	20.430	23.119
155	0.000	0.000	0.000	19.355	20.430
160	0.000	0.000	0.000	11.291	18.818
165	0.000	0.000	0.000	3.764	6.452
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	607.52	N.A.	11.80
0-30	1282.5	N.A.	24.80
0-40	2081.86	N.A.	40.30
0-60	3610.58	N.A.	69.90
0-80	4560.95	N.A.	88.30
0-90	4805.48	N.A.	93.10
10-90	4647.87	N.A.	90.00
20-40	1474.34	N.A.	28.60
20-50	2284.41	N.A.	44.20
40-70	2089.3	N.A.	40.50
60-80	950.37	N.A.	18.40
70-80	389.80	N.A.	7.60
80-90	244.53	N.A.	4.70
90-110	241.74	N.A.	4.70
90-120	297.44	N.A.	5.80
90-130	329.45	N.A.	6.40
90-150	353.39	N.A.	6.80
90-180	357.33	N.A.	6.90
110-180	115.59	N.A.	2.20
0-180	5162.8	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	157.61
10-20	449.91
20-30	674.98
30-40	799.35
40-50	810.08
50-60	718.64
60-70	560.58
70-80	389.80
80-90	244.53
90-100	149.65
100-110	92.09
110-120	55.71
120-130	32.01
130-140	16.93
140-150	7.01
150-160	3.27
160-170	0.67
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	16.6	18.1	17.0	18.5	19.0	19.6	21.1	20.1	21.5	22.0
	3H	17.8	19.1	18.3	19.6	20.1	21.8	23.2	22.3	23.7	24.2
	4H	18.2	19.5	18.7	19.9	20.5	22.9	24.2	23.4	24.7	25.2
	6H	18.4	19.6	18.9	20.1	20.6	24.0	25.2	24.5	25.7	26.2
	8H	18.4	19.6	19.0	20.1	20.7	24.6	25.7	25.1	26.2	26.8
	12H	18.4	19.5	19.0	20.1	20.7	25.2	26.3	25.7	26.8	27.4
4H	2H	17.5	18.8	18.0	19.3	19.8	19.9	21.2	20.4	21.7	22.2
	3H	19.0	20.1	19.5	20.6	21.2	22.4	23.5	22.9	24.0	24.6
	4H	19.5	20.5	20.0	21.0	21.6	23.6	24.6	24.1	25.2	25.8
	6H	19.8	20.7	20.3	21.2	21.9	24.9	25.8	25.5	26.4	27.0
	8H	19.9	20.7	20.4	21.3	21.9	25.6	26.4	26.1	27.0	27.6
	12H	19.9	20.7	20.5	21.3	21.9	26.3	27.1	26.9	27.7	28.3
8H	4H	20.2	21.0	20.8	21.6	22.2	23.8	24.6	24.3	25.2	25.8
	6H	20.7	21.4	21.3	22.0	22.7	25.2	25.9	25.8	26.5	27.2
	8H	20.9	21.5	21.5	22.1	22.8	26.0	26.7	26.6	27.3	27.9
	12H	21.0	21.6	21.6	22.2	22.9	27.0	27.5	27.6	28.1	28.8
12H	4H	20.4	21.2	21.0	21.8	22.4	23.8	24.5	24.4	25.1	25.8
	6H	21.0	21.7	21.7	22.3	22.9	25.3	25.9	25.9	26.5	27.2
	8H	21.3	21.9	21.9	22.5	23.2	26.1	26.7	26.7	27.3	28.0

Maximum UGR = 28.8

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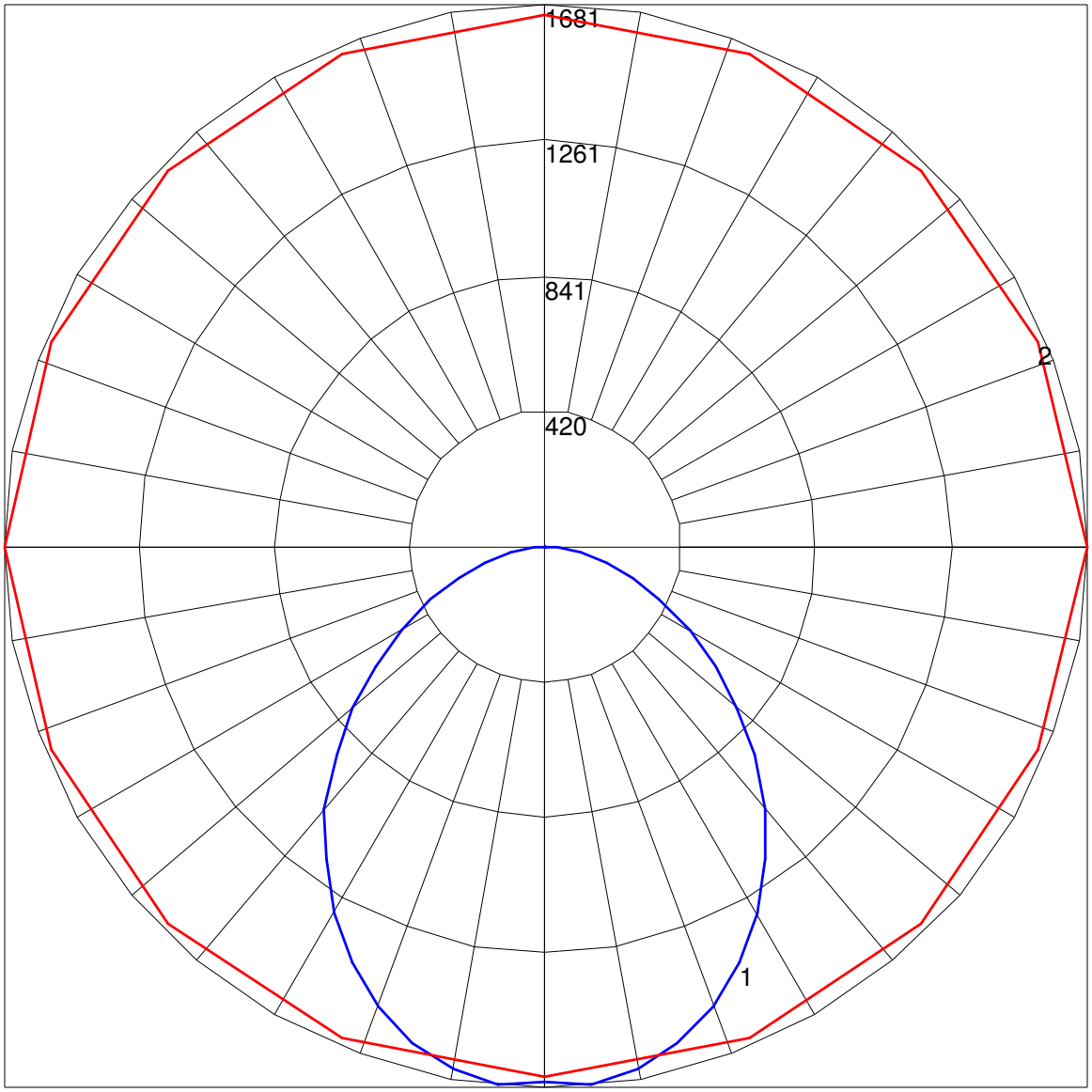
POLAR GRAPH



Maximum Candela = 1681.214 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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