



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4DR-TL-L20-930-DIM1-OM-OF-WH_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TESTLAB] Photopia 2022.1.0 see: www.ltioptics.com/ies

[ISSUEDATE] FEB 2023

[TESTDATE] Fri Feb 03 16:55:39 2023

[TEST] 4DR-OM-WH

[MANUFAC] WILLIAMS INDOOR

[OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.

[LUMCAT] 4DR-TL-L20-930-DIM-UNV-OM-OF-WH

[LUMINAIRE] 4INCH ROUND LED DOWNLIGHT WITH

[MORE] OPEN MEDIUM DIST WHITE PAINTED TRIM

[LAMP] LED 16.8W Vero COB array (500mA)

[LAMPCAT] BXRC-30E2000

[OTHER]

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1365
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	69
Total Luminaire Watts	19.8
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.18
Spacing Criterion (90-270)	1.18
Spacing Criterion (Diagonal)	0.98
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	0.51 ft
Luminous Width (90-270)	0.52 ft
Luminous Height	0.52 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	5515	4611	5479
55	3886	3128	3791
65	2320	1806	2330
75	1173	903	1158
85	348	248	349

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CANDELA TABULATION

	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>
0	922.63	922.63	922.63	922.63	922.63
5	1040.40	1014.24	1038.79	1038.36	1040.42
10	960.09	953.94	950.03	946.67	952.01
15	865.10	860.10	875.64	868.81	871.00
20	845.97	845.62	853.30	847.36	848.48
25	788.88	786.83	786.19	788.86	787.59
30	726.88	729.86	730.16	734.73	737.26
35	376.95	378.89	378.06	377.74	379.50
40	214.48	212.73	212.48	211.06	214.66
45	193.27	194.05	195.03	192.75	191.67
50	166.07	166.90	166.51	166.99	164.83
55	134.23	133.29	134.37	132.38	130.70
60	100.87	102.43	103.86	103.17	102.54
65	76.57	77.48	76.38	77.03	76.70
70	55.91	55.25	55.48	54.63	54.62
75	35.73	36.27	36.46	36.04	35.17
80	20.77	21.90	21.52	21.41	21.79
85	9.38	9.00	9.23	9.43	9.39
90	1.89	1.68	1.78	1.71	1.55

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	343.79	N.A.	25.20
0-30	707.63	N.A.	51.80
0-40	969.67	N.A.	71.00
0-60	1237.32	N.A.	90.60
0-80	1353.68	N.A.	99.20
0-90	1365.05	N.A.	100.00
10-90	1270.68	N.A.	93.10
20-40	625.88	N.A.	45.90
20-50	773.85	N.A.	56.70
40-70	344.76	N.A.	25.30
60-80	116.36	N.A.	8.50
70-80	39.25	N.A.	2.90
80-90	11.37	N.A.	0.80
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	1365.05	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	94.37
10-20	249.42
20-30	363.84
30-40	262.04
40-50	147.98
50-60	119.67
60-70	77.11
70-80	39.25
80-90	11.37
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	111	108	104	101	109	105	103	100	101	99	97	98	96	94	94	92	91	89
2	104	97	92	88	101	96	91	87	92	88	85	89	86	83	86	83	81	79
3	97	89	82	77	95	87	81	76	84	79	75	82	77	74	79	76	73	71
4	90	81	74	68	88	80	73	68	77	72	67	75	70	66	73	69	66	64
5	85	74	67	62	83	73	66	61	71	65	61	70	64	60	68	63	60	58
6	80	69	61	56	78	68	61	56	66	60	55	65	59	55	63	58	54	53
7	75	64	56	51	73	63	56	51	61	55	51	60	55	50	59	54	50	48
8	71	59	52	47	69	58	52	47	57	51	47	56	51	46	55	50	46	45
9	67	55	48	43	65	55	48	43	54	47	43	53	47	43	52	47	43	41
10	63	52	45	40	62	51	45	40	50	44	40	49	44	40	49	44	40	38

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UGR TABLE - CORRECTED

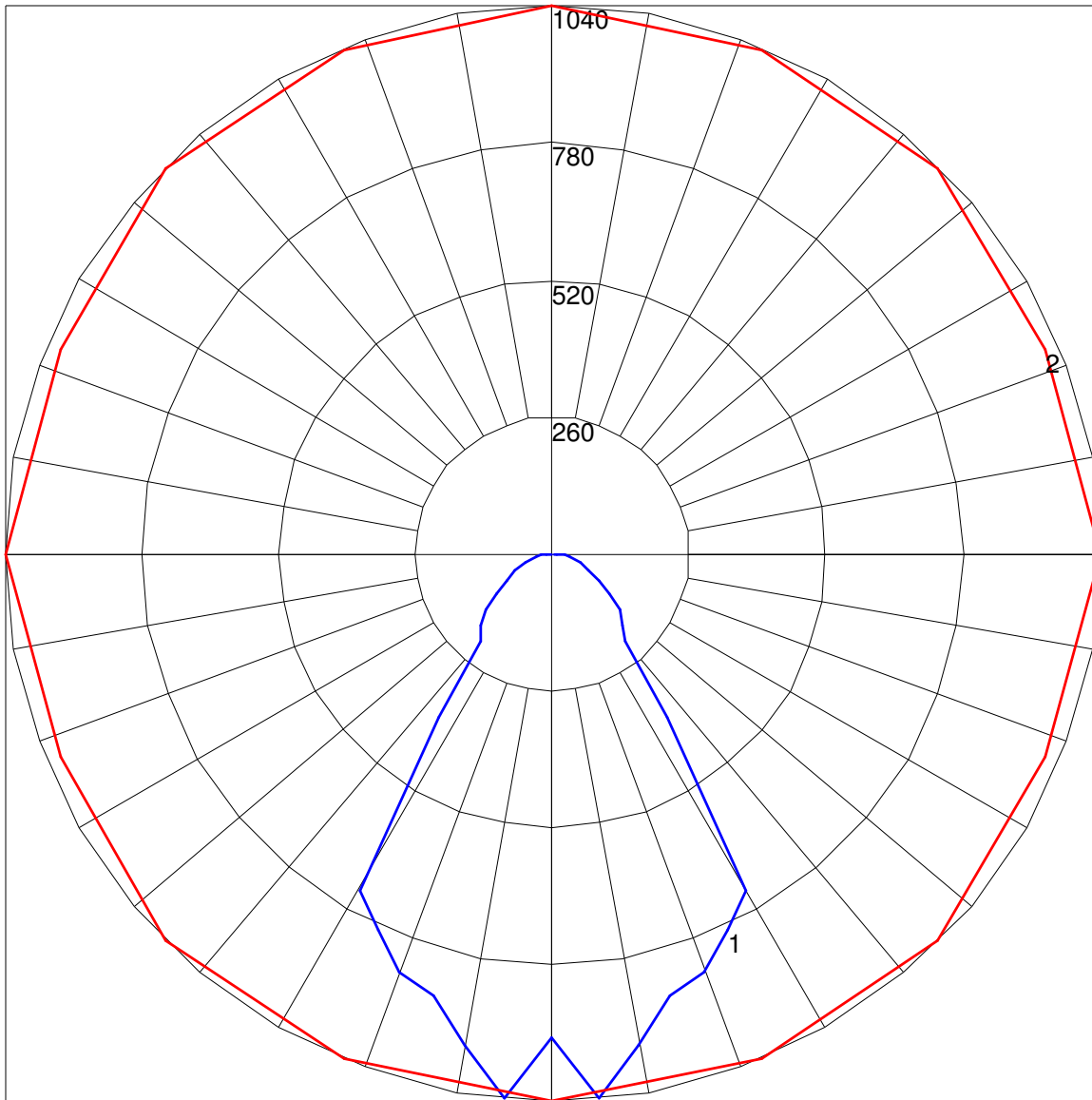
Reflectances

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	14.1	15.4	14.5	15.7	16.0	14.1	15.4	14.5	15.7	16.0
	3H	15.1	16.3	15.5	16.6	17.0	15.1	16.2	15.5	16.6	16.9
	4H	15.4	16.5	15.8	16.8	17.2	15.3	16.4	15.7	16.8	17.2
	6H	15.5	16.5	15.9	16.9	17.3	15.5	16.5	15.9	16.8	17.2
	8H	15.5	16.5	16.0	16.9	17.3	15.5	16.4	15.9	16.8	17.2
	12H	15.5	16.4	15.9	16.8	17.2	15.5	16.4	15.9	16.8	17.2
4H	2H	14.4	15.4	14.8	15.8	16.2	14.3	15.4	14.7	15.8	16.2
	3H	15.5	16.4	15.9	16.8	17.2	15.5	16.4	15.9	16.8	17.2
	4H	15.9	16.7	16.3	17.1	17.5	15.8	16.6	16.3	17.0	17.5
	6H	16.1	16.8	16.5	17.2	17.7	16.0	16.7	16.5	17.2	17.6
	8H	16.1	16.8	16.6	17.2	17.7	16.1	16.7	16.6	17.2	17.6
	12H	16.1	16.7	16.6	17.2	17.6	16.1	16.7	16.6	17.1	17.6
8H	4H	15.9	16.6	16.4	17.0	17.5	15.9	16.5	16.4	17.0	17.4
	6H	16.2	16.7	16.7	17.2	17.7	16.1	16.7	16.6	17.2	17.6
	8H	16.2	16.7	16.7	17.2	17.7	16.2	16.7	16.7	17.2	17.7
	12H	16.3	16.7	16.8	17.2	17.7	16.2	16.7	16.7	17.1	17.7
12H	4H	15.9	16.5	16.4	16.9	17.4	15.9	16.4	16.3	16.9	17.4
	6H	16.1	16.6	16.7	17.1	17.6	16.1	16.6	16.6	17.1	17.6
	8H	16.2	16.7	16.7	17.1	17.7	16.2	16.6	16.7	17.1	17.7

Maximum UGR = 17.7

POLAR GRAPH



Maximum Candela = 1040.42 Located At Horizontal Angle = 90, Vertical Angle = 5
1 - Vertical Plane Through Horizontal Angles (90 - 270) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)