



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4DR-TL-L40-835-DIM-UNV-OW-OF-CS-WET-CC_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM BALLABS TEST NO. 20685.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUEDATE] 20 APRIL 2020

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] 4" RND RECESSED LED CAST HOUSING DOWNLIGHT

[MORE] OPEN SEMI-SPEC SPUN ALUMINUM REFLECTOR (WIDE)

[LUMCAT] 4DR-TL-L40-835-DIM-UNV-OW-OF-CS-WET-CC

[LAMPCAT] V13 BXRE-35E2000

[_SEARCH_SOURCETYPE] LED

[_SEARCH_APPLICATION] Indoor, Classroom, Commercial, Corridor, Hotel, Industrial, Office, Downlight

[_SEARCH_MOUNTING] Recessed

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3382
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	89
Total Luminaire Watts	38
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.22
Spacing Criterion (90-270)	1.22
Spacing Criterion (Diagonal)	0.94
Basic Luminous Shape	Circular
Luminous Length (0-180)	0.37 ft (Diameter)
Luminous Width (90-270)	0.37 ft (Diameter)
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	10255	10255	10255
55	3161	3161	3161
65	390	390	390
75	0	0	0
85	0	0	0

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CANDELA TABULATION

	<u>0</u>
0	2902.523
5	2989.118
10	3078.920
15	3143.064
20	3282.577
25	3577.640
30	2803.100
35	492.306
40	128.288
45	70.559
50	36.883
55	17.640
60	8.018
65	1.604
70	1.604
75	0.000
80	0.000
85	0.000
90	0.000

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 4DR-TL-L40-835-DIM-UNV-OW-OF-CS-WET-CC_.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	1186.15	N.A.	35.10
0-30	2713.15	N.A.	80.20
0-40	3301.96	N.A.	97.60
0-60	3378.28	N.A.	99.90
0-80	3381.85	N.A.	100.00
0-90	3381.85	N.A.	100.00
10-90	3094.34	N.A.	91.50
20-40	2115.81	N.A.	62.60
20-50	2174.34	N.A.	64.30
40-70	79.47	N.A.	2.30
60-80	3.57	N.A.	0.10
70-80	0.42	N.A.	0.00
80-90	0.00	N.A.	0.00
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	3381.85	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	287.51
10-20	898.65
20-30	1527.00
30-40	588.81
40-50	58.53
50-60	17.79
60-70	3.15
70-80	0.42
80-90	0.00
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	114	111	109	106	111	109	107	105	105	103	102	101	100	98	98	97	96	94
2	108	104	100	96	106	102	98	95	99	96	93	96	93	91	93	91	89	88
3	103	97	92	88	101	95	91	87	93	89	86	90	87	85	88	86	83	82
4	98	91	85	81	96	90	85	81	87	83	80	85	82	79	84	81	78	77
5	93	85	79	75	92	84	79	75	82	78	74	81	77	74	79	76	73	72
6	89	80	74	70	87	79	74	70	78	73	69	76	72	69	75	71	68	67
7	84	75	69	65	83	75	69	65	73	68	65	72	68	64	71	67	64	63
8	80	71	65	61	79	70	65	61	69	64	61	68	64	60	67	63	60	59
9	76	67	61	57	75	66	61	57	66	60	57	65	60	57	64	60	57	55
10	73	63	58	54	72	63	57	54	62	57	54	61	57	53	61	56	53	52

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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

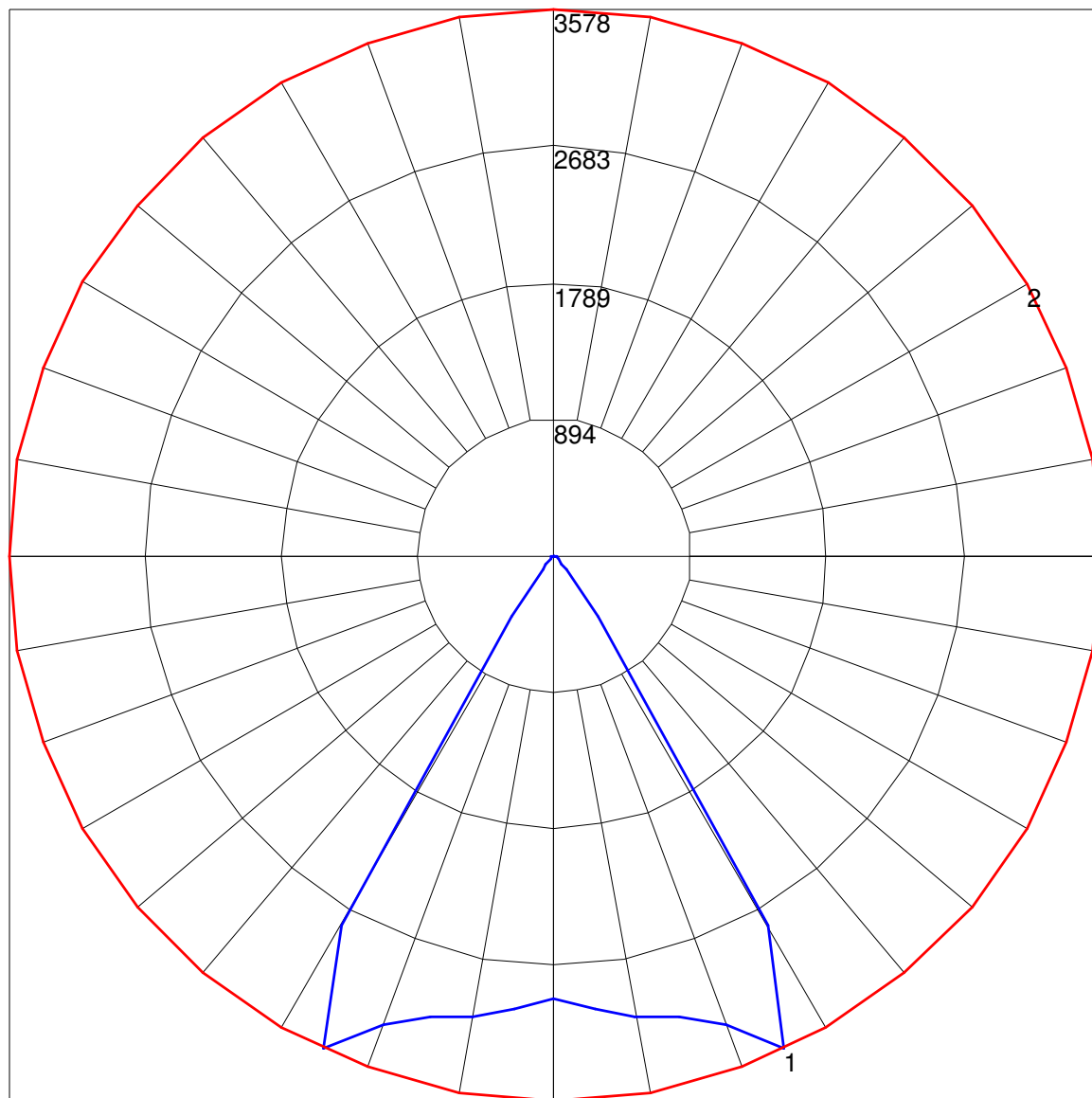
X=2H	Y=2H	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
	3H	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
	4H	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
	6H	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
	8H	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
	12H	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2

UGR Viewed Endwise

4H	2H	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
	3H	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
	4H	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
	6H	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
	8H	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
	12H	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
8H	4H	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
	6H	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
	8H	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
	12H	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
12H	4H	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
	6H	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
	8H	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2

Maximum UGR = 4.2

POLAR GRAPH



Maximum Candela = 3577.64 Located At Horizontal Angle = 0, Vertical Angle = 25
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (25) (Through Max. Cd.)