



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 8CRDI-TL-L20-8TWU-L20-8TWD-XXX-DALI-UNV-OW-CSU-OM-CSD-WM 4000K_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] GEN from UL #13537338.03
 [TESTLAB] UL Verification Services Inc.
 [ISSUE DATE] 24-FEB-2021
 [MANUFAC] WILLIAMS INDOOR
 [MORE] H.E. WILLIAMS, INC. - CARTHAGE, MO
 [LUMCAT] 8CRDI-TL-L20-8TWU-L20-8TWD-xxx-DALI-UNV-OW-CSU-OM-CSD-WM 4000k
 [LUMINAIRE] White formed aluminum housing, wide distribution reflector
 [MORE] trims, clear uplight glass lens enclosure, no downlight enclosure
 [LAMP] Two white LEDs (one up/one down)
 [SEARCH_SOURCETYPE] LED
 [SEARCH_APPLICATION] INDOOR, DIRECT, INDIRECT
 [SEARCH_MOUNTING] WALL

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4467
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	93
Total Luminaire Watts	48
Ballast Factor	1.00
CIE Type	General Diffuse
Spacing Criterion (0-180)	N.A.
Spacing Criterion (90-270)	N.A.
Spacing Criterion (Diagonal)	N.A.
Basic Luminous Shape	Circular w/ Sides
Luminous Length (0-180)	0.65 ft (Diameter)
Luminous Width (90-270)	0.65 ft (Diameter)
Luminous Height	2.17 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	467	467	467
55	128	128	128
65	35	35	35
75	9	9	9
85	3	3	3

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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>	<u>112.5</u>	<u>135.0</u>	<u>157.5</u>	<u>180.0</u>	<u>202.5</u>
0	4607.891	4607.891	4607.891	4607.891	4607.891	4607.891	4607.891	4607.891	4607.891	4607.891
5	4560.813	4560.813	4560.813	4560.813	4560.813	4560.813	4560.813	4560.813	4560.813	4560.813
10	3436.685	3436.685	3436.685	3436.685	3436.685	3436.685	3436.685	3436.685	3436.685	3436.685
15	2669.660	2669.660	2669.660	2669.660	2669.660	2669.660	2669.660	2669.660	2669.660	2669.660
20	2195.437	2195.437	2195.437	2195.437	2195.437	2195.437	2195.437	2195.437	2195.437	2195.437
25	1621.316	1621.316	1621.316	1621.316	1621.316	1621.316	1621.316	1621.316	1621.316	1621.316
30	1151.686	1151.686	1151.686	1151.686	1151.686	1151.686	1151.686	1151.686	1151.686	1151.686
35	454.129	454.129	454.129	454.129	454.129	454.129	454.129	454.129	454.129	454.129
40	132.966	132.966	132.966	132.966	132.966	132.966	132.966	132.966	132.966	132.966
45	53.049	53.049	53.049	53.049	53.049	53.049	53.049	53.049	53.049	53.049
50	30.773	30.773	30.773	30.773	30.773	30.773	30.773	30.773	30.773	30.773
55	15.846	15.846	15.846	15.846	15.846	15.846	15.846	15.846	15.846	15.846
60	8.382	8.382	8.382	8.382	8.382	8.382	8.382	8.382	8.382	8.382
65	4.593	4.593	4.593	4.593	4.593	4.593	4.593	4.593	4.593	4.593
70	2.526	2.526	2.526	2.526	2.526	2.526	2.526	2.526	2.526	2.526
75	1.263	1.263	1.263	1.263	1.263	1.263	1.263	1.263	1.263	1.263
80	0.689	0.689	0.689	0.689	0.689	0.689	0.689	0.689	0.689	0.689
85	0.344	0.344	0.344	0.344	0.344	0.344	0.344	0.344	0.344	0.344
90	4.331	4.331	4.331	4.331	4.331	4.331	4.331	4.331	4.331	4.331
95	4.785	4.785	4.785	4.785	4.785	4.785	4.785	4.785	4.785	4.785
100	5.789	5.789	5.789	5.789	5.789	5.789	5.789	5.789	5.789	5.789
105	7.162	7.162	7.162	7.162	7.162	7.162	7.162	7.162	7.162	7.162
110	9.035	9.035	9.035	9.035	9.035	9.035	9.035	9.035	9.035	9.035
115	11.846	11.846	11.846	11.846	11.846	11.846	11.846	11.846	11.846	11.846
120	16.397	16.397	16.397	16.397	16.397	16.397	16.397	16.397	16.397	16.397
125	24.830	24.830	24.830	24.830	24.830	24.830	24.830	24.830	24.830	24.830
130	39.453	39.453	39.453	39.453	39.453	39.453	39.453	39.453	39.453	39.453
135	62.843	62.843	62.843	62.843	62.843	62.843	62.843	62.843	62.843	62.843
140	250.337	250.337	250.337	250.337	250.337	250.337	250.337	250.337	250.337	250.337
145	889.783	889.783	889.783	889.783	889.783	889.783	889.783	889.783	889.783	889.783
150	1574.772	1574.772	1574.772	1574.772	1574.772	1574.772	1574.772	1574.772	1574.772	1574.772
155	1867.574	1867.574	1867.574	1867.574	1867.574	1867.574	1867.574	1867.574	1867.574	1867.574
160	1829.761	1829.761	1829.761	1829.761	1829.761	1829.761	1829.761	1829.761	1829.761	1829.761
165	1731.714	1731.714	1731.714	1731.714	1731.714	1731.714	1731.714	1731.714	1731.714	1731.714
170	1659.434	1659.434	1659.434	1659.434	1659.434	1659.434	1659.434	1659.434	1659.434	1659.434
175	1514.538	1514.538	1514.538	1514.538	1514.538	1514.538	1514.538	1514.538	1514.538	1514.538
180	1404.506	1404.506	1404.506	1404.506	1404.506	1404.506	1404.506	1404.506	1404.506	1404.506

Vert. Horizontal Angles

	<u>225.0</u>	<u>247.5</u>	<u>270.0</u>	<u>292.5</u>	<u>315.0</u>	<u>337.5</u>	<u>360.0</u>
0	4607.891	4607.891	4607.891	4607.891	4607.891	4607.891	4607.891
5	4560.813	4560.813	4560.813	4560.813	4560.813	4560.813	4560.813
10	3436.685	3436.685	3436.685	3436.685	3436.685	3436.685	3436.685
15	2669.660	2669.660	2669.660	2669.660	2669.660	2669.660	2669.660
20	2195.437	2195.437	2195.437	2195.437	2195.437	2195.437	2195.437
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50	30.773	30.773	30.773	30.773	30.773	30.773	30.773
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65	4.593	4.593	4.593	4.593	4.593	4.593	4.593
70	2.526	2.526	2.526	2.526	2.526	2.526	2.526
75	1.263	1.263	1.263	1.263	1.263	1.263	1.263
80	0.689	0.689	0.689	0.689	0.689	0.689	0.689
85	0.344	0.344	0.344	0.344	0.344	0.344	0.344
90	4.331	4.331	4.331	4.331	4.331	4.331	4.331
95	4.785	4.785	4.785	4.785	4.785	4.785	4.785
100	5.789	5.789	5.789	5.789	5.789	5.789	5.789
105	7.162	7.162	7.162	7.162	7.162	7.162	7.162
110	9.035	9.035	9.035	9.035	9.035	9.035	9.035
115	11.846	11.846	11.846	11.846	11.846	11.846	11.846
120	16.397	16.397	16.397	16.397	16.397	16.397	16.397
125	24.830	24.830	24.830	24.830	24.830	24.830	24.830
130	39.453	39.453	39.453	39.453	39.453	39.453	39.453
135	62.843	62.843	62.843	62.843	62.843	62.843	62.843
140	250.337	250.337	250.337	250.337	250.337	250.337	250.337
145	889.783	889.783	889.783	889.783	889.783	889.783	889.783
150	1574.772	1574.772	1574.772	1574.772	1574.772	1574.772	1574.772
155	1867.574	1867.574	1867.574	1867.574	1867.574	1867.574	1867.574
160	1829.761	1829.761	1829.761	1829.761	1829.761	1829.761	1829.761
165	1731.714	1731.714	1731.714	1731.714	1731.714	1731.714	1731.714
170	1659.434	1659.434	1659.434	1659.434	1659.434	1659.434	1659.434
175	1514.538	1514.538	1514.538	1514.538	1514.538	1514.538	1514.538
180	1404.506	1404.506	1404.506	1404.506	1404.506	1404.506	1404.506

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Zone	Lumens	%Lamp	%Fixt
0-20	1158.88	N.A.	25.90
0-30	1910.11	N.A.	42.80
0-40	2244.53	N.A.	50.20
0-60	2311.65	N.A.	51.80
0-80	2318.12	N.A.	51.90
0-90	2319.68	N.A.	51.90
10-90	1923.98	N.A.	43.10
20-40	1085.65	N.A.	24.30
20-50	1137.03	N.A.	25.50
40-70	72.07	N.A.	1.60
60-80	6.47	N.A.	0.10
70-80	1.51	N.A.	0.00
80-90	1.56	N.A.	0.00
90-110	13.07	N.A.	0.30
90-120	25.22	N.A.	0.60
90-130	48.73	N.A.	1.10
90-150	680.53	N.A.	15.20
90-180	2147.06	N.A.	48.10
110-180	2133.99	N.A.	47.80
0-180	4466.74	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	395.70
10-20	763.18
20-30	751.23
30-40	334.42
40-50	51.38
50-60	15.74
60-70	4.96
70-80	1.51
80-90	1.56
90-100	5.37
100-110	7.70
110-120	12.15
120-130	23.51
130-140	78.66
140-150	553.14
150-160	823.41
160-170	494.68
170-180	148.44

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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	108	108	108	108	100	100	100	100	84	84	84	71	71	71	58	58	58	52
1	101	98	95	92	93	91	88	86	78	76	75	66	65	64	55	55	54	49
2	95	89	84	81	88	83	79	76	72	69	67	62	60	59	53	52	51	46
3	89	81	76	72	82	76	72	68	67	64	61	58	56	54	50	49	47	44
4	83	75	69	64	78	71	65	61	62	59	56	55	52	50	48	46	44	41
5	78	69	63	58	73	66	60	56	58	54	51	52	49	46	45	43	42	39
6	74	64	58	54	69	61	55	51	55	50	47	49	46	43	43	41	39	37
7	70	60	54	49	65	57	51	48	51	47	44	46	43	41	41	39	37	35
8	66	56	50	46	62	53	48	44	48	44	41	44	41	38	39	37	35	33
9	63	53	47	43	59	50	45	41	46	42	39	42	38	36	37	35	34	32
10	59	50	44	40	56	47	42	39	43	39	36	40	36	34	36	34	32	30

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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	5.2	5.2	5.2	5.2	5.2	UGR Viewed Endwise				
	3H	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
	4H	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
	6H	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
	8H	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
	12H	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2

4H	2H	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
	3H	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
	4H	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
	6H	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
	8H	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
	12H	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2

8H	4H	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
	6H	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
	8H	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
	12H	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2

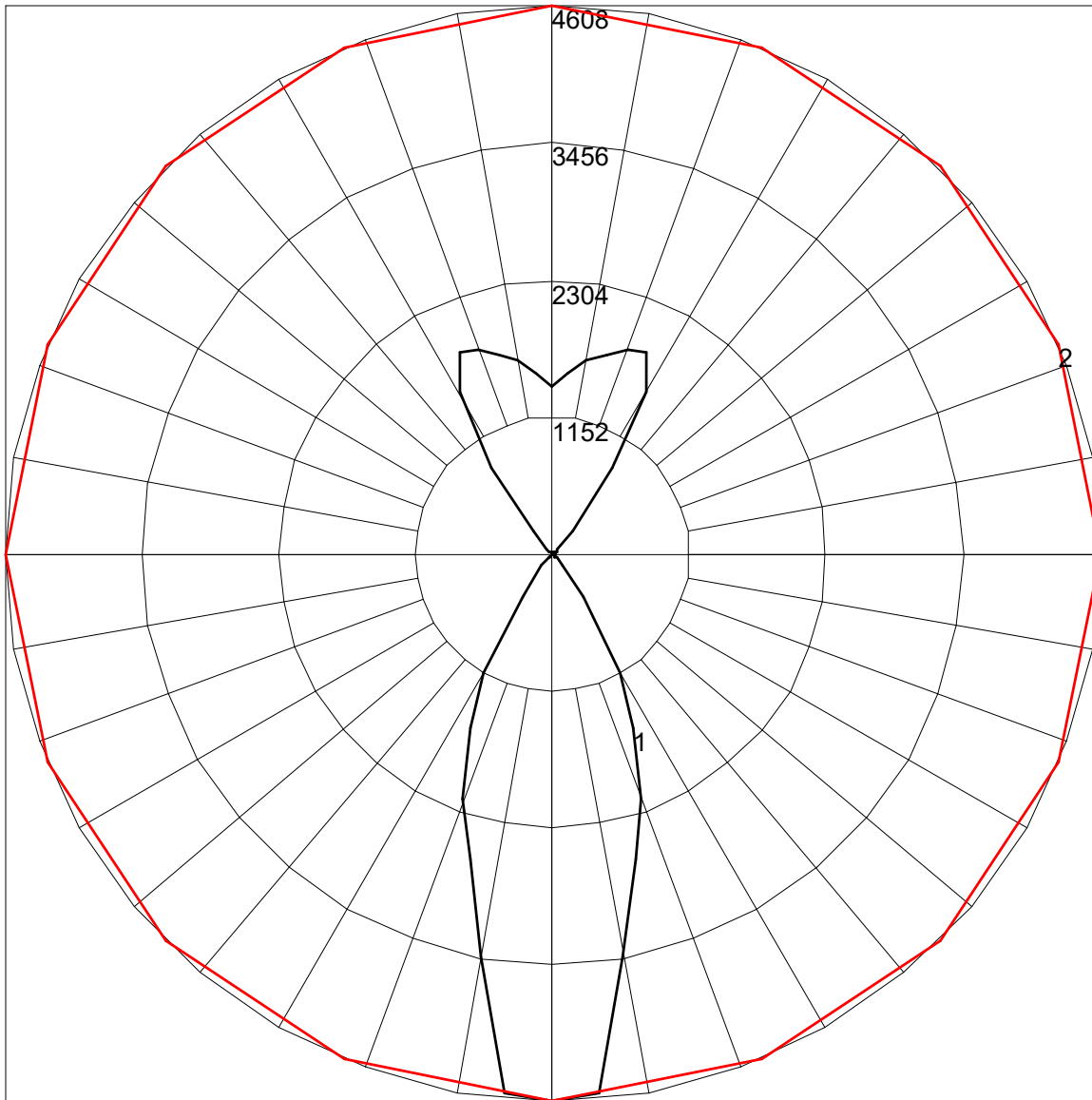
12H	4H	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
	6H	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
	8H	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2

Maximum UGR = 5.2

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POLAR GRAPH



Maximum Candela = 4607.891 Located At Horizontal Angle = 0, Vertical Angle = 0

1 - Vertical Plane Through Horizontal Angles (90 - 270)

2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)