



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 8CRDI-TL-P29-8TWU-P29-8TWD-XXX-POE PR-LW-CSU-OM-CSD-WM 4000K_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #13537338.04 & #12326812.04

[TESTLAB] UL Verification Services Inc.

[ISSUE DATE] 25-FEB-2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] 8CRDI-TL-P29-8TWU-P29-8TWD-xxx-PoE PR-LW-CS-OM-CSD-WM 4000k

[LUMINAIRE] White formed aluminum housing, wide distribution reflector

[MORE] trims, flush upright frosted 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	4898
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	98
Total Luminaire Watts	50
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	541	541	541
55	148	148	148
65	41	41	41
75	11	11	11
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>
0.0	5333.863	5333.863	5333.863	5333.863	5333.863	5333.863	5333.863	5333.863	5333.863	5333.863
2.5	5398.991	5398.991	5398.991	5398.991	5398.991	5398.991	5398.991	5398.991	5398.991	5398.991
5.0	5279.368	5279.368	5279.368	5279.368	5279.368	5279.368	5279.368	5279.368	5279.368	5279.368
7.5	4747.709	4747.709	4747.709	4747.709	4747.709	4747.709	4747.709	4747.709	4747.709	4747.709
10.0	3978.134	3978.134	3978.134	3978.134	3978.134	3978.134	3978.134	3978.134	3978.134	3978.134
12.5	3461.096	3461.096	3461.096	3461.096	3461.096	3461.096	3461.096	3461.096	3461.096	3461.096
15.0	3090.265	3090.265	3090.265	3090.265	3090.265	3090.265	3090.265	3090.265	3090.265	3090.265
17.5	2799.182	2799.182	2799.182	2799.182	2799.182	2799.182	2799.182	2799.182	2799.182	2799.182
20.0	2541.327	2541.327	2541.327	2541.327	2541.327	2541.327	2541.327	2541.327	2541.327	2541.327
22.5	2227.649	2227.649	2227.649	2227.649	2227.649	2227.649	2227.649	2227.649	2227.649	2227.649
25.0	1876.754	1876.754	1876.754	1876.754	1876.754	1876.754	1876.754	1876.754	1876.754	1876.754
27.5	1564.405	1564.405	1564.405	1564.405	1564.405	1564.405	1564.405	1564.405	1564.405	1564.405
30.0	1333.133	1333.133	1333.133	1333.133	1333.133	1333.133	1333.133	1333.133	1333.133	1333.133
32.5	945.289	945.289	945.289	945.289	945.289	945.289	945.289	945.289	945.289	945.289
35.0	525.677	525.677	525.677	525.677	525.677	525.677	525.677	525.677	525.677	525.677
37.5	229.278	229.278	229.278	229.278	229.278	229.278	229.278	229.278	229.278	229.278
40.0	153.915	153.915	153.915	153.915	153.915	153.915	153.915	153.915	153.915	153.915
42.5	86.793	86.793	86.793	86.793	86.793	86.793	86.793	86.793	86.793	86.793
45.0	61.407	61.407	61.407	61.407	61.407	61.407	61.407	61.407	61.407	61.407
47.5	47.583	47.583	47.583	47.583	47.583	47.583	47.583	47.583	47.583	47.583
50.0	35.621	35.621	35.621	35.621	35.621	35.621	35.621	35.621	35.621	35.621
52.5	25.785	25.785	25.785	25.785	25.785	25.785	25.785	25.785	25.785	25.785
55.0	18.342	18.342	18.342	18.342	18.342	18.342	18.342	18.342	18.342	18.342
57.5	13.291	13.291	13.291	13.291	13.291	13.291	13.291	13.291	13.291	13.291
60.0	9.703	9.703	9.703	9.703	9.703	9.703	9.703	9.703	9.703	9.703
62.5	7.177	7.177	7.177	7.177	7.177	7.177	7.177	7.177	7.177	7.177
65.0	5.317	5.317	5.317	5.317	5.317	5.317	5.317	5.317	5.317	5.317
67.5	3.854	3.854	3.854	3.854	3.854	3.854	3.854	3.854	3.854	3.854
70.0	2.924	2.924	2.924	2.924	2.924	2.924	2.924	2.924	2.924	2.924
72.5	2.127	2.127	2.127	2.127	2.127	2.127	2.127	2.127	2.127	2.127
75.0	1.462	1.462	1.462	1.462	1.462	1.462	1.462	1.462	1.462	1.462
77.5	1.063	1.063	1.063	1.063	1.063	1.063	1.063	1.063	1.063	1.063
80.0	0.797	0.797	0.797	0.797	0.797	0.797	0.797	0.797	0.797	0.797
82.5	0.532	0.532	0.532	0.532	0.532	0.532	0.532	0.532	0.532	0.532
85.0	0.399	0.399	0.399	0.399	0.399	0.399	0.399	0.399	0.399	0.399
87.5	0.266	0.266	0.266	0.266	0.266	0.266	0.266	0.266	0.266	0.266
90.0	5.481	5.481	5.481	5.481	5.481	5.481	5.481	5.481	5.481	5.481
92.5	8.236	8.236	8.236	8.236	8.236	8.236	8.236	8.236	8.236	8.236
95.0	14.392	14.392	14.392	14.392	14.392	14.392	14.392	14.392	14.392	14.392
97.5	24.410	24.410	24.410	24.410	24.410	24.410	24.410	24.410	24.410	24.410
100.0	36.338	36.338	36.338	36.338	36.338	36.338	36.338	36.338	36.338	36.338
102.5	48.862	48.862	48.862	48.862	48.862	48.862	48.862	48.862	48.862	48.862
105.0	62.363	62.363	62.363	62.363	62.363	62.363	62.363	62.363	62.363	62.363
107.5	77.602	77.602	77.602	77.602	77.602	77.602	77.602	77.602	77.602	77.602
110.0	95.347	95.347	95.347	95.347	95.347	95.347	95.347	95.347	95.347	95.347
112.5	115.299	115.299	115.299	115.299	115.299	115.299	115.299	115.299	115.299	115.299
115.0	137.884	137.884	137.884	137.884	137.884	137.884	137.884	137.884	137.884	137.884
117.5	163.186	163.186	163.186	163.186	163.186	163.186	163.186	163.186	163.186	163.186
120.0	191.500	191.500	191.500	191.500	191.500	191.500	191.500	191.500	191.500	191.500
122.5	223.000	223.000	223.000	223.000	223.000	223.000	223.000	223.000	223.000	223.000
125.0	257.811	257.811	257.811	257.811	257.811	257.811	257.811	257.811	257.811	257.811
127.5	294.956	294.956	294.956	294.956	294.956	294.956	294.956	294.956	294.956	294.956
130.0	333.588	333.588	333.588	333.588	333.588	333.588	333.588	333.588	333.588	333.588
132.5	372.431	372.431	372.431	372.431	372.431	372.431	372.431	372.431	372.431	372.431

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CANDELA TABULATION - (Cont.)

135.0	411.233	411.233	411.233	411.233	411.233	411.233	411.233	411.233	411.233	411.233
137.5	451.689	451.689	451.689	451.689	451.689	451.689	451.689	451.689	451.689	451.689
140.0	498.387	498.387	498.387	498.387	498.387	498.387	498.387	498.387	498.387	498.387
142.5	558.244	558.244	558.244	558.244	558.244	558.244	558.244	558.244	558.244	558.244
145.0	638.903	638.903	638.903	638.903	638.903	638.903	638.903	638.903	638.903	638.903
147.5	743.335	743.335	743.335	743.335	743.335	743.335	743.335	743.335	743.335	743.335
150.0	872.813	872.813	872.813	872.813	872.813	872.813	872.813	872.813	872.813	872.813
152.5	1007.811	1007.811	1007.811	1007.811	1007.811	1007.811	1007.811	1007.811	1007.811	1007.811
155.0	1144.931	1144.931	1144.931	1144.931	1144.931	1144.931	1144.931	1144.931	1144.931	1144.931
157.5	1267.193	1267.193	1267.193	1267.193	1267.193	1267.193	1267.193	1267.193	1267.193	1267.193
160.0	1362.710	1362.710	1362.710	1362.710	1362.710	1362.710	1362.710	1362.710	1362.710	1362.710
162.5	1426.812	1426.812	1426.812	1426.812	1426.812	1426.812	1426.812	1426.812	1426.812	1426.812
165.0	1463.321	1463.321	1463.321	1463.321	1463.321	1463.321	1463.321	1463.321	1463.321	1463.321
167.5	1482.849	1482.849	1482.849	1482.849	1482.849	1482.849	1482.849	1482.849	1482.849	1482.849
170.0	1493.886	1493.886	1493.886	1493.886	1493.886	1493.886	1493.886	1493.886	1493.886	1493.886
172.5	1501.952	1501.952	1501.952	1501.952	1501.952	1501.952	1501.952	1501.952	1501.952	1501.952
175.0	1509.169	1509.169	1509.169	1509.169	1509.169	1509.169	1509.169	1509.169	1509.169	1509.169
177.5	1512.565	1512.565	1512.565	1512.565	1512.565	1512.565	1512.565	1512.565	1512.565	1512.565
180.0	1511.812	1511.812	1511.812	1511.812	1511.812	1511.812	1511.812	1511.812	1511.812	1511.812

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>
0.0	5333.863	5333.863	5333.863	5333.863	5333.863	5333.863	5333.863
2.5	5398.991	5398.991	5398.991	5398.991	5398.991	5398.991	5398.991
5.0	5279.368	5279.368	5279.368	5279.368	5279.368	5279.368	5279.368
7.5	4747.709	4747.709	4747.709	4747.709	4747.709	4747.709	4747.709
10.0	3978.134	3978.134	3978.134	3978.134	3978.134	3978.134	3978.134
12.5	3461.096	3461.096	3461.096	3461.096	3461.096	3461.096	3461.096
15.0	3090.265	3090.265	3090.265	3090.265	3090.265	3090.265	3090.265
17.5	2799.182	2799.182	2799.182	2799.182	2799.182	2799.182	2799.182
20.0	2541.327	2541.327	2541.327	2541.327	2541.327	2541.327	2541.327
22.5	2227.649	2227.649	2227.649	2227.649	2227.649	2227.649	2227.649
25.0	1876.754	1876.754	1876.754	1876.754	1876.754	1876.754	1876.754
27.5	1564.405	1564.405	1564.405	1564.405	1564.405	1564.405	1564.405
30.0	1333.133	1333.133	1333.133	1333.133	1333.133	1333.133	1333.133
32.5	945.289	945.289	945.289	945.289	945.289	945.289	945.289
35.0	525.677	525.677	525.677	525.677	525.677	525.677	525.677
37.5	229.278	229.278	229.278	229.278	229.278	229.278	229.278
40.0	153.915	153.915	153.915	153.915	153.915	153.915	153.915
42.5	86.793	86.793	86.793	86.793	86.793	86.793	86.793
45.0	61.407	61.407	61.407	61.407	61.407	61.407	61.407
47.5	47.583	47.583	47.583	47.583	47.583	47.583	47.583
50.0	35.621	35.621	35.621	35.621	35.621	35.621	35.621
52.5	25.785	25.785	25.785	25.785	25.785	25.785	25.785
55.0	18.342	18.342	18.342	18.342	18.342	18.342	18.342
57.5	13.291	13.291	13.291	13.291	13.291	13.291	13.291
60.0	9.703	9.703	9.703	9.703	9.703	9.703	9.703
62.5	7.177	7.177	7.177	7.177	7.177	7.177	7.177
65.0	5.317	5.317	5.317	5.317	5.317	5.317	5.317
67.5	3.854	3.854	3.854	3.854	3.854	3.854	3.854
70.0	2.924	2.924	2.924	2.924	2.924	2.924	2.924
72.5	2.127	2.127	2.127	2.127	2.127	2.127	2.127
75.0	1.462	1.462	1.462	1.462	1.462	1.462	1.462
77.5	1.063	1.063	1.063	1.063	1.063	1.063	1.063
80.0	0.797	0.797	0.797	0.797	0.797	0.797	0.797

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82.5	0.532	0.532	0.532	0.532	0.532	0.532	0.532
85.0	0.399	0.399	0.399	0.399	0.399	0.399	0.399
87.5	0.266	0.266	0.266	0.266	0.266	0.266	0.266
90.0	5.481	5.481	5.481	5.481	5.481	5.481	5.481
92.5	8.236	8.236	8.236	8.236	8.236	8.236	8.236
95.0	14.392	14.392	14.392	14.392	14.392	14.392	14.392
97.5	24.410	24.410	24.410	24.410	24.410	24.410	24.410
100.0	36.338	36.338	36.338	36.338	36.338	36.338	36.338
102.5	48.862	48.862	48.862	48.862	48.862	48.862	48.862
105.0	62.363	62.363	62.363	62.363	62.363	62.363	62.363
107.5	77.602	77.602	77.602	77.602	77.602	77.602	77.602
110.0	95.347	95.347	95.347	95.347	95.347	95.347	95.347
112.5	115.299	115.299	115.299	115.299	115.299	115.299	115.299
115.0	137.884	137.884	137.884	137.884	137.884	137.884	137.884
117.5	163.186	163.186	163.186	163.186	163.186	163.186	163.186
120.0	191.500	191.500	191.500	191.500	191.500	191.500	191.500
122.5	223.000	223.000	223.000	223.000	223.000	223.000	223.000
125.0	257.811	257.811	257.811	257.811	257.811	257.811	257.811
127.5	294.956	294.956	294.956	294.956	294.956	294.956	294.956
130.0	333.588	333.588	333.588	333.588	333.588	333.588	333.588
132.5	372.431	372.431	372.431	372.431	372.431	372.431	372.431
135.0	411.233	411.233	411.233	411.233	411.233	411.233	411.233
137.5	451.689	451.689	451.689	451.689	451.689	451.689	451.689
140.0	498.387	498.387	498.387	498.387	498.387	498.387	498.387
142.5	558.244	558.244	558.244	558.244	558.244	558.244	558.244
145.0	638.903	638.903	638.903	638.903	638.903	638.903	638.903
147.5	743.335	743.335	743.335	743.335	743.335	743.335	743.335
150.0	872.813	872.813	872.813	872.813	872.813	872.813	872.813
152.5	1007.811	1007.811	1007.811	1007.811	1007.811	1007.811	1007.811
155.0	1144.931	1144.931	1144.931	1144.931	1144.931	1144.931	1144.931
157.5	1267.193	1267.193	1267.193	1267.193	1267.193	1267.193	1267.193
160.0	1362.710	1362.710	1362.710	1362.710	1362.710	1362.710	1362.710
162.5	1426.812	1426.812	1426.812	1426.812	1426.812	1426.812	1426.812
165.0	1463.321	1463.321	1463.321	1463.321	1463.321	1463.321	1463.321
167.5	1482.849	1482.849	1482.849	1482.849	1482.849	1482.849	1482.849
170.0	1493.886	1493.886	1493.886	1493.886	1493.886	1493.886	1493.886
172.5	1501.952	1501.952	1501.952	1501.952	1501.952	1501.952	1501.952
175.0	1509.169	1509.169	1509.169	1509.169	1509.169	1509.169	1509.169
177.5	1512.565	1512.565	1512.565	1512.565	1512.565	1512.565	1512.565
180.0	1511.812	1511.812	1511.812	1511.812	1511.812	1511.812	1511.812

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 8CRDI-TL-P29-8TWU-P29-8TWD-XXX-POE PR-LW-CSU-OM-CSD-WM 4000K_.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	1332.94	N.A.	27.20
0-30	2196.07	N.A.	44.80
0-40	2564.16	N.A.	52.30
0-60	2637.07	N.A.	53.80
0-80	2644.36	N.A.	54.00
0-90	2645.55	N.A.	54.00
10-90	2186.16	N.A.	44.60
20-40	1231.22	N.A.	25.10
20-50	1286.39	N.A.	26.30
40-70	78.49	N.A.	1.60
60-80	7.29	N.A.	0.10
70-80	1.71	N.A.	0.00
80-90	1.19	N.A.	0.00
90-110	85.62	N.A.	1.70
90-120	223.93	N.A.	4.60
90-130	455.58	N.A.	9.30
90-150	1181.44	N.A.	24.10
90-180	2252.61	N.A.	46.00
110-180	2166.99	N.A.	44.20
0-180	4898.16	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	459.39
10-20	873.55
20-30	863.13
30-40	368.09
40-50	55.17
50-60	17.74
60-70	5.58
70-80	1.71
80-90	1.19
90-100	18.49
100-110	67.13
110-120	138.31
120-130	231.66
130-140	318.00
140-150	407.86
150-160	518.30
160-170	409.34
170-180	143.53

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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	86	86	86	72	72	72	60	60	60	54
1	101	98	95	93	94	92	89	87	79	78	76	68	67	66	57	57	56	51
2	95	90	85	81	89	84	80	77	73	71	68	64	62	60	54	53	52	48
3	89	82	77	72	83	77	73	69	68	65	62	60	57	55	52	50	49	46
4	84	76	70	65	79	72	66	62	64	60	57	56	54	51	49	48	46	43
5	79	70	64	59	74	67	61	57	60	56	52	53	50	48	47	45	43	41
6	75	65	59	55	70	62	57	53	56	52	49	50	47	45	45	43	41	39
7	71	61	55	50	66	58	53	49	53	48	45	48	44	42	43	41	39	37
8	67	57	51	47	63	55	49	45	50	45	42	45	42	40	41	39	37	35
9	63	54	48	44	60	51	46	42	47	43	40	43	40	37	39	37	35	33
10	60	51	45	41	57	49	43	40	45	40	38	41	38	35	37	35	33	32

IES INDOOR REPORT

PHOTOMETRIC FILENAME : 8CRDI-TL-P29-8TWU-P29-8TWD-XXX-POE PR-LW-CSU-OM-CSD-WM 4000K_.IES

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	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
	3H	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
	4H	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
	6H	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
	8H	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
	12H	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6

UGR Viewed Endwise

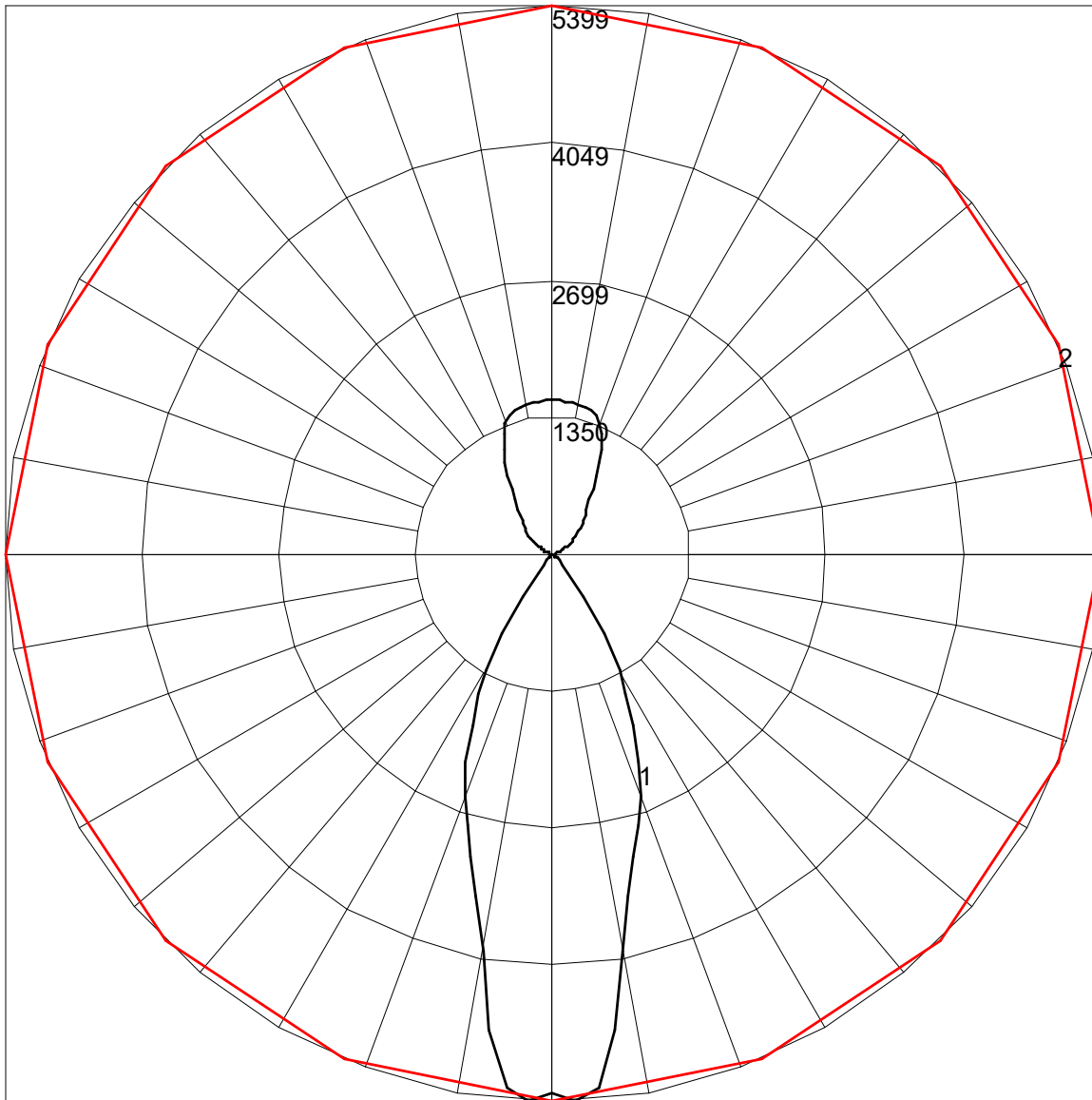
4H	2H	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
	3H	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
	4H	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
	6H	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
	8H	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
	12H	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
8H	4H	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
	6H	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
	8H	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
	12H	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
12H	4H	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
	6H	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
	8H	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6

Maximum UGR = 5.6

IES INDOOR REPORT

PHOTOMETRIC FILENAME : 8CRDI-TL-P29-8TWU-P29-8TWD-XXX-POE PR-LW-CSU-OM-CSD-WM 4000K_.IES

POLAR GRAPH



Maximum Candela = 5398.991 Located At Horizontal Angle = 0, Vertical Angle = 2.5

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

2 - Horizontal Cone Through Vertical Angle (2.5) (Through Max. Cd.)