

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: FAIL-SAFE

Report Number: 766700

Luminaire Tested: **MHGW-175xxxx**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: 766700
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: MHGW-175xxxx
Description: FAIL-SAFE WHITE 12 x 12
Light Source: #021 - 175W MH CL HOR MED 14000 LUMENS
Ballast/Driver: -

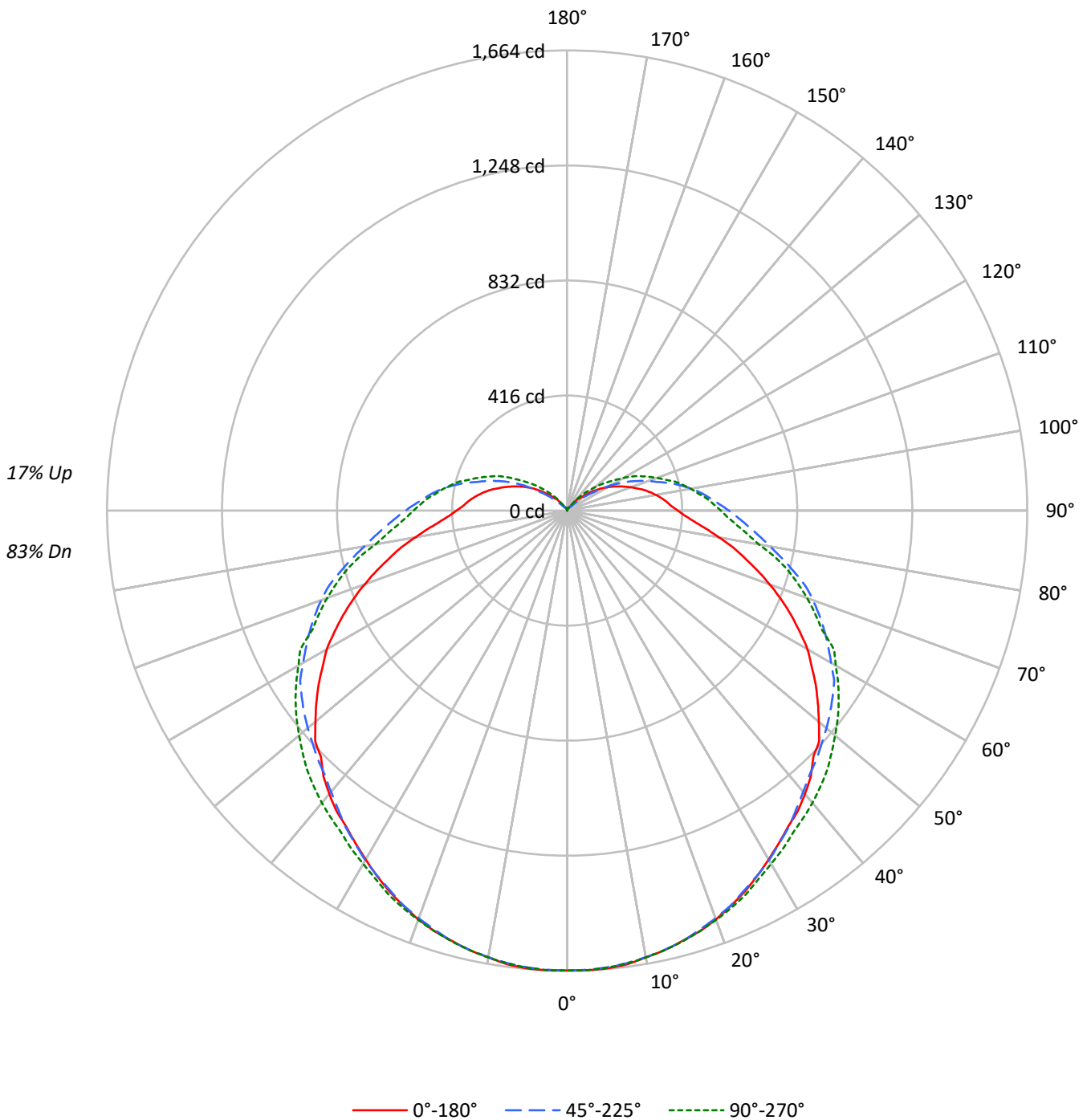
Summary

Lumens per Lamp: 14000 (1 lamp)
Luminaire Lumens: 8053.2 lumens
Efficiency: 57.5%
Efficacy: 46.0 lumens/watt
Spacing Criteria (0/90/45): 1.31 / 1.33 / 1.48
Luminous Opening: Point Source (0' x 0' x 0')
CIE Type: Semi-Direct

Input Watts (W): 175
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT

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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				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
RCR																		
0	66	66	66	66	64	64	64	64	59	59	59	54	54	54	50	50	50	48
1	58	55	52	49	56	52	50	47	48	46	44	44	42	41	41	39	38	36
2	52	47	42	38	50	45	40	37	41	37	34	38	35	32	34	32	30	28
3	47	40	35	31	45	39	34	30	35	31	28	33	29	26	30	27	25	23
4	43	35	30	25	41	34	29	25	31	27	23	29	25	22	26	23	21	19
5	39	31	26	21	37	30	25	21	28	23	20	25	22	19	23	20	18	16
6	36	28	22	18	34	27	22	18	25	20	17	23	19	16	21	18	15	14
7	33	25	20	16	32	24	19	16	22	18	15	21	17	14	19	16	13	12
8	31	23	18	14	29	22	17	14	20	16	13	19	15	13	18	14	12	11
9	29	21	16	13	28	20	16	12	19	15	12	17	14	11	16	13	11	10
10	27	19	14	11	26	19	14	11	17	13	11	16	13	10	15	12	10	9

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	Luminaire represents a point source (luminous area is zero).		
5°	No luminance values can be calculated.		
10°			
15°			
20°			
25°			
30°			
35°			
40°			
45°			
50°			
55°			
60°			
65°			
70°			
75°			
80°			
85°			



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ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	157.8	2.0	1.1	0°	1663	1663	1663	1663	1663	
10°-20°	455.2	5.7	3.3	5°	1662	1658	1658	1659	1659	158
20°-30°	701.5	8.7	5.0	15°	1611	1613	1612	1612	1613	455
30°-40°	879.5	10.9	6.3	25°	1520	1516	1515	1523	1531	701
40°-50°	993.1	12.3	7.1	35°	1394	1392	1397	1411	1423	876
50°-60°	1034.1	12.8	7.4	45°	1259	1261	1274	1308	1329	979
60°-70°	984.8	12.2	7.0	55°	1097	1118	1172	1191	1199	982
70°-80°	848.5	10.5	6.1	65°	893	954	1026	1041	1015	884
80°-90°	668.1	8.3	4.8	75°	665	761	848	863	825	705
90°-100°	523.2	6.5	3.7	85°	462	572	658	665	617	398
100°-110°	381.0	4.7	2.7	90°	400	495	585	593	556	220
110°-120°	239.6	3.0	1.7	95°	361	439	518	530	506	288
120°-130°	124.1	1.5	0.9	105°	288	316	384	396	404	303
130°-140°	44.8	0.6	0.3	115°	207	196	248	264	294	206
140°-150°	11.4	0.1	0.1	125°	131	117	114	159	180	118
150°-160°	5.0	0.1	0.0	135°	61	47	32	65	88	51
160°-170°	1.6	0.0	0.0	145°	16	14	14	16	21	12
170°-180°	0.0	0.0	0.0	155°	10	10	11	11	11	5
0°-30°	1314.5	16.3	9.4	165°	8	7	7	7	8	2
0°-40°	2194.0	27.2	15.7	175°	0	0	0	0	0	0
0°-60°	4221.2	52.4	30.2	180°	0	0	0	0	0	0
0°-90°	6722.6	83.5	48.0							
90°-120°	1143.7	14.2	8.2							
90°-150°	1324.0	16.4	9.5							
90°-180°	1331.0	16.5	9.5							
0°-180°	8053.2	100.0	57.5							



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1663	1663	1663	1663	1663
2.5°	1664	1661	1662	1662	1664
5°	1662	1658	1658	1659	1659
7.5°	1655	1651	1651	1651	1652
10°	1641	1641	1640	1642	1641
12.5°	1628	1628	1627	1627	1628
15°	1611	1613	1612	1612	1613
17.5°	1595	1591	1590	1593	1595
20°	1573	1569	1569	1574	1575
22.5°	1547	1542	1546	1549	1554
25°	1520	1516	1515	1523	1531
27.5°	1489	1485	1488	1497	1501
30°	1457	1456	1460	1468	1475
32.5°	1425	1424	1427	1440	1451
35°	1394	1392	1397	1411	1423
37.5°	1370	1354	1361	1388	1402
40°	1338	1324	1328	1362	1380
42.5°	1304	1294	1297	1334	1355
45°	1259	1261	1274	1308	1329
47.5°	1236	1224	1248	1281	1297
50°	1188	1189	1224	1251	1265
52.5°	1143	1157	1199	1221	1234
55°	1097	1118	1172	1191	1199
57.5°	1048	1070	1145	1149	1162
60°	1004	1032	1102	1115	1122
62.5°	948	994	1064	1079	1088
65°	893	954	1026	1041	1015
67.5°	837	911	987	1001	970
70°	779	863	946	948	923
72.5°	722	819	903	905	874
75°	665	761	848	863	825
77.5°	614	713	795	802	768
80°	557	666	744	757	703
82.5°	507	620	700	712	658
85°	462	572	658	665	617
87.5°	426	529	620	624	582
90°	400	495	585	593	556
92.5°	377	467	549	563	530
95°	361	439	518	530	506
97.5°	344	407	489	493	477
100°	326	375	457	462	454
102.5°	307	345	421	431	429
105°	288	316	384	396	404
107.5°	265	284	344	365	371
110°	246	256	312	326	345



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	226	225	280	292	319
115°	207	196	248	264	294
117.5°	188	173	214	237	268
120°	169	155	183	211	236
122.5°	150	136	145	183	205
125°	131	117	114	159	180
127.5°	110	98	89	133	155
130°	92	78	66	111	132
132.5°	76	62	47	84	109
135°	61	47	32	65	88
137.5°	60	35	20	48	68
140°	32	25	17	34	50
142.5°	23	18	15	23	32
145°	16	14	14	16	21
147.5°	12	13	14	14	15
150°	12	12	13	13	13
152.5°	11	11	12	12	12
155°	10	10	11	11	11
157.5°	9	9	10	10	10
160°	9	8	9	9	9
162.5°	8	8	8	8	8
165°	8	7	7	7	8
167.5°	0	0	0	0	0
170°	0	0	0	0	0
172.5°	0	0	0	0	0
175°	0	0	0	0	0
177.5°	0	0	0	0	0
180°	0	0	0	0	0

(END OF REPORT)