

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: 766613

Luminaire Tested: **MHJCPP175xxxx**

Issue Date: 3/3/2020

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.



Test Information

Test Method: LM-79-08
Report Number: 766613
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: MHJCPP175xxxx
Description: FAIL-SAFE GARAGE LIGHT
Light Source: #013 - 175W MH CL BU MED 14000 LUMENS
Ballast/Driver: -

Luminaire Equipment:	<u>Sample No.</u>	<u>Condition</u>	<u>Description</u>
	AS-5443-1	Good	WHITE TWIN R-EVOLVE FLOOD
	AS-5443-2	Good	REFLECTOR
	AS-5443-3	Good	DRIVER
	AS-5443-4	Good	UPPER MODULE
	AS-5443-5	Good	LENS
	AS-5443-6	Good	DRIVER 2
	AS-5443-7	Good	TRIM RING

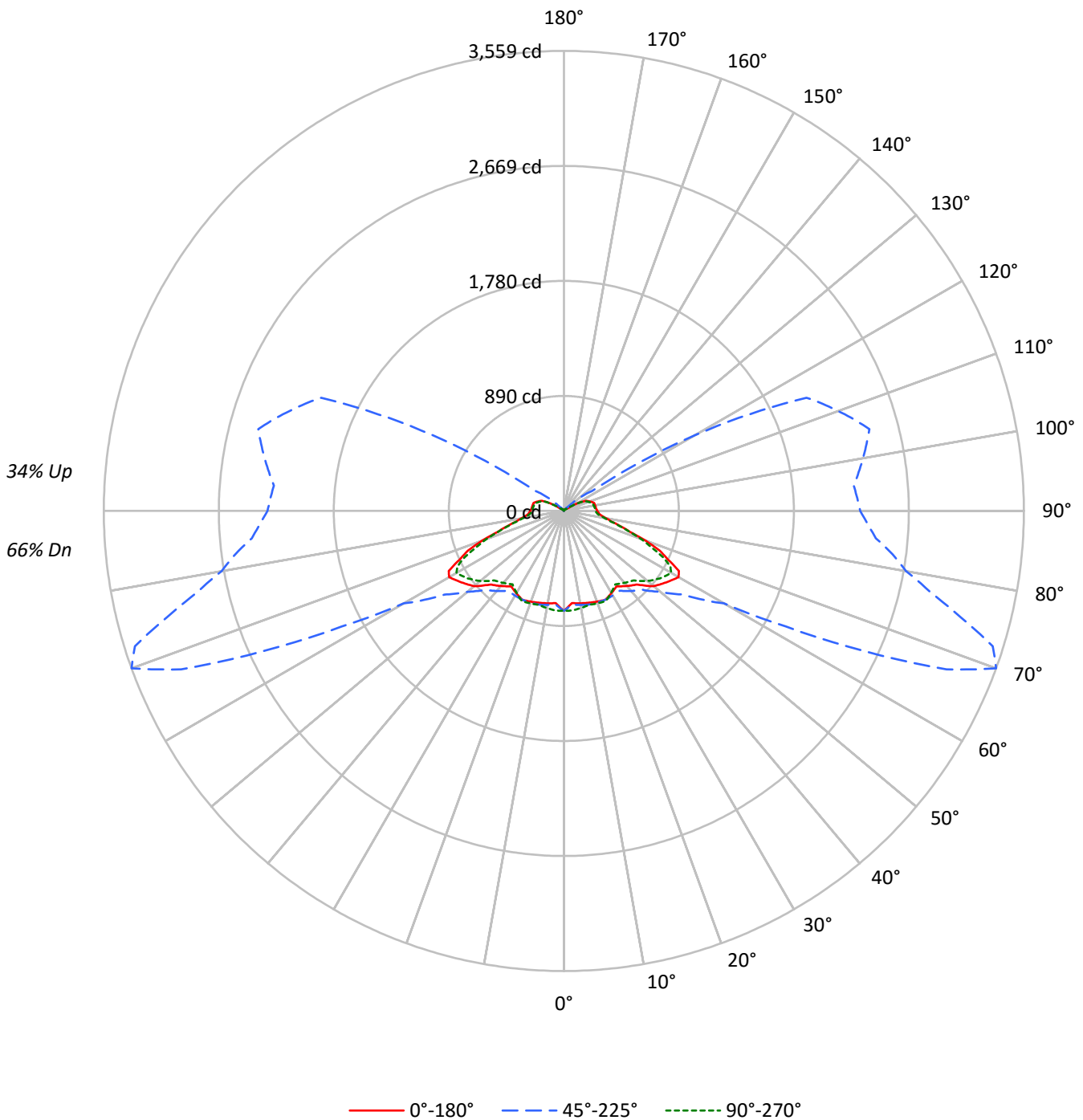
Summary

Lumens per Lamp: 14000 (1 lamp)
Luminaire Lumens: 10564.1 lumens
Efficiency: 75.5%
Efficacy: 60.4 lumens/watt
Spacing Criteria (0/90/45): 1.42 / 1.38 / 2.21
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	84	84	84	84	79	79	79	79	69	69	69	61	61	61	53	53	53	50
1	71	66	61	56	66	61	57	53	53	50	46	46	43	40	39	37	35	31
2	63	54	47	42	58	51	44	39	44	39	34	37	33	30	31	28	25	22
3	56	46	38	32	52	43	36	30	37	31	26	31	27	23	26	22	19	16
4	50	40	32	26	47	37	30	24	32	26	21	27	22	18	22	18	15	12
5	46	35	27	21	42	32	25	20	28	22	17	23	19	15	19	15	12	10
6	42	31	23	18	39	29	22	17	25	19	15	21	16	12	17	13	10	8
7	39	28	20	15	36	26	19	14	22	17	12	19	14	11	16	12	9	7
8	36	25	18	13	33	23	17	12	20	15	11	17	13	9	14	11	8	6
9	33	23	16	12	31	21	15	11	18	13	10	16	11	8	13	9	7	5
10	31	21	14	10	29	19	14	10	17	12	8	14	10	7	12	9	6	4

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
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°	45°	90°	135°	180°	Flux
0°-10°	71.0	0.7	0.5	0°	773	773	773	773	773	
10°-20°	211.3	2.0	1.5	5°	715	726	772	726	715	69
20°-30°	344.4	3.3	2.5	15°	735	750	752	750	735	209
30°-40°	471.9	4.5	3.4	25°	758	758	769	758	758	343
40°-50°	643.7	6.1	4.6	35°	711	753	693	753	711	469
50°-60°	905.9	8.6	6.5	45°	804	863	760	863	804	644
60°-70°	1476.7	14.0	10.5	55°	964	1128	908	1128	964	866
70°-80°	1499.9	14.2	10.7	65°	890	2567	846	2567	890	878
80°-90°	1312.6	12.4	9.4	75°	454	3178	442	3178	454	494
90°-100°	1307.7	12.4	9.3	85°	276	2424	262	2424	276	239
100°-110°	1219.7	11.5	8.7	90°	259	2292	247	2292	259	142
110°-120°	797.0	7.5	5.7	95°	249	2252	242	2252	249	204
120°-130°	257.3	2.4	1.8	105°	242	2448	230	2448	242	243
130°-140°	29.9	0.3	0.2	115°	187	2072	180	2072	187	160
140°-150°	8.7	0.1	0.1	125°	30	274	29	274	30	60
150°-160°	2.0	0.0	0.0	135°	22	44	20	44	22	18
160°-170°	0.2	0.0	0.0	145°	18	16	15	16	18	10
170°-180°	0.0	0.0	0.0	155°	3	1	3	1	3	3
0°-30°	626.8	5.9	4.5	165°	0	0	0	0	0	0
0°-40°	1098.7	10.4	7.8	175°	0	0	0	0	0	0
0°-60°	2648.3	25.1	18.9	180°	0	0	0	0	0	0
0°-90°	6937.6	65.7	49.6							
90°-120°	3324.4	31.5	23.7							
90°-150°	3620.3	34.3	25.9							
90°-180°	3623.0	34.3	25.9							
0°-180°	10564.1	100.0	75.5							



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	773	773	773	773	773	773	773	773	773	773	773
5°	715	712	719	720	726	726	753	759	758	779	772
15°	735	737	739	737	735	750	746	742	749	752	752
25°	758	759	758	753	751	758	757	752	758	767	769
35°	711	713	721	721	733	753	722	709	708	696	693
45°	804	802	803	815	853	863	839	784	759	763	760
50°	905	909	899	915	954	972	922	852	827	832	843
55°	964	964	952	969	1025	1128	996	927	898	906	908
60°	1024	1080	1097	1259	1291	1431	1271	1194	1021	1052	959
62.5°	1004	1107	1138	1484	1689	1936	1561	1422	1026	1075	928
65°	890	1036	1052	1608	2116	2567	1940	1584	979	1051	846
67.5°	804	953	935	1617	2369	3204	2188	1604	889	969	732
70°	673	858	826	1573	2387	3559	2273	1548	763	847	637
72.5°	536	741	712	1483	2311	3480	2242	1459	647	750	530
75°	454	642	606	1371	2198	3178	2145	1389	568	670	442
77.5°	378	556	531	1287	2104	2906	2066	1327	524	618	370
80°	336	504	507	1227	2063	2690	2054	1268	486	568	320
82.5°	299	463	492	1195	2058	2564	2073	1213	465	520	283
85°	276	427	488	1175	2101	2424	2080	1172	467	483	262
87.5°	267	404	495	1162	2171	2353	2079	1163	489	452	251
90°	259	383	511	1151	2245	2292	2073	1150	512	421	247
95°	249	332	549	1105	2443	2252	2110	1123	549	356	242
105°	242	269	774	985	2488	2448	2259	943	700	272	230
115°	187	201	693	679	1684	2072	1633	666	663	217	180
125°	30	32	36	52	124	274	161	55	34	27	29
135°	22	22	22	24	31	44	31	24	20	21	20
145°	18	16	14	11	11	16	11	11	14	15	15
155°	3	4	3	2	0	1	0	2	3	5	3
165°	0	0	0	0	0	0	0	0	0	0	0
175°	0	0	0	0	0	0	0	0	0	0	0
180°	0	0	0	0	0	0	0	0	0	0	0



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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	773	773	773	773	773	773	773	773	773	773
5°	779	758	759	753	726	726	720	719	712	715
15°	752	749	742	746	750	735	737	739	737	735
25°	767	758	752	757	758	751	753	758	759	758
35°	696	708	709	722	753	733	721	721	713	711
45°	763	759	784	839	863	853	815	803	802	804
50°	832	827	852	922	972	954	915	899	909	905
55°	906	898	927	996	1128	1025	969	952	964	964
60°	1052	1021	1194	1271	1431	1291	1259	1097	1080	1024
62.5°	1075	1026	1422	1561	1936	1689	1484	1138	1107	1004
65°	1051	979	1584	1940	2567	2116	1608	1052	1036	890
67.5°	969	889	1604	2188	3204	2369	1617	935	953	804
70°	847	763	1548	2273	3559	2387	1573	826	858	673
72.5°	750	647	1459	2242	3480	2311	1483	712	741	536
75°	670	568	1389	2145	3178	2198	1371	606	642	454
77.5°	618	524	1327	2066	2906	2104	1287	531	556	378
80°	568	486	1268	2054	2690	2063	1227	507	504	336
82.5°	520	465	1213	2073	2564	2058	1195	492	463	299
85°	483	467	1172	2080	2424	2101	1175	488	427	276
87.5°	452	489	1163	2079	2353	2171	1162	495	404	267
90°	421	512	1150	2073	2292	2245	1151	511	383	259
95°	356	549	1123	2110	2252	2443	1105	549	332	249
105°	272	700	943	2259	2448	2488	985	774	269	242
115°	217	663	666	1633	2072	1684	679	693	201	187
125°	27	34	55	161	274	124	52	36	32	30
135°	21	20	24	31	44	31	24	22	22	22
145°	15	14	11	11	16	11	11	14	16	18
155°	5	3	2	0	1	0	2	3	4	3
165°	0	0	0	0	0	0	0	0	0	0
175°	0	0	0	0	0	0	0	0	0	0
180°	0	0	0	0	0	0	0	0	0	0

(END OF REPORT)