

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: 766702

Luminaire Tested: **HPHW-150xxxx**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: 766702
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: HPHW-150xxxx
Description: FAIL-SAFE WHITE 12 x 12
Light Source: #007 - 150W HPS CL HOR MED 16000 LUMENS
Ballast/Driver: -

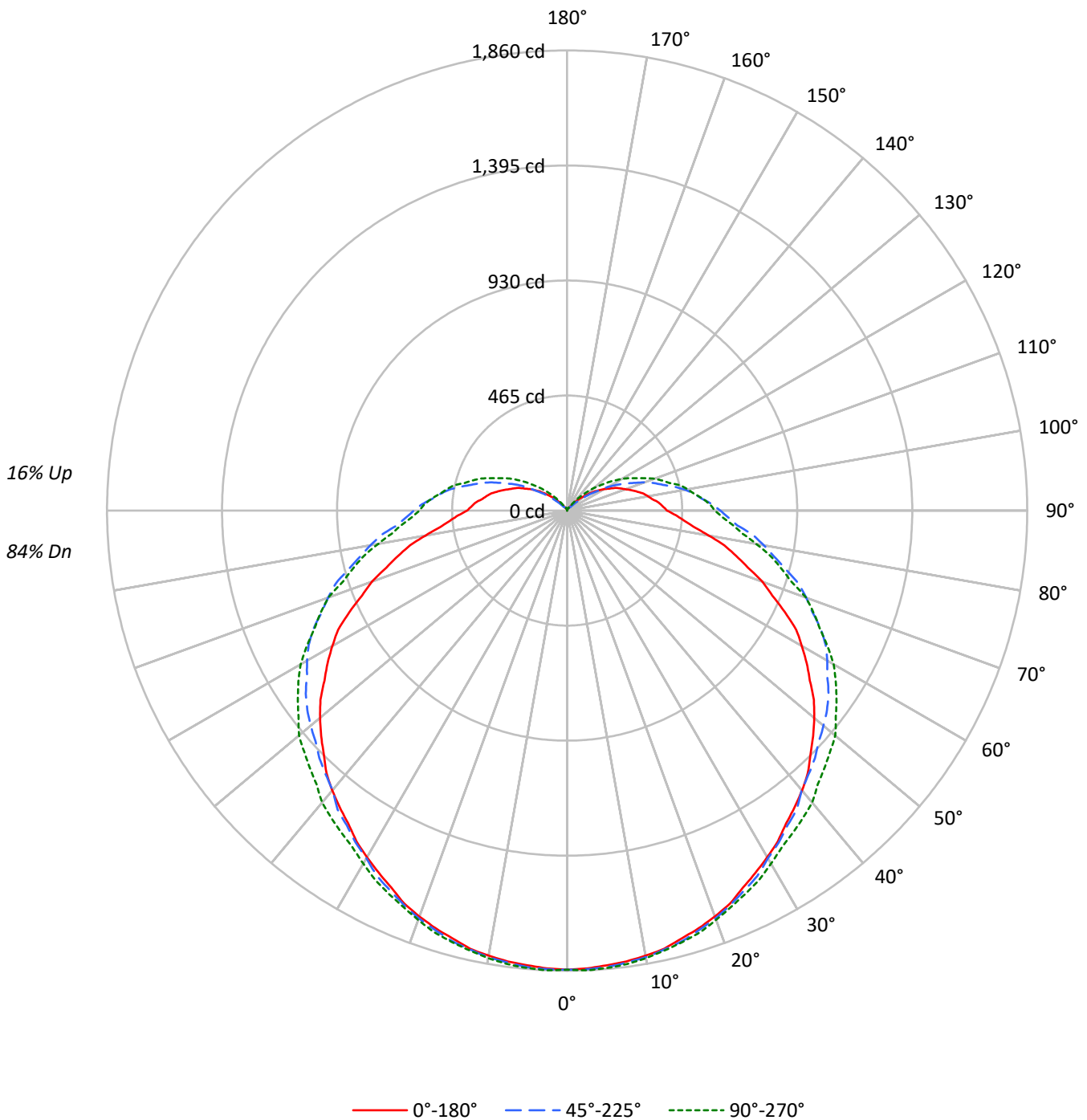
Summary

Lumens per Lamp: 16000 (1 lamp)
Luminaire Lumens: 8800.1 lumens
Efficiency: 55.0%
Efficacy: 58.7 lumens/watt
Spacing Criteria (0/90/45): 1.3 / 1.33 / 1.48
Luminous Opening: Point Source (0' x 0' x 0')
CIE Type: Semi-Direct

Input Watts (W): 150
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	63	63	63	63	61	61	61	61	56	56	56	52	52	52	48	48	48	46
1	56	52	49	47	53	50	48	45	46	44	42	43	41	39	39	38	36	35
2	50	45	40	36	48	43	39	35	39	36	33	36	34	31	33	31	29	27
3	45	39	34	29	43	37	32	29	34	30	27	31	28	25	29	26	24	22
4	41	34	29	24	39	33	28	24	30	26	23	28	24	21	25	22	20	18
5	38	30	25	21	36	29	24	20	27	22	19	25	21	18	23	20	17	16
6	35	27	22	18	33	26	21	17	24	20	17	22	18	16	20	17	15	13
7	32	24	19	16	30	23	19	15	22	17	14	20	16	14	19	15	13	12
8	30	22	17	14	28	21	17	13	20	16	13	18	15	12	17	14	12	10
9	28	20	15	12	26	19	15	12	18	14	11	17	13	11	16	13	10	9
10	26	18	14	11	25	18	14	11	17	13	10	16	12	10	15	12	9	8

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°	176.1	2.0	1.1	0°	1856	1856	1856	1856	1856	
10°-20°	508.2	5.8	3.2	5°	1845	1849	1852	1854	1856	176
20°-30°	782.6	8.9	4.9	15°	1790	1794	1801	1802	1805	506
30°-40°	979.5	11.1	6.1	25°	1681	1688	1694	1704	1708	777
40°-50°	1101.2	12.5	6.9	35°	1543	1544	1553	1573	1590	970
50°-60°	1139.9	13.0	7.1	45°	1391	1397	1416	1449	1471	1077
60°-70°	1079.1	12.3	6.7	55°	1198	1222	1290	1316	1329	1075
70°-80°	917.4	10.4	5.7	65°	971	1034	1132	1144	1127	961
80°-90°	710.8	8.1	4.4	75°	707	818	914	935	894	748
90°-100°	554.9	6.3	3.5	85°	476	602	691	721	672	410
100°-110°	402.7	4.6	2.5	90°	404	514	619	637	597	224
110°-120°	252.6	2.9	1.6	95°	372	452	547	578	551	294
120°-130°	129.8	1.5	0.8	105°	294	326	401	423	430	311
130°-140°	46.3	0.5	0.3	115°	217	206	256	284	309	213
140°-150°	11.9	0.1	0.1	125°	135	119	121	167	198	120
150°-160°	5.4	0.1	0.0	135°	60	49	31	70	90	47
160°-170°	1.8	0.0	0.0	145°	16	14	15	17	21	12
170°-180°	0.0	0.0	0.0	155°	11	11	12	12	12	5
0°-30°	1466.8	16.7	9.2	165°	8	8	8	8	9	2
0°-40°	2446.3	27.8	15.3	175°	0	0	0	0	0	0
0°-60°	4687.4	53.3	29.3	180°	0	0	0	0	0	
0°-90°	7394.6	84.0	46.2							
90°-120°	1210.3	13.8	7.6							
90°-150°	1398.2	15.9	8.7							
90°-180°	1405.0	16.0	8.8							
0°-180°	8800.1	100.0	55.0							



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1856	1856	1856	1856	1856
2.5°	1852	1853	1856	1858	1860
5°	1845	1849	1852	1854	1856
7.5°	1838	1841	1843	1844	1849
10°	1827	1828	1833	1834	1837
12.5°	1814	1820	1817	1820	1821
15°	1790	1794	1801	1802	1805
17.5°	1770	1774	1777	1778	1787
20°	1746	1752	1754	1758	1761
22.5°	1720	1720	1725	1732	1733
25°	1681	1688	1694	1704	1708
27.5°	1650	1655	1665	1670	1682
30°	1618	1624	1623	1642	1648
32.5°	1585	1586	1591	1605	1614
35°	1543	1544	1553	1573	1590
37.5°	1511	1513	1524	1544	1566
40°	1477	1477	1475	1518	1541
42.5°	1440	1432	1445	1485	1500
45°	1391	1397	1416	1449	1471
47.5°	1349	1360	1380	1420	1442
50°	1304	1320	1353	1388	1415
52.5°	1257	1263	1324	1356	1369
55°	1198	1222	1290	1316	1329
57.5°	1148	1175	1247	1281	1288
60°	1096	1130	1214	1239	1244
62.5°	1044	1078	1178	1191	1186
65°	971	1034	1132	1144	1127
67.5°	898	984	1073	1101	1078
70°	839	932	1028	1049	1027
72.5°	766	873	981	990	948
75°	707	818	914	935	894
77.5°	650	767	857	878	840
80°	581	701	807	817	776
82.5°	519	646	758	770	715
85°	476	602	691	721	672
87.5°	440	553	652	672	628
90°	404	514	619	637	597
92.5°	387	487	587	608	577
95°	372	452	547	578	551
97.5°	348	425	517	531	518
100°	332	390	485	495	495
102.5°	316	361	444	463	470
105°	294	326	401	423	430
107.5°	274	293	369	387	403
110°	251	263	333	352	376



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	234	234	292	321	342
115°	217	206	256	284	309
117.5°	191	179	224	253	283
120°	174	157	190	223	256
122.5°	152	137	149	198	224
125°	135	119	121	167	198
127.5°	112	96	95	140	166
130°	92	79	70	117	142
132.5°	77	63	47	93	118
135°	60	49	31	70	90
137.5°	42	36	21	51	70
140°	33	25	18	35	52
142.5°	23	18	16	24	34
145°	16	14	15	17	21
147.5°	13	14	15	15	16
150°	13	13	14	14	15
152.5°	12	12	13	13	13
155°	11	11	12	12	12
157.5°	10	10	10	11	11
160°	10	10	10	10	10
162.5°	9	9	9	9	9
165°	8	8	8	8	9
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)