

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: P30651

Luminaire Tested: **ORM-614T5-UNV-SYM/ASM**

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: P30651
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORM-614T5-UNV-SYM/ASM
Description: FAILSAFE HEALTHCARE 2x2 RECESSED GRID MOUNT LINEAR
FLUORESCENT FIXTURE WITH A WHITE PAINTED INTERIOR & A DOOR
WITH A CLEAR FACETED SHATTER RESISTANT LENS
Light Source: (6) BIPIN T5 DOUBLE ENDED LINEAR FLUORESCENT LAMPS 3500K
F14W/T5/835/ECO 14W
Ballast/Driver: (3) GE ELECTRONIC BALLAST
GE228MVPSN-A

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

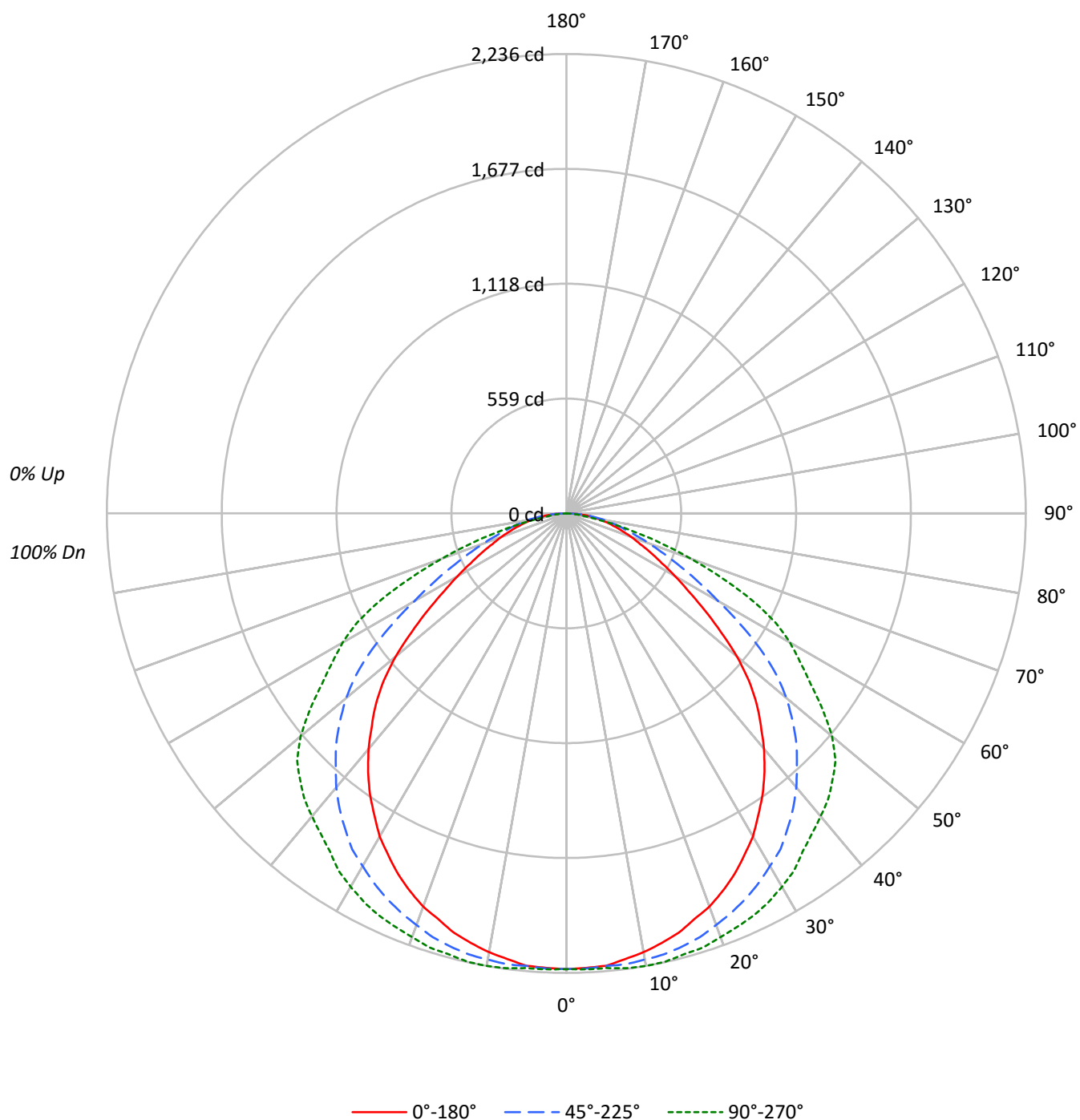
Lumens per Lamp: 1350 (6 lamps)
Luminaire Lumens: 6248.7 lumens
Efficiency: 77.1%
Efficacy: 64.6 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.39 / 1.43
Luminous Opening: Rectangular (W 1.75' x L: 1.75' x H: 0')
CIE Type: Direct

Input Watts (W): 96.8
Input Voltage (V): NR
Input Current (A_{in}): 0.8192
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: 13 HR
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				0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	92	92	92	92	90	90	90	90	86	86	86	82	82	82	79	79	79
1	84	81	78	75	82	79	76	74	76	73	71	73	71	69	70	69	67
2	77	71	66	62	75	69	65	61	67	63	59	64	61	58	62	59	57
3	70	62	56	52	68	61	56	51	59	54	50	57	53	49	55	51	48
4	65	55	49	44	63	54	48	44	53	47	43	51	46	42	49	45	42
5	59	50	43	38	58	49	42	38	47	42	37	46	41	37	44	40	36
6	55	45	38	33	53	44	38	33	43	37	33	41	36	32	40	36	32
7	51	41	34	29	49	40	34	29	39	33	29	38	32	29	37	32	28
8	47	37	30	26	46	36	30	26	35	30	26	34	29	26	34	29	25
9	44	34	28	23	43	33	27	23	33	27	23	32	27	23	31	26	23
10	41	31	25	21	40	31	25	21	30	25	21	29	24	21	29	24	21

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7796	7796	7796
5°	7797	7801	7836
10°	7738	7870	7980
15°	7689	7940	8078
20°	7615	7974	8206
25°	7512	8020	8373
30°	7370	8044	8515
35°	7148	8049	8611
40°	6864	7988	8832
45°	6511	7873	9111
50°	5933	7650	9230
55°	5037	7078	8904
60°	4302	6010	8829
65°	3759	5106	8283
70°	3473	4409	6628
75°	3300	3965	4563
80°	3340	3866	2591
85°	3589	3952	1815



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ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	211.0	3.4	2.6	0°	2218	2218	2218	2218	2218	
10°-20°	614.4	9.8	7.6	5°	2210	2209	2211	2221	2221	209
20°-30°	950.1	15.2	11.7	15°	2113	2136	2182	2213	2220	595
30°-40°	1163.8	18.6	14.4	25°	1937	1998	2068	2129	2159	891
40°-50°	1215.7	19.5	15.0	35°	1666	1753	1876	1978	2007	1040
50°-60°	1026.4	16.4	12.7	45°	1310	1421	1584	1748	1833	1004
60°-70°	654.5	10.5	8.1	55°	822	937	1155	1380	1453	741
70°-80°	318.8	5.1	3.9	65°	452	505	614	779	996	455
80°-90°	93.3	1.5	1.2	75°	243	264	292	333	336	259
90°-100°	0.6	0.0	0.0	85°	89	94	98	79	45	88
100°-110°	0.0	0.0	0.0	90°	5	3	4	5	6	8
110°-120°	0.0	0.0	0.0	95°	0	0	0	0	0	0
120°-130°	0.0	0.0	0.0	105°	0	0	0	0	0	0
130°-140°	0.0	0.0	0.0	115°	0	0	0	0	0	0
140°-150°	0.0	0.0	0.0	125°	0	0	0	0	0	0
150°-160°	0.0	0.0	0.0	135°	0	0	0	0	0	0
160°-170°	0.0	0.0	0.0	145°	0	0	0	0	0	0
170°-180°	0.0	0.0	0.0	155°	0	0	0	0	0	0
0°-30°	1775.6	28.4	21.9	165°	0	0	0	0	0	0
0°-40°	2939.4	47.0	36.3	175°	0	0	0	0	0	0
0°-60°	5181.5	82.9	64.0	180°	0	0	0	0	0	0
0°-90°	6248.1	100.0	77.1							
90°-120°	0.6	0.0	0.0							
90°-150°	0.6	0.0	0.0							
90°-180°	1.0	0.0	0.0							
0°-180°	6248.7	100.0	77.1							



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2218	2218	2218	2218	2218
2.5°	2214	2213	2217	2216	2221
5°	2210	2209	2211	2221	2221
7.5°	2188	2196	2213	2225	2233
10°	2168	2178	2205	2228	2236
12.5°	2142	2162	2198	2225	2234
15°	2113	2136	2182	2213	2220
17.5°	2071	2110	2162	2199	2215
20°	2036	2081	2132	2180	2194
22.5°	1989	2039	2102	2160	2177
25°	1937	1998	2068	2129	2159
27.5°	1876	1948	2028	2104	2132
30°	1816	1887	1982	2070	2098
32.5°	1739	1825	1939	2022	2062
35°	1666	1753	1876	1978	2007
37.5°	1584	1678	1813	1919	1964
40°	1496	1599	1741	1862	1925
42.5°	1401	1510	1661	1810	1886
45°	1310	1421	1584	1748	1833
47.5°	1205	1323	1493	1680	1777
50°	1085	1212	1399	1592	1688
52.5°	948	1080	1289	1488	1574
55°	822	937	1155	1380	1453
57.5°	705	803	1005	1243	1350
60°	612	691	855	1085	1256
62.5°	525	592	728	924	1147
65°	452	505	614	779	996
67.5°	389	430	515	649	817
70°	338	370	429	535	645
72.5°	288	314	354	428	486
75°	243	264	292	333	336
77.5°	201	218	239	251	218
80°	165	175	191	181	128
82.5°	127	135	144	124	74
85°	89	94	98	79	45
87.5°	49	49	49	38	28
90°	5	3	4	5	6
92.5°	0	0	0	0	0
95°	0	0	0	0	0
97.5°	0	0	0	0	0
100°	0	0	0	0	0
102.5°	0	0	0	0	0
105°	0	0	0	0	0
107.5°	0	0	0	0	0
110°	0	0	0	0	0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0	0	0	0	0
115°	0	0	0	0	0
117.5°	0	0	0	0	0
120°	0	0	0	0	0
122.5°	0	0	0	0	0
125°	0	0	0	0	0
127.5°	0	0	0	0	0
130°	0	0	0	0	0
132.5°	0	0	0	0	0
135°	0	0	0	0	0
137.5°	0	0	0	0	0
140°	0	0	0	0	0
142.5°	0	0	0	0	0
145°	0	0	0	0	0
147.5°	0	0	0	0	0
150°	0	0	0	0	0
152.5°	0	0	0	0	0
155°	0	0	0	0	0
157.5°	0	0	0	0	0
160°	0	0	0	0	0
162.5°	0	0	0	0	0
165°	0	0	0	0	0
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)