

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: P30652

Luminaire Tested: **ORM-332T8-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: P30652
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORM-332T8-UNV-SYM/ASM
Description: FAILSAFE HEALTHCARE 1x4 RECESSED GRID MOUNT LINEAR
FLUORESCENT FIXTURE WITH A WHITE PAINTED INTERIOR & A DOOR
WITH A CLEAR FACETED SHATTER RESISTANT LENS
Light Source: (3) BIPIN T8 DOUBLE ENDED LINEAR FLUORESCENT LAMPS 5000K
GE F32T8-XL-SPX50-HL-ECO 32 W
Ballast/Driver: (2) SYLVANIA ELECTRONIC BALLAST
QTP2x32T8-UNV-ISN-SC, QTP1x32T8-UNV-ISN-SC
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

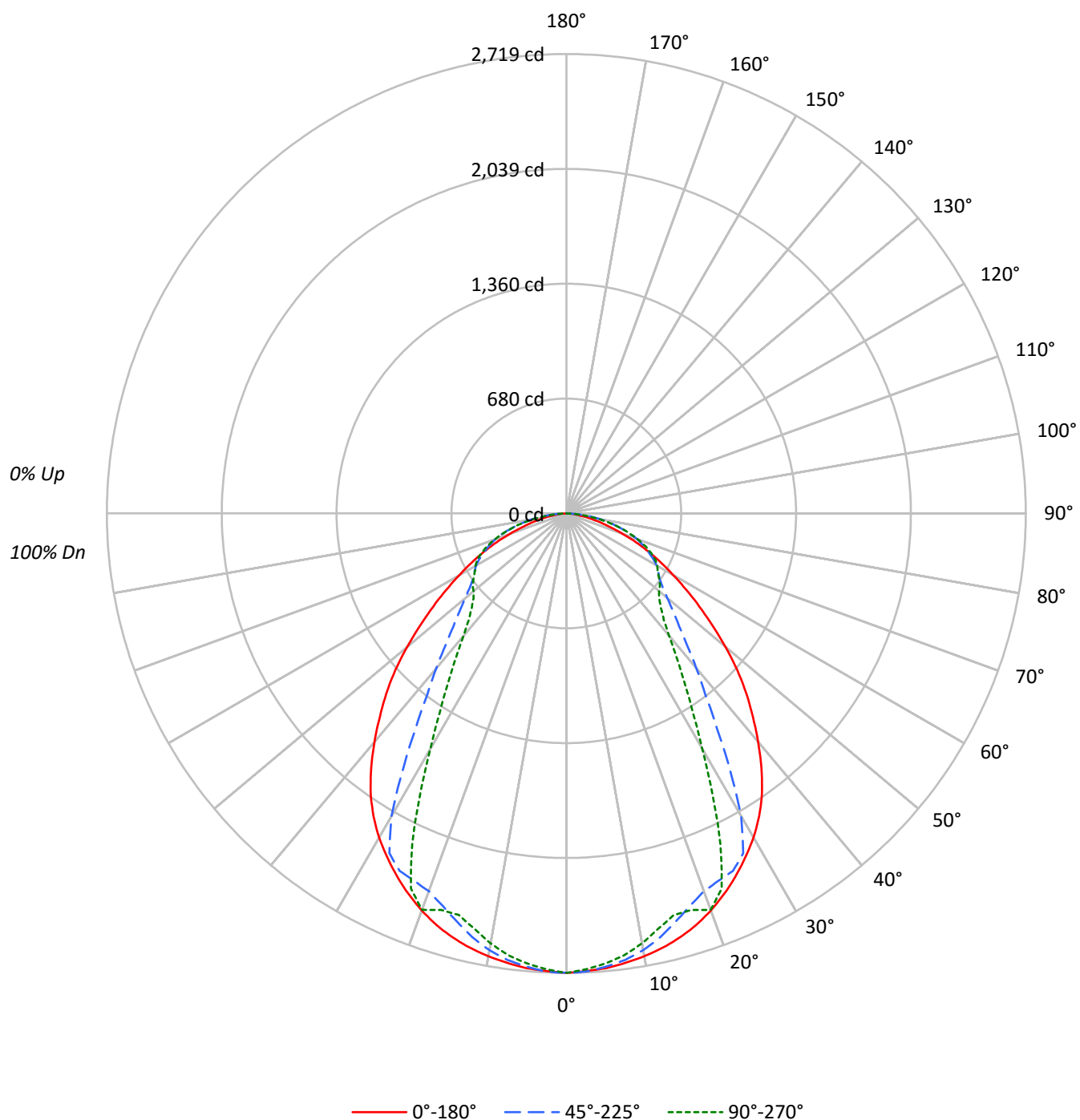
Lumens per Lamp: 3100 (3 lamps)
Luminaire Lumens: 5463.0 lumens
Efficiency: 58.7%
Efficacy: 67.6 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.02 / 1.08
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 80.8
Input Voltage (V): NR
Input Current (Ain): 0.6731
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	70	70	70	70	68	68	68	68	65	65	65	62	62	62	60	60	60
1	64	62	59	57	63	60	58	56	58	56	55	56	54	53	54	52	51
2	59	55	51	48	58	53	50	47	51	49	46	50	47	45	48	46	44
3	54	49	44	41	53	48	44	40	46	42	40	44	41	39	43	40	38
4	50	44	39	35	49	43	38	35	41	38	34	40	37	34	39	36	34
5	46	39	35	31	45	39	34	31	38	33	30	36	33	30	35	32	30
6	43	36	31	27	42	35	31	27	34	30	27	33	30	27	32	29	27
7	40	33	28	25	39	32	28	25	32	27	24	31	27	24	30	27	24
8	38	30	26	22	37	30	25	22	29	25	22	28	25	22	28	24	22
9	35	28	23	20	35	28	23	20	27	23	20	26	23	20	26	22	20
10	33	26	22	19	33	26	21	19	25	21	19	25	21	18	24	21	18

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7317	7317	7317
5°	7296	7274	7220
10°	7271	7170	7058
15°	7238	6968	6853
20°	7162	6813	7148
25°	7037	6930	6410
30°	6886	6429	4993
35°	6633	5112	3995
40°	6204	4205	3323
45°	5731	3593	3014
50°	5149	3265	3002
55°	4513	3157	3143
60°	3940	3321	3342
65°	3432	3400	3521
70°	2832	3509	3548
75°	2194	3441	3441
80°	1627	3285	3084
85°	1297	2902	2408



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ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	254.8	4.7	2.7	0°	2719	2719	2719	2719	2719	
10°-20°	713.2	13.1	7.7	5°	2701	2697	2693	2689	2673	257
20°-30°	1039.0	19.0	11.2	15°	2598	2569	2501	2474	2460	732
30°-40°	1005.1	18.4	10.8	25°	2370	2302	2334	2268	2159	1091
40°-50°	822.3	15.1	8.8	35°	2019	1939	1556	1296	1216	1256
50°-60°	677.7	12.4	7.3	45°	1506	1307	944	814	792	1158
60°-70°	535.2	9.8	5.8	55°	962	856	673	673	670	865
70°-80°	323.1	5.9	3.5	65°	539	533	534	556	553	535
80°-90°	92.1	1.7	1.0	75°	211	285	331	329	331	231
90°-100°	0.4	0.0	0.0	85°	42	81	94	83	78	47
100°-110°	0.0	0.0	0.0	90°	3	3	3	4	2	4
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°	2007.0	36.7	21.6	165°	0	0	0	0	0	0
0°-40°	3012.1	55.1	32.4	175°	0	0	0	0	0	0
0°-60°	4512.1	82.6	48.5	180°	0	0	0	0	0	0
0°-90°	5462.6	100.0	58.7							
90°-120°	0.4	0.0	0.0							
90°-150°	0.4	0.0	0.0							
90°-180°	0.0	0.0	0.0							
0°-180°	5463.0	100.0	58.7							



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2719	2719	2719	2719	2719
2.5°	2711	2711	2714	2713	2700
5°	2701	2697	2693	2689	2673
7.5°	2683	2674	2665	2655	2637
10°	2661	2647	2624	2602	2583
12.5°	2633	2613	2569	2536	2517
15°	2598	2569	2501	2474	2460
17.5°	2555	2515	2434	2440	2460
20°	2501	2450	2379	2463	2496
22.5°	2439	2378	2353	2444	2402
25°	2370	2302	2334	2268	2159
27.5°	2295	2226	2267	1993	1872
30°	2216	2142	2069	1718	1607
32.5°	2125	2045	1803	1481	1392
35°	2019	1939	1556	1296	1216
37.5°	1897	1811	1351	1140	1068
40°	1766	1649	1197	1003	946
42.5°	1634	1471	1058	895	854
45°	1506	1307	944	814	792
47.5°	1372	1166	855	756	745
50°	1230	1052	780	717	717
52.5°	1090	951	719	694	698
55°	962	856	673	673	670
57.5°	842	763	645	643	641
60°	732	676	617	615	621
62.5°	635	600	577	591	594
65°	539	533	534	556	553
67.5°	447	472	492	508	507
70°	360	407	446	454	451
72.5°	280	344	392	396	392
75°	211	285	331	329	331
77.5°	153	230	270	273	267
80°	105	179	212	212	199
82.5°	68	128	155	145	132
85°	42	81	94	83	78
87.5°	21	36	38	28	25
90°	3	3	3	4	2
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)