

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: P313921

Luminaire Tested: **24FCZ2-40-UNV-L83050-CA125-W2A-U-3500K**

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: P313921
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-15)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-40-UNV-L83050-CA125-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" ACRYLIC SHEET
Light Source: (168) 3500K TUNABLE CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC 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

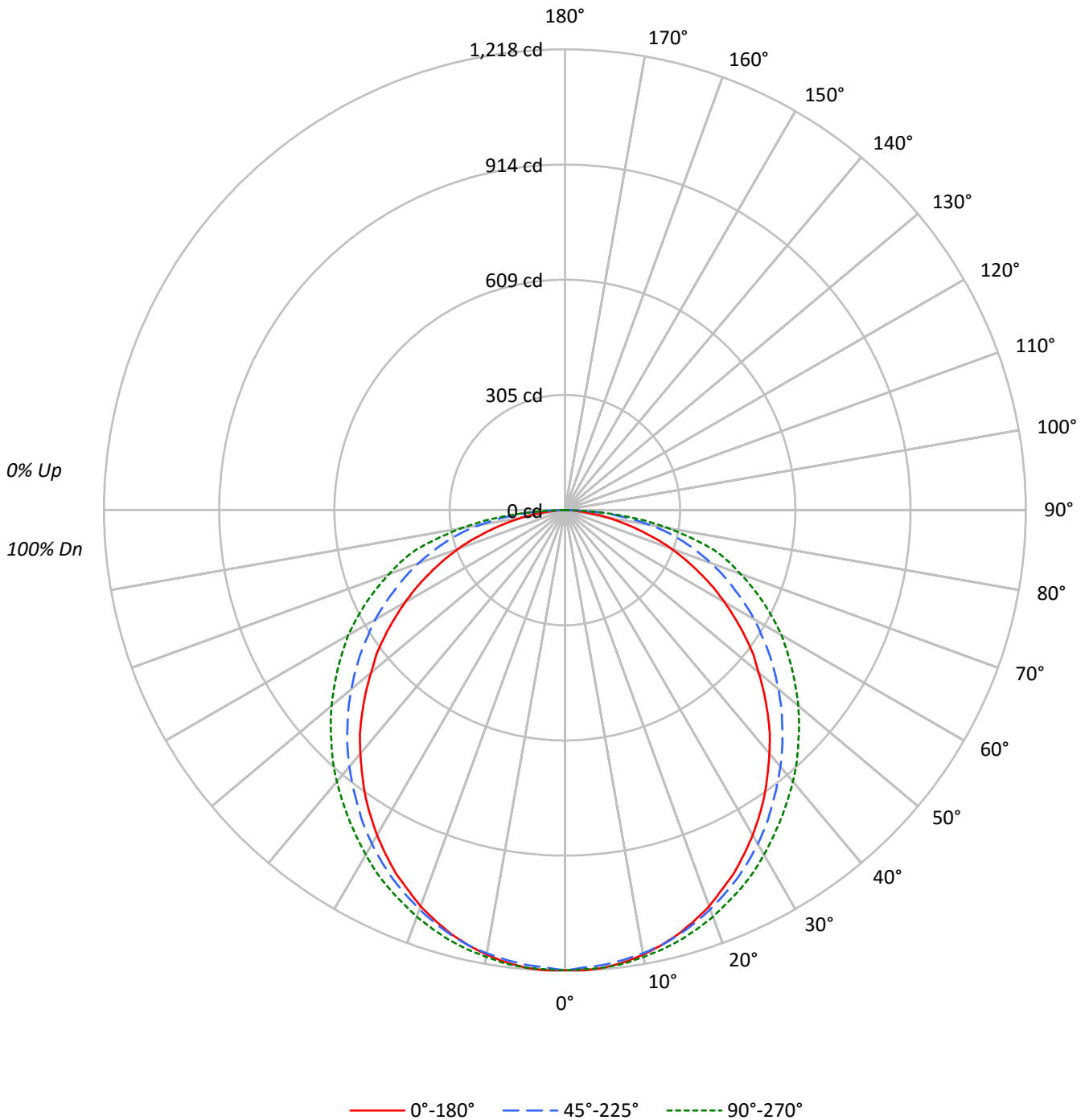
Lumens per Lamp: N/A
Luminaire Lumens: 3688.0 lumens
Efficiency: N/A
Efficacy: 112.8 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 32.7
Input Voltage (V): NR
Input Current (A_{in}): 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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	108	103	98	94	105	100	96	92	96	92	89	92	89	87	88	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	37	31	57	45	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1637	1637	1637
5°	1639	1630	1639
10°	1630	1625	1638
15°	1616	1619	1640
20°	1596	1608	1638
25°	1571	1597	1637
30°	1542	1584	1635
35°	1511	1568	1636
40°	1476	1556	1646
45°	1441	1546	1660
50°	1398	1542	1685
55°	1363	1544	1719
60°	1311	1558	1778
65°	1251	1574	1843
70°	1184	1622	1945
75°	1056	1692	2125
80°	900	1792	2171
85°	642	1775	2078



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	115.1	3.1
10°-20°	329.1	8.9
20°-30°	497.1	13.5
30°-40°	599.1	16.2
40°-50°	629.0	17.1
50°-60°	588.5	16.0
60°-70°	486.0	13.2
70°-80°	331.1	9.0
80°-90°	112.9	3.1
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	941.4	25.5
0°-40°	1540.5	41.8
0°-60°	2758.0	74.8
0°-90°	3688.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3688.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1216	1216	1216	1216	1216	
5°	1214	1213	1206	1214	1214	115
15°	1160	1161	1162	1175	1177	327
25°	1058	1063	1076	1096	1102	487
35°	920	930	954	986	996	575
45°	757	773	812	856	872	584
55°	581	604	658	712	733	519
65°	393	426	494	557	579	390
75°	203	250	326	387	409	217
85°	42	82	115	130	135	52
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1216.3	1216.3	1216.3	1216.3	1216.3
2.5°	1217.5	1216.3	1210.2	1216.3	1215.0
5°	1213.8	1212.6	1206.5	1213.8	1213.8
7.5°	1205.3	1205.3	1199.1	1207.7	1208.9
10°	1193.0	1193.0	1189.4	1199.1	1199.1
12.5°	1178.3	1178.3	1178.3	1188.1	1189.4
15°	1160.0	1161.2	1162.4	1174.7	1177.1
17.5°	1138.0	1140.4	1144.1	1158.8	1161.2
20°	1114.7	1117.2	1123.3	1140.4	1144.1
22.5°	1085.3	1091.5	1100.0	1119.6	1123.3
25°	1058.4	1063.3	1075.6	1096.4	1102.5
27.5°	1025.4	1032.7	1048.6	1070.7	1079.2
30°	992.3	999.7	1019.3	1045.0	1052.3
32.5°	956.9	967.9	988.7	1015.6	1024.2
35°	920.2	929.9	954.4	986.2	996.0
37.5°	879.8	893.2	920.2	954.4	966.7
40°	840.6	855.3	885.9	922.6	937.3
42.5°	801.5	816.1	850.4	892.0	906.7
45°	757.4	773.3	812.5	856.5	872.4
47.5°	713.4	732.9	775.8	822.3	839.4
50°	668.1	690.1	736.6	785.6	805.1
52.5°	627.7	648.5	697.5	750.1	768.4
55°	581.2	604.5	658.3	712.1	732.9
57.5°	533.5	559.2	616.7	675.4	696.2
60°	487.0	515.1	578.8	637.5	660.8
62.5°	441.7	469.9	535.9	597.1	620.4
65°	392.8	425.8	494.3	556.7	578.8
67.5°	346.3	381.8	454.0	515.1	537.2
70°	301.0	335.3	412.4	472.3	494.3
72.5°	252.1	291.2	368.3	430.7	454.0
75°	203.1	249.6	325.5	386.7	408.7
77.5°	157.8	205.6	281.4	331.6	342.6
80°	116.2	165.2	231.3	266.7	280.2
82.5°	74.6	123.6	176.2	201.9	212.9
85°	41.6	82.0	115.0	129.7	134.6
87.5°	17.1	35.5	46.5	52.6	52.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)