

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: P313242

Luminaire Tested: **24FCZ2-50HE-UNV-L83050-HRP-CA08-W2A-U-4000K**

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: P313242
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-50HE-UNV-L83050-HRP-CA08-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" ACRYLIC SHEET
Light Source: (336) 4000K 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: 3748.0 lumens
Efficiency: N/A
Efficacy: 95.4 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

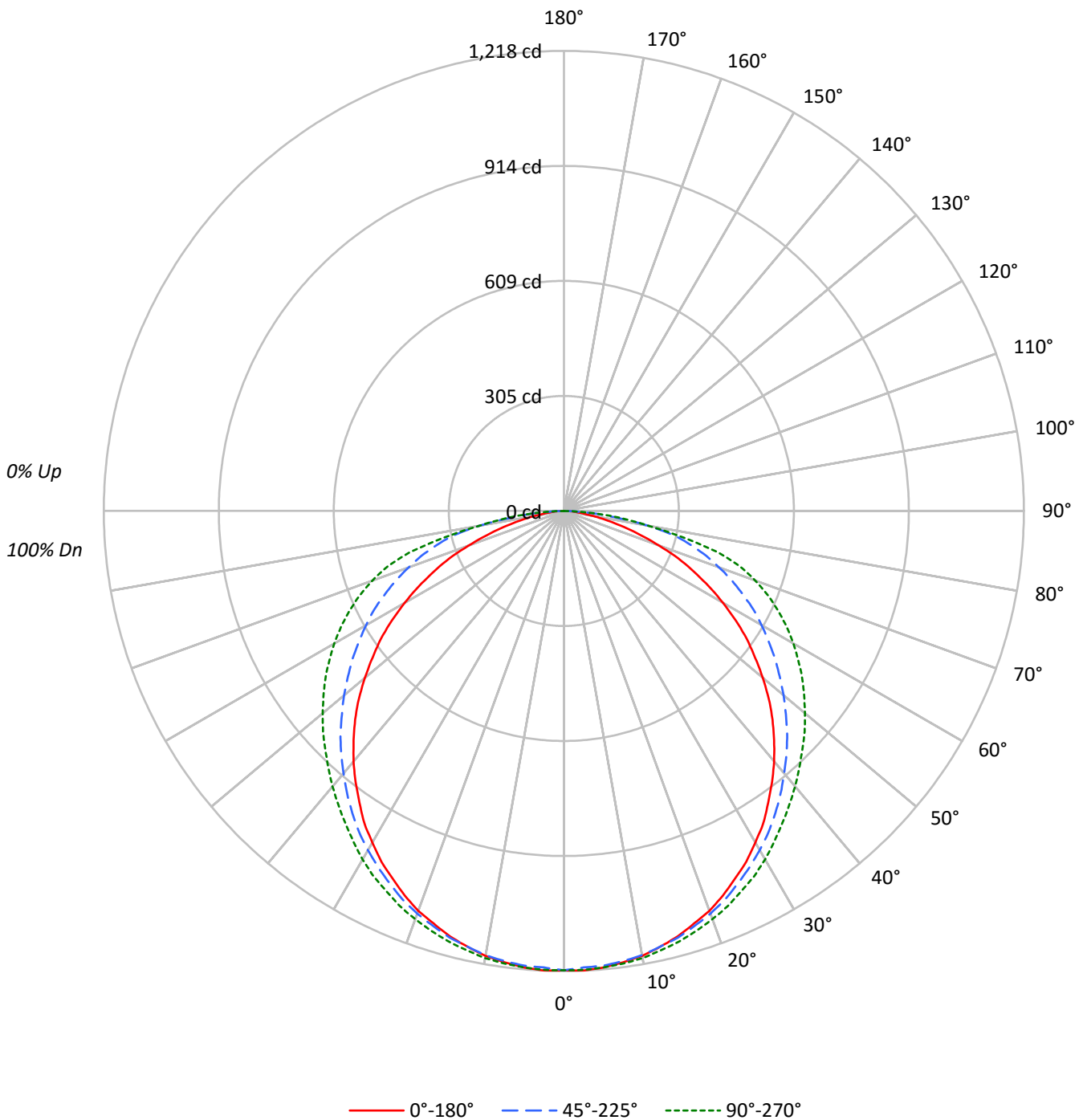
Input Watts (W): 39.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	108	103	98	94	105	101	96	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	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	24	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1636	1636	1636
5°	1638	1632	1638
10°	1633	1631	1642
15°	1624	1628	1644
20°	1613	1624	1647
25°	1593	1617	1649
30°	1575	1611	1655
35°	1549	1603	1657
40°	1521	1593	1673
45°	1487	1591	1699
50°	1439	1590	1744
55°	1388	1601	1807
60°	1309	1626	1887
65°	1209	1663	1993
70°	1055	1722	2124
75°	857	1811	2194
80°	632	1775	1775
85°	485	1308	1477



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	115.2	3.1
10°-20°	330.8	8.8
20°-30°	503.6	13.4
30°-40°	611.5	16.3
40°-50°	646.0	17.2
50°-60°	609.6	16.3
60°-70°	506.9	13.5
70°-80°	333.5	8.9
80°-90°	90.9	2.4
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°	949.6	25.3
0°-40°	1561.1	41.7
0°-60°	2816.8	75.2
0°-90°	3748.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3748.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1216	1216	1216	1216	1216	
5°	1213	1213	1208	1213	1213	115
15°	1166	1167	1169	1180	1180	329
25°	1073	1080	1089	1108	1111	495
35°	943	954	976	1001	1009	590
45°	781	797	836	877	893	602
55°	592	617	683	747	770	527
65°	380	424	522	599	626	375
75°	165	240	348	413	422	178
85°	31	69	85	94	96	38
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1216.0	1216.0	1216.0	1216.0	1216.0
2.5°	1217.6	1216.0	1209.8	1216.0	1216.0
5°	1212.9	1212.9	1208.2	1212.9	1212.9
7.5°	1205.1	1205.1	1201.9	1208.2	1208.2
10°	1195.6	1195.6	1194.1	1201.9	1201.9
12.5°	1181.5	1183.1	1181.5	1190.9	1190.9
15°	1165.8	1167.4	1169.0	1180.0	1180.0
17.5°	1145.4	1148.6	1151.7	1164.3	1165.8
20°	1126.6	1128.2	1134.4	1148.6	1150.1
22.5°	1101.5	1106.2	1114.1	1128.2	1132.9
25°	1073.3	1079.5	1088.9	1107.8	1110.9
27.5°	1046.6	1051.3	1063.8	1084.2	1090.5
30°	1013.6	1021.5	1037.2	1057.6	1065.4
32.5°	982.2	990.1	1008.9	1030.9	1037.2
35°	943.0	954.0	976.0	1001.1	1008.9
37.5°	905.4	916.3	943.0	971.3	980.7
40°	866.1	878.7	906.9	939.9	952.4
42.5°	823.8	841.0	872.4	908.5	922.6
45°	781.4	797.1	836.3	877.1	892.8
47.5°	735.9	754.7	797.1	845.7	864.6
50°	687.3	710.8	759.4	812.8	833.2
52.5°	638.6	665.3	720.2	779.8	801.8
55°	591.5	616.7	682.6	746.9	770.4
57.5°	539.8	571.1	643.3	712.4	735.9
60°	486.4	520.9	604.1	676.3	701.4
62.5°	433.1	472.3	566.4	638.6	665.3
65°	379.7	423.7	522.5	599.4	626.1
67.5°	327.9	376.6	481.7	558.6	585.3
70°	268.3	329.5	437.8	513.1	539.8
72.5°	213.4	284.0	395.4	466.0	489.6
75°	164.8	240.1	348.3	412.7	422.1
77.5°	120.8	196.1	299.7	321.7	323.2
80°	81.6	156.9	229.1	225.9	229.1
82.5°	53.3	117.7	144.4	161.6	163.2
85°	31.4	69.0	84.7	94.1	95.7
87.5°	15.7	23.5	29.8	31.4	34.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)