

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: P309513

Luminaire Tested: **24FCZ2-50HE-UNV-L82765-HRP-CA125-W2A-U-4500K**

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: P309513
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-L82765-HRP-CA125-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" ACRYLIC SHEET
Light Source: (336) 4500K 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: 3529.0 lumens
Efficiency: N/A
Efficacy: 90.3 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

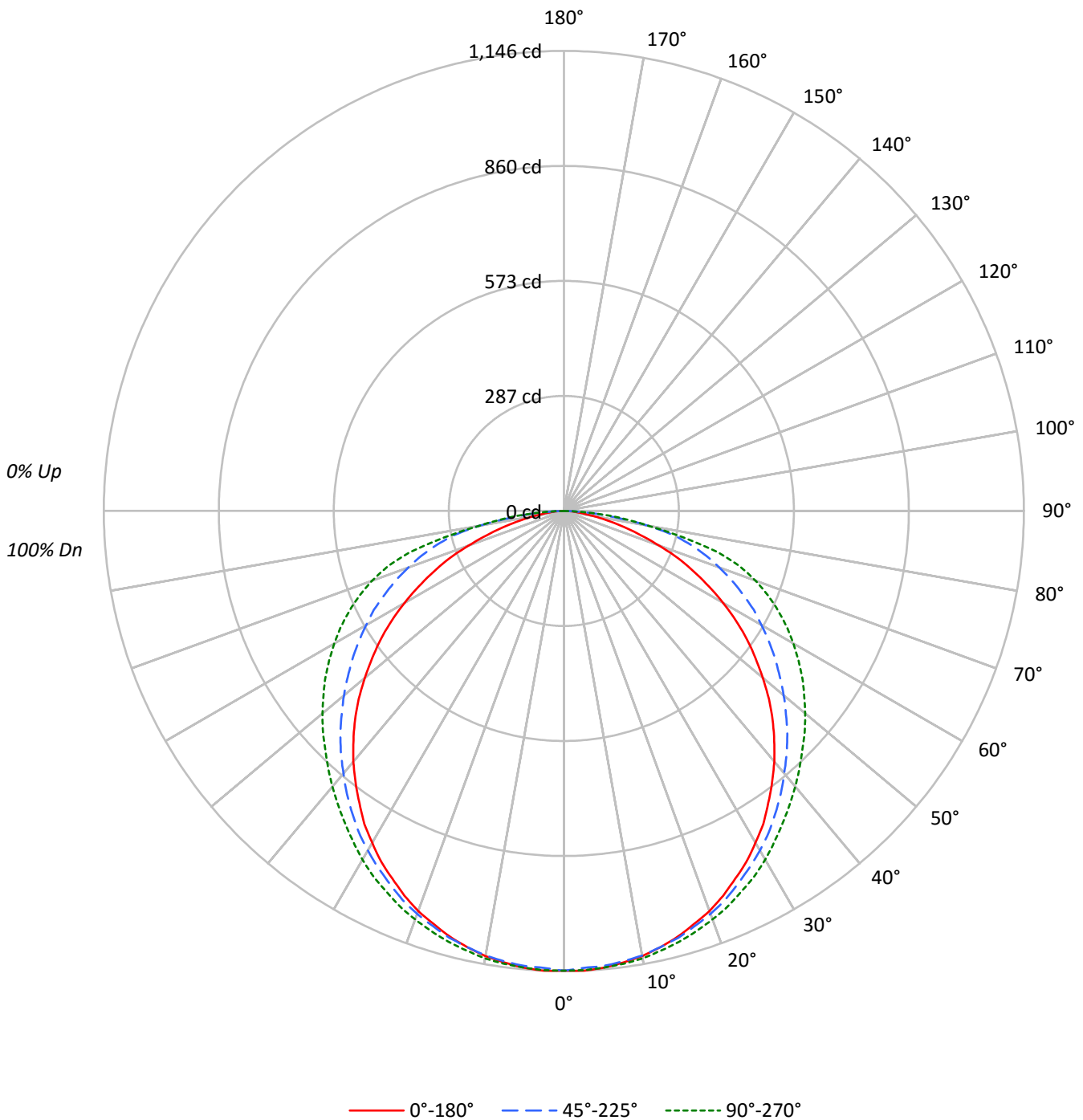
Input Watts (W): 39.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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	100	100	100	100	100		
	1	108	103	98	94	105	101	96	93	96	93	90	92	90	87	89	86	84	82	82	82	82	82	82		
	2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67	67	67	67	67	67		
	3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56	56	56	56	56	56		
	4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50	48	48	48	48	48	48		
	5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41	41	41	41	41	41		
	6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36	36	36	36	36	36		
	7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31	31	31	31	31	31		
	8	59	45	36	30	57	44	36	30	43	36	30	42	35	30	41	34	30	28	28	28	28	28	28		
	9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25	25	25	25	25	25		
	10	52	38	30	25	50	38	30	25	37	30	25	36	29	24	35	29	24	23	23	23	23	23	23		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1541	1541	1541
5°	1542	1536	1542
10°	1538	1536	1546
15°	1529	1533	1548
20°	1519	1529	1551
25°	1500	1522	1553
30°	1483	1517	1559
35°	1458	1509	1560
40°	1432	1500	1575
45°	1400	1498	1600
50°	1355	1497	1642
55°	1307	1508	1702
60°	1232	1531	1777
65°	1138	1566	1877
70°	994	1622	1999
75°	806	1705	2066
80°	595	1671	1671
85°	455	1232	1391



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	108.5	3.1
10°-20°	311.5	8.8
20°-30°	474.2	13.4
30°-40°	575.8	16.3
40°-50°	608.3	17.2
50°-60°	574.0	16.3
60°-70°	477.3	13.5
70°-80°	314.0	8.9
80°-90°	85.6	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°	894.1	25.3
0°-40°	1469.9	41.7
0°-60°	2652.2	75.2
0°-90°	3529.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3529.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1145	1145	1145	1145	1145	
5°	1142	1142	1138	1142	1142	108
15°	1098	1099	1101	1111	1111	310
25°	1010	1016	1025	1043	1046	466
35°	888	898	919	943	950	556
45°	736	750	788	826	841	567
55°	557	581	643	703	725	496
65°	358	399	492	564	590	353
75°	155	226	328	389	397	167
85°	30	65	80	89	90	36
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1145.0	1145.0	1145.0	1145.0	1145.0
2.5°	1146.5	1145.0	1139.1	1145.0	1145.0
5°	1142.0	1142.0	1137.6	1142.0	1142.0
7.5°	1134.6	1134.6	1131.7	1137.6	1137.6
10°	1125.8	1125.8	1124.3	1131.7	1131.7
12.5°	1112.5	1114.0	1112.5	1121.3	1121.3
15°	1097.7	1099.2	1100.7	1111.0	1111.0
17.5°	1078.5	1081.5	1084.4	1096.2	1097.7
20°	1060.8	1062.3	1068.2	1081.5	1082.9
22.5°	1037.1	1041.6	1049.0	1062.3	1066.7
25°	1010.5	1016.5	1025.3	1043.0	1046.0
27.5°	985.4	989.9	1001.7	1020.9	1026.8
30°	954.4	961.8	976.6	995.8	1003.2
32.5°	924.9	932.2	950.0	970.7	976.6
35°	887.9	898.3	918.9	942.6	950.0
37.5°	852.5	862.8	887.9	914.5	923.4
40°	815.5	827.3	853.9	885.0	896.8
42.5°	775.6	791.9	821.4	855.4	868.7
45°	735.7	750.5	787.5	825.9	840.6
47.5°	692.9	710.6	750.5	796.3	814.0
50°	647.1	669.3	715.1	765.3	784.5
52.5°	601.3	626.4	678.1	734.3	755.0
55°	557.0	580.6	642.7	703.2	725.4
57.5°	508.2	537.8	605.7	670.7	692.9
60°	458.0	490.5	568.8	636.8	660.4
62.5°	407.8	444.7	533.3	601.3	626.4
65°	357.5	398.9	492.0	564.4	589.5
67.5°	308.8	354.6	453.6	526.0	551.1
70°	252.6	310.3	412.2	483.1	508.2
72.5°	200.9	267.4	372.3	438.8	460.9
75°	155.1	226.0	328.0	388.6	397.4
77.5°	113.8	184.7	282.2	302.9	304.3
80°	76.8	147.7	215.7	212.7	215.7
82.5°	50.2	110.8	135.9	152.2	153.6
85°	29.5	65.0	79.8	88.6	90.1
87.5°	14.8	22.2	28.1	29.5	32.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)