

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: P313996

Luminaire Tested: **24FCZ2-50HE-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: P313996
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: 24FCZ2-50HE-UNV-L83050-CA125-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" ACRYLIC SHEET
Light Source: (336) 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: 4579.0 lumens
Efficiency: N/A
Efficacy: 119.2 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

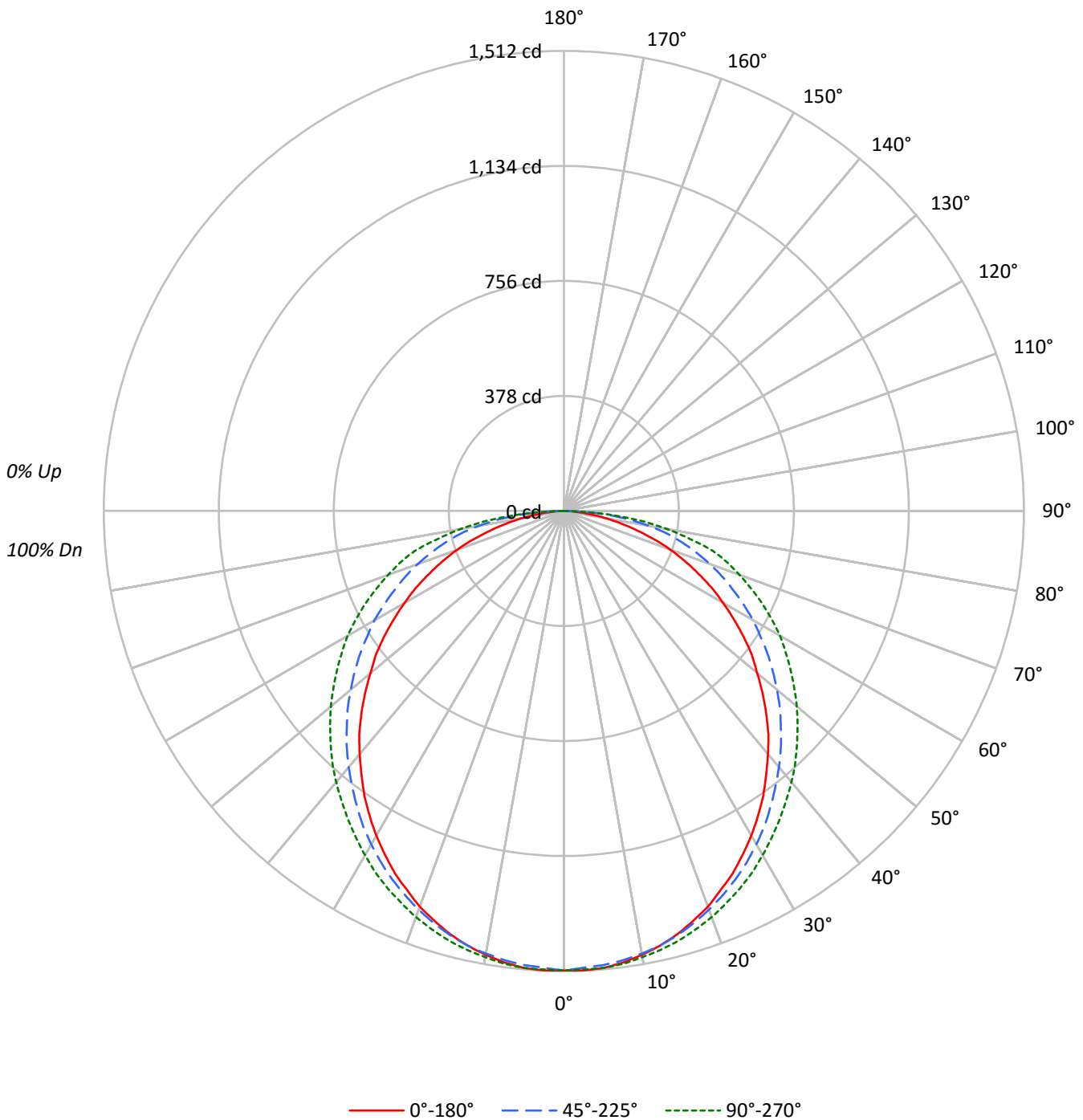
Input Watts (W): 38.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2032	2032	2032
5°	2036	2023	2036
10°	2024	2018	2034
15°	2006	2010	2036
20°	1982	1997	2034
25°	1951	1983	2032
30°	1914	1966	2030
35°	1877	1946	2031
40°	1833	1932	2044
45°	1789	1920	2061
50°	1736	1914	2093
55°	1693	1917	2135
60°	1627	1934	2208
65°	1553	1954	2288
70°	1470	2014	2415
75°	1311	2101	2638
80°	1118	2225	2696
85°	798	2205	2580



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	142.9	3.1
10°-20°	408.6	8.9
20°-30°	617.2	13.5
30°-40°	743.9	16.2
40°-50°	781.0	17.1
50°-60°	730.6	16.0
60°-70°	603.4	13.2
70°-80°	411.1	9.0
80°-90°	140.2	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°	1168.8	25.5
0°-40°	1912.7	41.8
0°-60°	3424.3	74.8
0°-90°	4579.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4579.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1510	1510	1510	1510	1510	
5°	1507	1506	1498	1507	1507	143
15°	1440	1442	1443	1458	1462	406
25°	1314	1320	1335	1361	1369	605
35°	1142	1155	1185	1224	1237	714
45°	940	960	1009	1064	1083	725
55°	722	750	817	884	910	644
65°	488	529	614	691	719	484
75°	252	310	404	480	507	269
85°	52	102	143	161	167	65
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1510.1	1510.1	1510.1	1510.1	1510.1
2.5°	1511.6	1510.1	1502.5	1510.1	1508.6
5°	1507.1	1505.6	1498.0	1507.1	1507.1
7.5°	1496.4	1496.4	1488.8	1499.5	1501.0
10°	1481.2	1481.2	1476.7	1488.8	1488.8
12.5°	1463.0	1463.0	1463.0	1475.2	1476.7
15°	1440.2	1441.7	1443.3	1458.5	1461.5
17.5°	1412.9	1415.9	1420.5	1438.7	1441.7
20°	1384.0	1387.1	1394.7	1415.9	1420.5
22.5°	1347.6	1355.2	1365.8	1390.1	1394.7
25°	1314.1	1320.2	1335.4	1361.2	1368.8
27.5°	1273.1	1282.2	1302.0	1329.3	1340.0
30°	1232.1	1241.2	1265.5	1297.4	1306.5
32.5°	1188.0	1201.7	1227.5	1261.0	1271.6
35°	1142.5	1154.6	1185.0	1224.5	1236.7
37.5°	1092.3	1109.0	1142.5	1185.0	1200.2
40°	1043.7	1061.9	1099.9	1145.5	1163.7
42.5°	995.1	1013.3	1055.9	1107.5	1125.7
45°	940.4	960.2	1008.8	1063.5	1083.2
47.5°	885.7	910.0	963.2	1020.9	1042.2
50°	829.5	856.8	914.6	975.3	999.7
52.5°	779.4	805.2	866.0	931.3	954.1
55°	721.6	750.5	817.3	884.2	910.0
57.5°	662.4	694.3	765.7	838.6	864.4
60°	604.7	639.6	718.6	791.5	820.4
62.5°	548.4	583.4	665.4	741.4	770.2
65°	487.7	528.7	613.8	691.2	718.6
67.5°	429.9	474.0	563.6	639.6	666.9
70°	373.7	416.3	512.0	586.4	613.8
72.5°	313.0	361.6	457.3	534.8	563.6
75°	252.2	309.9	404.1	480.1	507.4
77.5°	196.0	255.2	349.4	411.7	425.4
80°	144.3	205.1	287.1	331.2	347.9
82.5°	92.7	153.4	218.8	250.7	264.3
85°	51.7	101.8	142.8	161.0	167.1
87.5°	21.3	44.1	57.7	65.3	65.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)