

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: P311534

Luminaire Tested: **24FCZ2-50HE-UNV-L82765-S-CA125-W2A-U-2700K**

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: P311534
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)
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-S-CA125-W2A-U-2700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" ACRYLIC SHEET
Light Source: (336) 2700K 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: 4415.0 lumens
Efficiency: N/A
Efficacy: 115.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.27 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

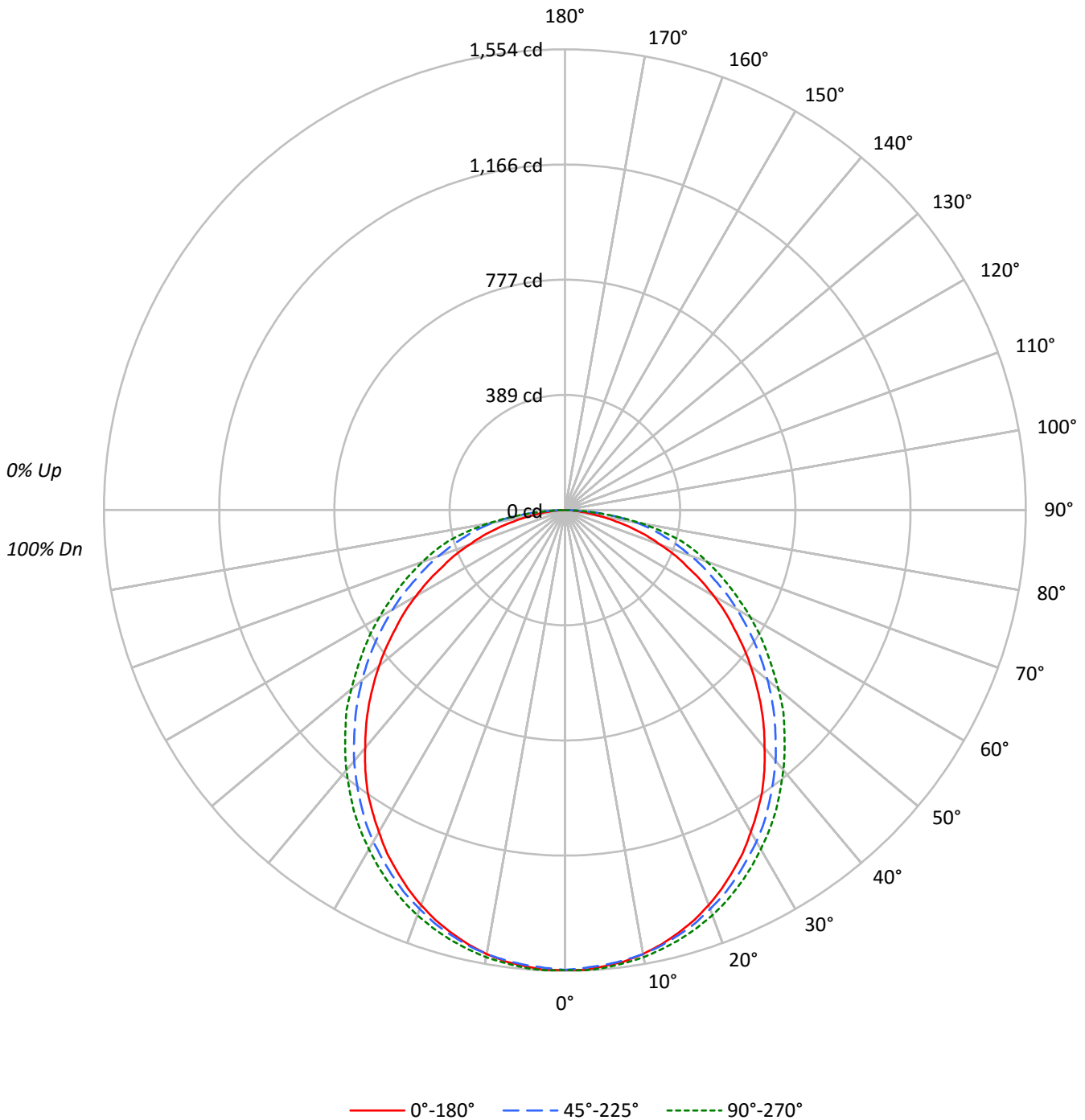
Input Watts (W): 38.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2087	2087	2087
5°	2085	2080	2093
10°	2077	2077	2092
15°	2057	2067	2088
20°	2030	2050	2082
25°	1992	2030	2070
30°	1948	2007	2052
35°	1905	1974	2036
40°	1840	1941	2012
45°	1780	1903	1991
50°	1711	1867	1967
55°	1635	1832	1947
60°	1559	1804	1943
65°	1460	1772	1955
70°	1352	1782	2008
75°	1210	1815	2122
80°	978	1923	2076
85°	736	1689	1646



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	146.8	3.3
10°-20°	419.6	9.5
20°-30°	630.7	14.3
30°-40°	751.3	17.0
40°-50°	768.9	17.4
50°-60°	692.2	15.7
60°-70°	543.6	12.3
70°-80°	352.8	8.0
80°-90°	109.1	2.5
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°	1197.1	27.1
0°-40°	1948.4	44.1
0°-60°	3409.5	77.2
0°-90°	4415.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4415.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1551	1551	1551	1551	1551	
5°	1544	1547	1540	1548	1550	147
15°	1477	1481	1484	1496	1499	416
25°	1342	1353	1367	1390	1394	618
35°	1160	1174	1202	1231	1240	724
45°	935	958	1000	1038	1046	721
55°	697	728	781	822	830	625
65°	459	494	557	603	614	457
75°	233	278	349	397	408	246
85°	48	88	109	107	107	58
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1551.0	1551.0	1551.0	1551.0	1551.0
2.5°	1552.4	1552.4	1545.4	1552.4	1553.8
5°	1544.0	1546.8	1539.8	1548.2	1549.6
7.5°	1535.6	1535.6	1531.4	1539.8	1541.2
10°	1520.2	1521.6	1520.2	1530.0	1531.4
12.5°	1500.5	1503.3	1504.7	1514.6	1516.0
15°	1476.7	1480.9	1483.7	1496.3	1499.1
17.5°	1450.0	1454.3	1461.3	1475.3	1478.1
20°	1417.8	1423.4	1431.8	1450.0	1454.3
22.5°	1382.7	1388.3	1402.4	1419.2	1426.2
25°	1342.1	1353.3	1367.3	1389.7	1394.0
27.5°	1301.4	1311.2	1329.4	1353.3	1358.9
30°	1253.7	1269.1	1291.6	1315.4	1321.0
32.5°	1207.4	1222.9	1249.5	1274.8	1281.8
35°	1159.8	1173.8	1201.8	1231.3	1239.7
37.5°	1105.1	1123.3	1154.1	1183.6	1192.0
40°	1047.6	1070.0	1105.1	1135.9	1145.7
42.5°	992.9	1016.7	1051.8	1085.4	1096.7
45°	935.4	957.8	999.9	1037.8	1046.2
47.5°	876.5	901.7	946.6	984.5	998.5
50°	817.6	844.2	891.9	931.2	939.6
52.5°	758.7	786.7	837.2	879.3	883.5
55°	697.0	727.8	781.1	821.8	830.2
57.5°	640.9	667.5	725.0	767.1	776.9
60°	579.2	608.6	670.3	709.6	722.2
62.5°	520.3	551.1	615.6	654.9	666.1
65°	458.6	493.6	556.7	603.0	614.2
67.5°	405.3	438.9	506.3	551.1	562.3
70°	343.6	381.4	453.0	499.2	510.5
72.5°	290.3	329.6	401.1	446.0	462.8
75°	232.8	277.7	349.2	396.9	408.1
77.5°	176.7	228.6	301.5	338.0	338.0
80°	126.2	180.9	248.2	265.0	267.9
82.5°	82.7	136.0	183.7	182.3	182.3
85°	47.7	88.3	109.4	106.6	106.6
87.5°	18.2	36.5	39.3	39.3	37.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)