

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: P314373

Luminaire Tested: **24FCZ2-50HE-UNV-L83050-S-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: P314373
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-L83050-S-CA125-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH 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: 5100.0 lumens
Efficiency: N/A
Efficacy: 126.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

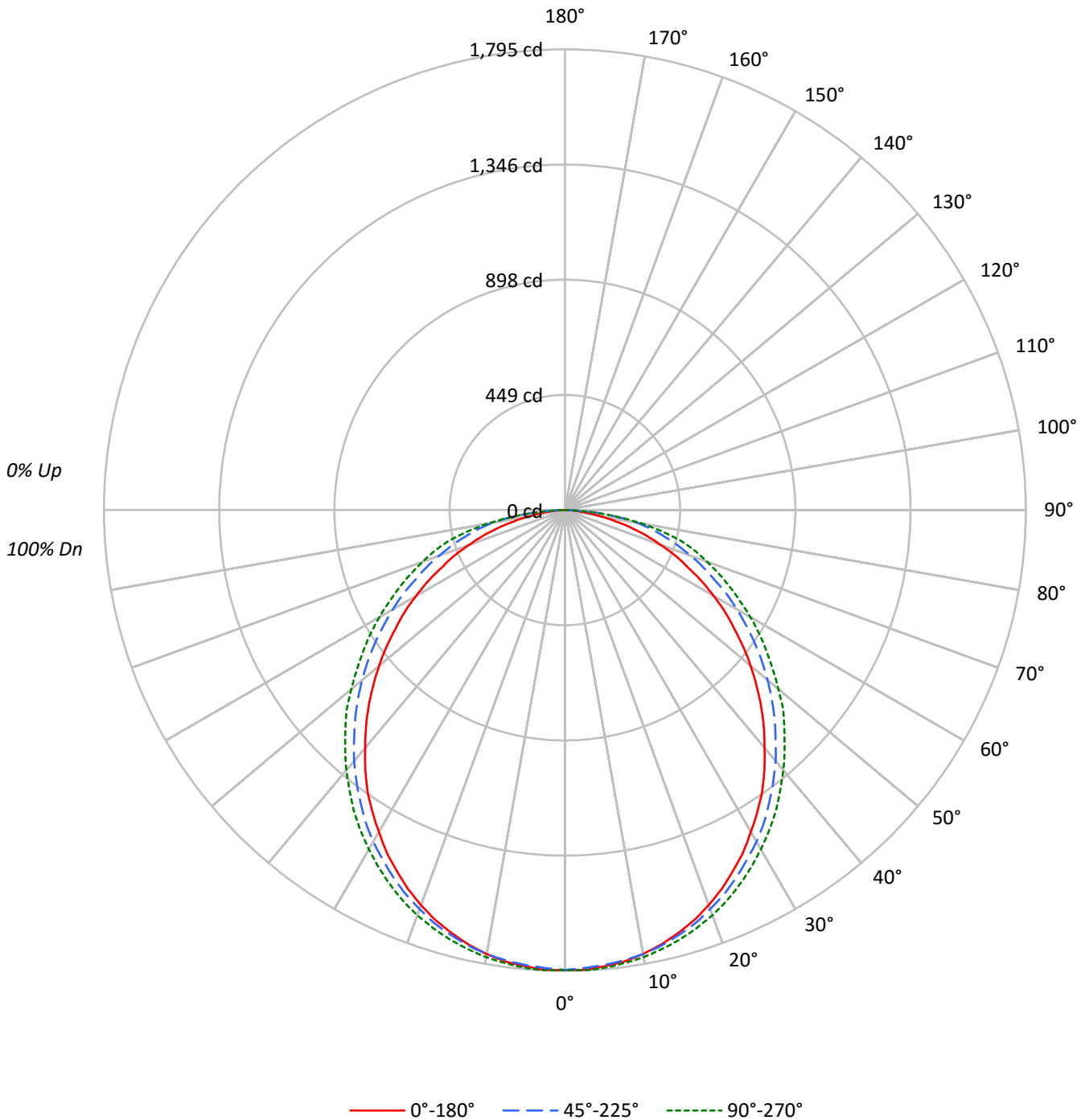
Input Watts (W): 40.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2411	2411	2411
5°	2409	2402	2418
10°	2399	2399	2417
15°	2376	2387	2412
20°	2345	2368	2405
25°	2302	2345	2390
30°	2250	2318	2371
35°	2201	2280	2352
40°	2125	2242	2325
45°	2056	2198	2300
50°	1977	2157	2272
55°	1889	2117	2250
60°	1800	2084	2245
65°	1686	2047	2259
70°	1561	2058	2320
75°	1398	2097	2451
80°	1130	2221	2397
85°	851	1951	1900



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	169.6	3.3
10°-20°	484.7	9.5
20°-30°	728.6	14.3
30°-40°	867.8	17.0
40°-50°	888.2	17.4
50°-60°	799.6	15.7
60°-70°	627.9	12.3
70°-80°	407.5	8.0
80°-90°	126.1	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°	1382.8	27.1
0°-40°	2250.7	44.1
0°-60°	3938.4	77.2
0°-90°	5100.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5100.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1792	1792	1792	1792	1792	
5°	1784	1787	1779	1788	1790	169
15°	1706	1711	1714	1728	1732	481
25°	1550	1563	1580	1605	1610	714
35°	1340	1356	1388	1422	1432	836
45°	1080	1106	1155	1199	1208	833
55°	805	841	902	949	959	722
65°	530	570	643	697	710	527
75°	269	321	403	458	471	285
85°	55	102	126	123	123	67
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1791.7	1791.7	1791.7	1791.7	1791.7
2.5°	1793.3	1793.3	1785.2	1793.3	1794.9
5°	1783.6	1786.8	1778.7	1788.4	1790.0
7.5°	1773.8	1773.8	1769.0	1778.7	1780.3
10°	1756.0	1757.6	1756.0	1767.4	1769.0
12.5°	1733.3	1736.6	1738.2	1749.5	1751.2
15°	1705.8	1710.7	1713.9	1728.5	1731.7
17.5°	1675.0	1679.9	1688.0	1704.2	1707.4
20°	1637.8	1644.2	1654.0	1675.0	1679.9
22.5°	1597.3	1603.7	1619.9	1639.4	1647.5
25°	1550.3	1563.3	1579.5	1605.4	1610.2
27.5°	1503.3	1514.7	1535.7	1563.3	1569.7
30°	1448.2	1466.1	1492.0	1519.5	1526.0
32.5°	1394.8	1412.6	1443.4	1472.5	1480.6
35°	1339.7	1355.9	1388.3	1422.3	1432.0
37.5°	1276.5	1297.6	1333.2	1367.2	1377.0
40°	1210.1	1236.0	1276.5	1312.2	1323.5
42.5°	1146.9	1174.5	1215.0	1253.8	1266.8
45°	1080.5	1106.4	1155.0	1198.8	1208.5
47.5°	1012.5	1041.6	1093.5	1137.2	1153.4
50°	944.4	975.2	1030.3	1075.6	1085.4
52.5°	876.4	908.8	967.1	1015.7	1020.6
55°	805.1	840.8	902.3	949.3	959.0
57.5°	740.3	771.1	837.5	886.1	897.5
60°	669.0	703.1	774.3	819.7	834.3
62.5°	601.0	636.6	711.2	756.5	769.5
65°	529.7	570.2	643.1	696.6	709.5
67.5°	468.2	507.0	584.8	636.6	649.6
70°	396.9	440.6	523.2	576.7	589.7
72.5°	335.3	380.7	463.3	515.1	534.6
75°	268.9	320.7	403.4	458.4	471.4
77.5°	204.1	264.1	348.3	390.4	390.4
80°	145.8	209.0	286.7	306.2	309.4
82.5°	95.6	157.1	212.2	210.6	210.6
85°	55.1	102.1	126.4	123.1	123.1
87.5°	21.1	42.1	45.4	45.4	43.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)