

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: P310853

Luminaire Tested: **24FCZ2-50HE-UNV-L82765-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: P310853
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-L82765-CA08-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, RIBBED 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: 4587.0 lumens
Efficiency: N/A
Efficacy: 118.2 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

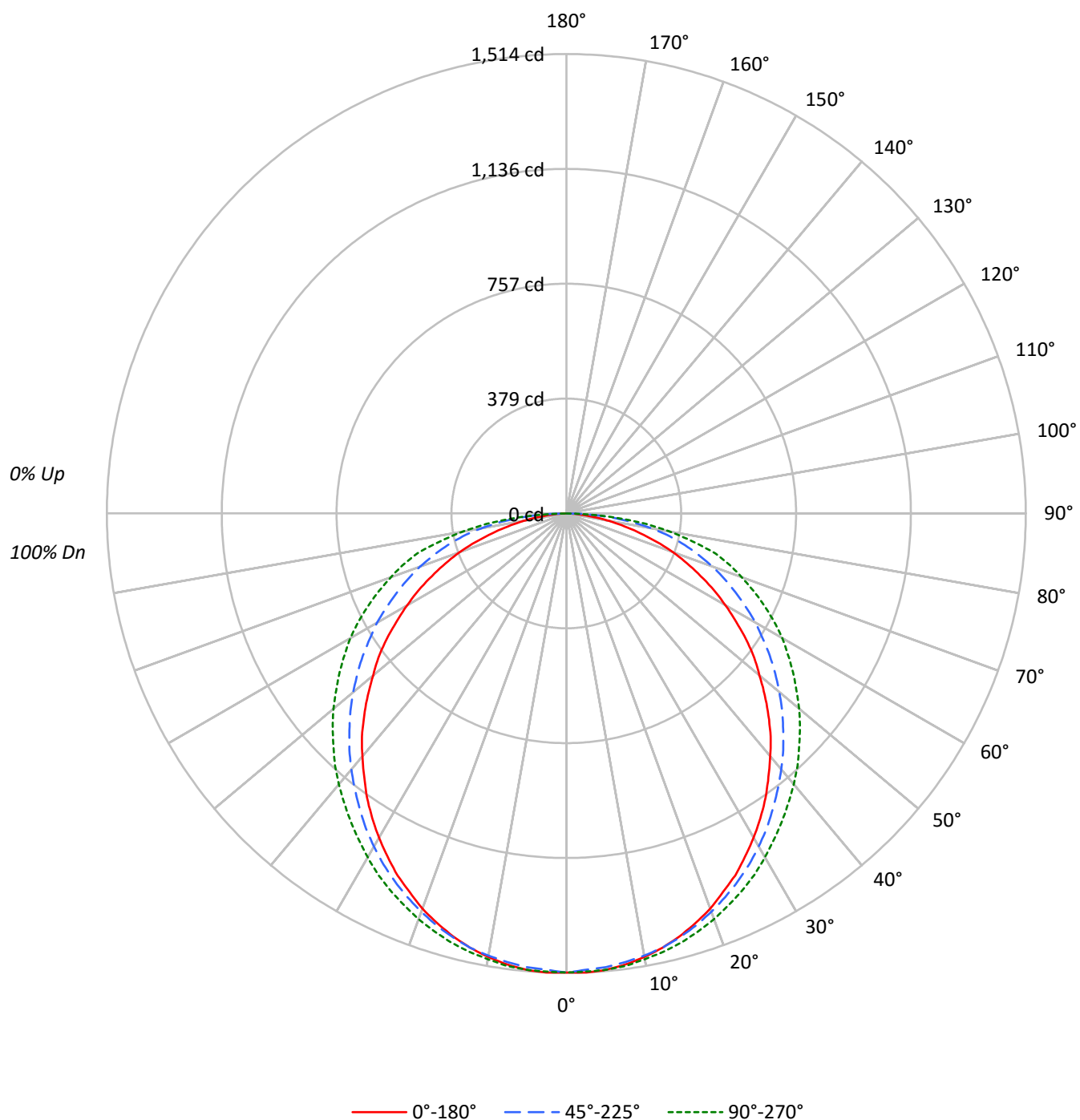
Input Watts (W): 38.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				0
RW	70	50	30	10	70	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		100
1	108	103	98	94	105	100	96	92	96	92	89		92	89	87		82
2	98	89	81	75	95	87	80	74	83	78	73		80	75	71		67
3	89	77	69	62	86	76	68	61	73	66	60		70	64	59		56
4	81	68	59	52	79	67	58	52	64	57	51		62	56	50		47
5	74	61	52	45	72	60	51	44	58	50	44		56	49	43		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	64	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	37	31	57	45	36	30	43	36	30		42	35	30		28
9	55	41	33	27	54	41	33	27	40	32	27		39	32	27		25
10	52	38	30	25	50	38	30	25	37	30	25		36	29	25		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2035	2035	2035
5°	2039	2027	2039
10°	2027	2021	2038
15°	2010	2014	2039
20°	1985	2000	2038
25°	1954	1986	2036
30°	1917	1970	2033
35°	1880	1950	2035
40°	1836	1935	2048
45°	1792	1923	2065
50°	1739	1918	2096
55°	1696	1921	2138
60°	1630	1937	2211
65°	1555	1957	2292
70°	1473	2018	2419
75°	1313	2104	2642
80°	1120	2228	2700
85°	798	2209	2584



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	143.2	3.1
10°-20°	409.4	8.9
20°-30°	618.3	13.5
30°-40°	745.2	16.2
40°-50°	782.3	17.1
50°-60°	731.9	16.0
60°-70°	604.4	13.2
70°-80°	411.9	9.0
80°-90°	140.5	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°	1170.8	25.5
0°-40°	1916.0	41.8
0°-60°	3430.2	74.8
0°-90°	4587.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4587.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1513	1513	1513	1513	1513	
5°	1510	1508	1501	1510	1510	143
15°	1443	1444	1446	1461	1464	407
25°	1316	1322	1338	1364	1371	606
35°	1144	1157	1187	1227	1239	715
45°	942	962	1010	1065	1085	727
55°	723	752	819	886	912	645
65°	488	530	615	692	720	485
75°	253	310	405	481	508	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°	1512.8	1512.8	1512.8	1512.8	1512.8
2.5°	1514.3	1512.8	1505.1	1512.8	1511.2
5°	1509.7	1508.2	1500.6	1509.7	1509.7
7.5°	1499.1	1499.1	1491.4	1502.1	1503.6
10°	1483.8	1483.8	1479.3	1491.4	1491.4
12.5°	1465.6	1465.6	1465.6	1477.7	1479.3
15°	1442.7	1444.3	1445.8	1461.0	1464.1
17.5°	1415.4	1418.4	1423.0	1441.2	1444.3
20°	1386.4	1389.5	1397.1	1418.4	1423.0
22.5°	1349.9	1357.5	1368.2	1392.5	1397.1
25°	1316.4	1322.5	1337.7	1363.6	1371.2
27.5°	1275.3	1284.5	1304.3	1331.6	1342.3
30°	1234.2	1243.4	1267.7	1299.7	1308.8
32.5°	1190.1	1203.8	1229.7	1263.2	1273.8
35°	1144.5	1156.6	1187.1	1226.6	1238.8
37.5°	1094.2	1111.0	1144.5	1187.1	1202.3
40°	1045.5	1063.8	1101.8	1147.5	1165.8
42.5°	996.8	1015.1	1057.7	1109.5	1127.7
45°	942.0	961.8	1010.5	1065.3	1085.1
47.5°	887.3	911.6	964.9	1022.7	1044.0
50°	830.9	858.3	916.2	977.0	1001.4
52.5°	780.7	806.6	867.5	932.9	955.7
55°	722.9	751.8	818.8	885.7	911.6
57.5°	663.5	695.5	767.0	840.1	866.0
60°	605.7	640.7	719.9	792.9	821.8
62.5°	549.4	584.4	666.6	742.7	771.6
65°	488.5	529.6	614.8	692.5	719.9
67.5°	430.7	474.8	564.6	640.7	668.1
70°	374.4	417.0	512.9	587.4	614.8
72.5°	313.5	362.2	458.1	535.7	564.6
75°	252.6	310.5	404.8	480.9	508.3
77.5°	196.3	255.7	350.0	412.4	426.1
80°	144.6	205.5	287.6	331.8	348.5
82.5°	92.8	153.7	219.2	251.1	264.8
85°	51.7	102.0	143.1	161.3	167.4
87.5°	21.3	44.1	57.8	65.4	65.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)