

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: P310864

Luminaire Tested: **24FCZ2-50HE-UNV-L82765-CA125-W2A-U-5000K**

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: P310864
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-CA125-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" ACRYLIC SHEET
Light Source: (336) 5000K 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: 4715.0 lumens
Efficiency: N/A
Efficacy: 120.0 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

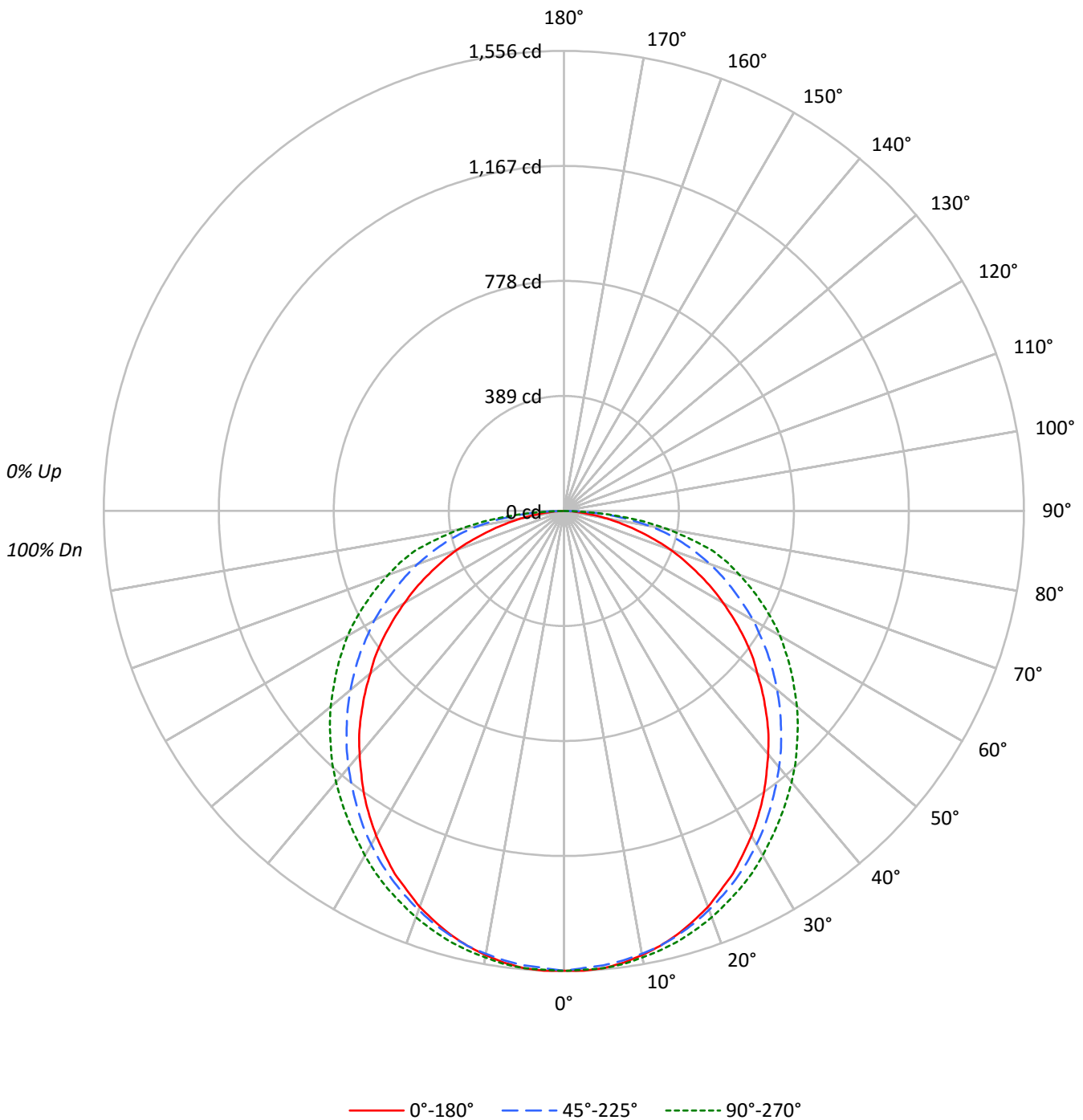
Input Watts (W): 39.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	2092	2092	2092
5°	2096	2083	2096
10°	2084	2078	2095
15°	2066	2070	2096
20°	2041	2056	2094
25°	2009	2041	2093
30°	1971	2025	2090
35°	1932	2004	2092
40°	1888	1989	2105
45°	1842	1976	2122
50°	1788	1971	2155
55°	1743	1974	2198
60°	1675	1991	2273
65°	1599	2012	2356
70°	1514	2074	2486
75°	1350	2163	2716
80°	1151	2291	2775
85°	821	2269	2657



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	147.2	3.1
10°-20°	420.8	8.9
20°-30°	635.6	13.5
30°-40°	766.0	16.2
40°-50°	804.1	17.1
50°-60°	752.3	16.0
60°-70°	621.3	13.2
70°-80°	423.4	9.0
80°-90°	144.4	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°	1203.5	25.5
0°-40°	1969.5	41.8
0°-60°	3526.0	74.8
0°-90°	4715.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4715.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1555	1555	1555	1555	1555	
5°	1552	1550	1542	1552	1552	147
15°	1483	1485	1486	1502	1505	418
25°	1353	1359	1375	1402	1410	623
35°	1176	1189	1220	1261	1273	735
45°	968	989	1039	1095	1115	747
55°	743	773	842	910	937	663
65°	502	544	632	712	740	498
75°	260	319	416	494	522	277
85°	53	105	147	166	172	67
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1555.0	1555.0	1555.0	1555.0	1555.0
2.5°	1556.5	1555.0	1547.1	1555.0	1553.4
5°	1551.8	1550.3	1542.5	1551.8	1551.8
7.5°	1540.9	1540.9	1533.1	1544.0	1545.6
10°	1525.2	1525.2	1520.6	1533.1	1533.1
12.5°	1506.5	1506.5	1506.5	1519.0	1520.6
15°	1483.0	1484.6	1486.1	1501.8	1504.9
17.5°	1454.8	1458.0	1462.7	1481.4	1484.6
20°	1425.1	1428.3	1436.1	1458.0	1462.7
22.5°	1387.6	1395.4	1406.4	1431.4	1436.1
25°	1353.2	1359.4	1375.1	1401.7	1409.5
27.5°	1310.9	1320.3	1340.6	1368.8	1379.8
30°	1268.7	1278.1	1303.1	1336.0	1345.3
32.5°	1223.3	1237.4	1264.0	1298.4	1309.4
35°	1176.4	1188.9	1220.2	1260.9	1273.4
37.5°	1124.8	1142.0	1176.4	1220.2	1235.8
40°	1074.7	1093.5	1132.6	1179.5	1198.3
42.5°	1024.7	1043.4	1087.2	1140.4	1159.2
45°	968.3	988.7	1038.7	1095.0	1115.4
47.5°	912.0	937.0	991.8	1051.2	1073.1
50°	854.1	882.3	941.7	1004.3	1029.3
52.5°	802.5	829.1	891.7	958.9	982.4
55°	743.1	772.8	841.6	910.5	937.0
57.5°	682.1	714.9	788.4	863.5	890.1
60°	622.6	658.6	739.9	815.0	844.8
62.5°	564.7	600.7	685.2	763.4	793.1
65°	502.2	544.4	632.0	711.8	739.9
67.5°	442.7	488.1	580.4	658.6	686.8
70°	384.8	428.6	527.2	603.8	632.0
72.5°	322.3	372.3	470.9	550.7	580.4
75°	259.7	319.1	416.1	494.3	522.5
77.5°	201.8	262.8	359.8	423.9	438.0
80°	148.6	211.2	295.7	341.0	358.2
82.5°	95.4	158.0	225.3	258.1	272.2
85°	53.2	104.8	147.0	165.8	172.1
87.5°	21.9	45.4	59.4	67.3	67.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)