

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: P313248

Luminaire Tested: **24FCZ2-50HE-UNV-L83050-HRP-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: P313248
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)
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-HRP-CA125-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. 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: 3770.0 lumens
Efficiency: N/A
Efficacy: 93.5 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

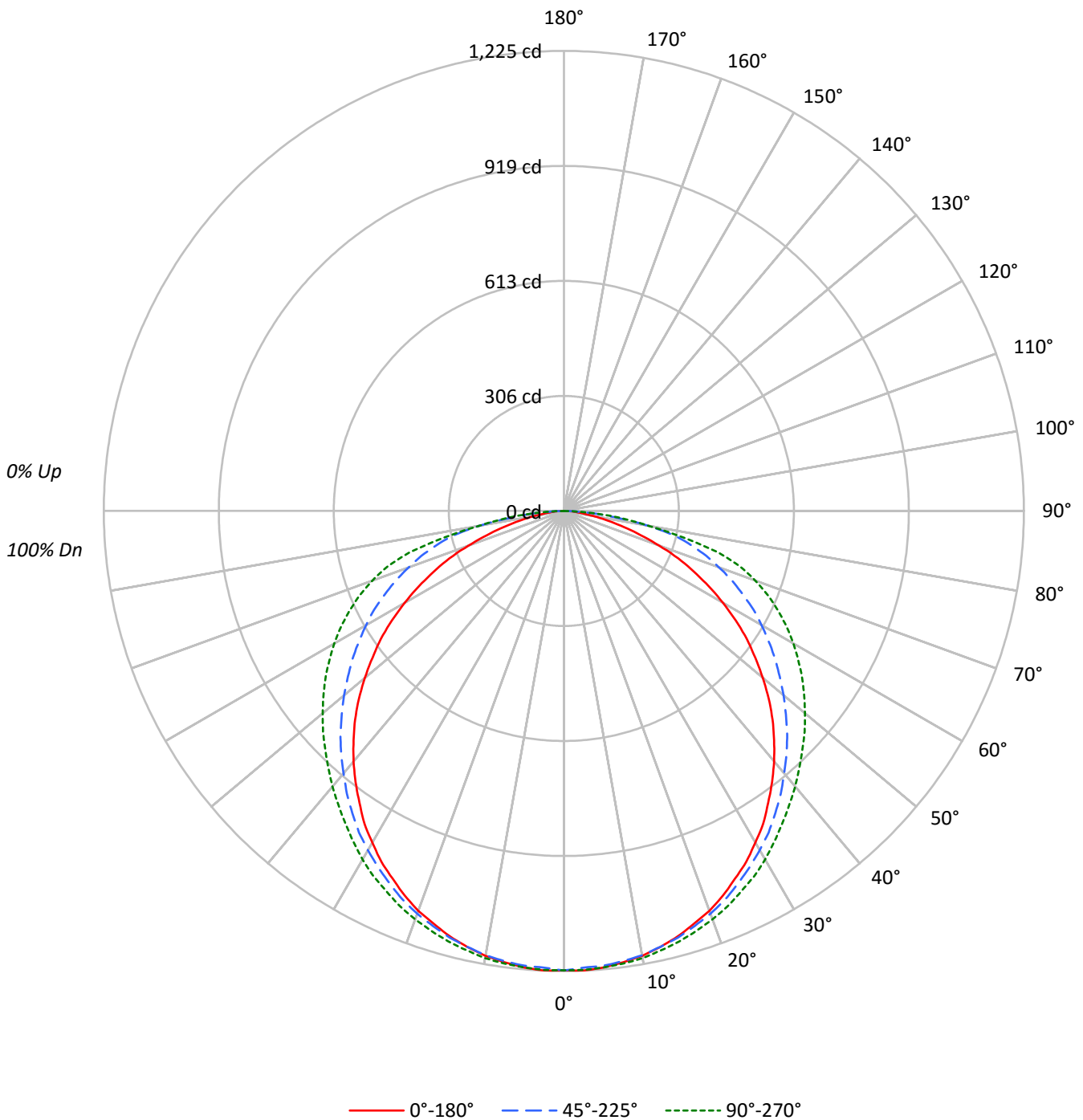
Input Watts (W): 40.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				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	101	96	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	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	24	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1646	1646	1646
5°	1648	1641	1648
10°	1643	1641	1652
15°	1634	1638	1653
20°	1623	1634	1656
25°	1603	1626	1659
30°	1584	1621	1665
35°	1558	1612	1667
40°	1530	1602	1683
45°	1496	1601	1709
50°	1447	1599	1754
55°	1396	1611	1818
60°	1317	1635	1898
65°	1216	1673	2005
70°	1062	1732	2136
75°	861	1822	2207
80°	636	1785	1785
85°	488	1315	1487



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	115.9	3.1
10°-20°	332.7	8.8
20°-30°	506.6	13.4
30°-40°	615.1	16.3
40°-50°	649.8	17.2
50°-60°	613.2	16.3
60°-70°	509.8	13.5
70°-80°	335.4	8.9
80°-90°	91.4	2.4
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°	955.2	25.3
0°-40°	1570.3	41.7
0°-60°	2833.3	75.2
0°-90°	3770.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3770.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1223	1223	1223	1223	1223	
5°	1220	1220	1215	1220	1220	116
15°	1173	1174	1176	1187	1187	331
25°	1080	1086	1095	1114	1117	498
35°	949	960	982	1007	1015	594
45°	786	802	841	882	898	605
55°	595	620	687	751	775	530
65°	382	426	526	603	630	378
75°	166	242	350	415	425	179
85°	32	69	85	95	96	39
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1223.2	1223.2	1223.2	1223.2	1223.2
2.5°	1224.8	1223.2	1216.9	1223.2	1223.2
5°	1220.0	1220.0	1215.3	1220.0	1220.0
7.5°	1212.1	1212.1	1209.0	1215.3	1215.3
10°	1202.7	1202.7	1201.1	1209.0	1209.0
12.5°	1188.5	1190.0	1188.5	1197.9	1197.9
15°	1172.7	1174.3	1175.8	1186.9	1186.9
17.5°	1152.2	1155.3	1158.5	1171.1	1172.7
20°	1133.2	1134.8	1141.1	1155.3	1156.9
22.5°	1108.0	1112.7	1120.6	1134.8	1139.5
25°	1079.6	1085.9	1095.3	1114.3	1117.4
27.5°	1052.7	1057.5	1070.1	1090.6	1096.9
30°	1019.6	1027.5	1043.3	1063.8	1071.7
32.5°	988.0	995.9	1014.8	1036.9	1043.3
35°	948.6	959.6	981.7	1007.0	1014.8
37.5°	910.7	921.7	948.6	977.0	986.4
40°	871.2	883.8	912.3	945.4	958.0
42.5°	828.6	846.0	877.5	913.8	928.0
45°	786.0	801.8	841.2	882.3	898.1
47.5°	740.2	759.2	801.8	850.7	869.6
50°	691.3	715.0	763.9	817.6	838.1
52.5°	642.4	669.2	724.4	784.4	806.5
55°	595.0	620.3	686.6	751.3	774.9
57.5°	542.9	574.5	647.1	716.5	740.2
60°	489.3	524.0	607.6	680.2	705.5
62.5°	435.6	475.1	569.8	642.4	669.2
65°	381.9	426.1	525.6	602.9	629.7
67.5°	329.9	378.8	484.5	561.9	588.7
70°	269.9	331.4	440.3	516.1	542.9
72.5°	214.6	285.7	397.7	468.8	492.4
75°	165.7	241.5	350.4	415.1	424.6
77.5°	121.5	197.3	301.5	323.6	325.1
80°	82.1	157.8	230.4	227.3	230.4
82.5°	53.7	118.4	145.2	162.6	164.1
85°	31.6	69.4	85.2	94.7	96.3
87.5°	15.8	23.7	30.0	31.6	34.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)