

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: P313220

Luminaire Tested: **24FCZ2-45-UNV-L83050-HRP-CA125-W2A-U-3000K**

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: P313220
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: 24FCZ2-45-UNV-L83050-HRP-CA125-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" ACRYLIC SHEET
Light Source: (168) 3000K 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: 3031.0 lumens
Efficiency: N/A
Efficacy: 80.8 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

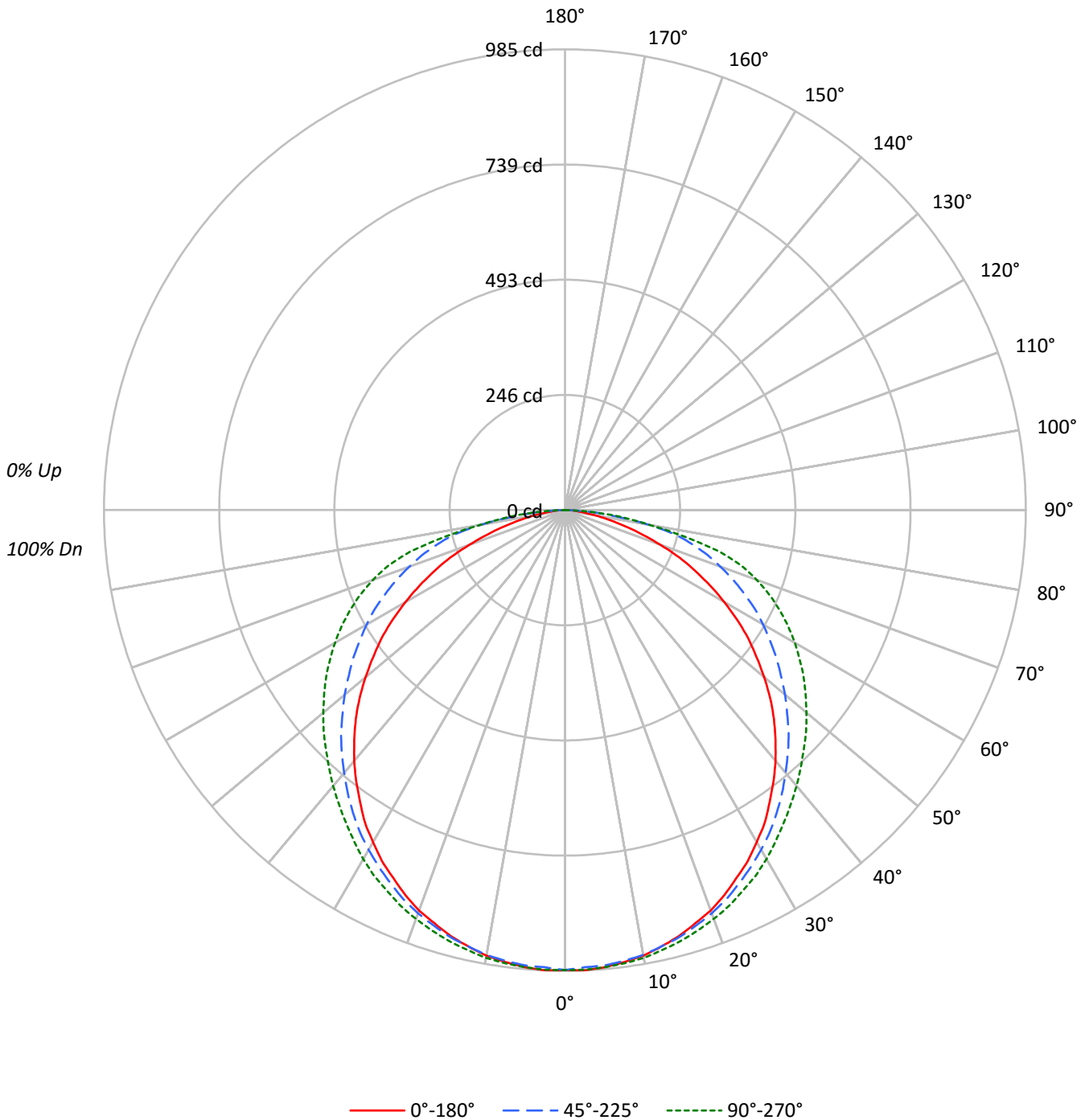
Input Watts (W): 37.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1323	1323	1323
5°	1325	1320	1325
10°	1321	1319	1328
15°	1313	1317	1329
20°	1305	1314	1332
25°	1288	1307	1334
30°	1274	1303	1339
35°	1253	1296	1340
40°	1230	1288	1353
45°	1202	1287	1374
50°	1163	1286	1410
55°	1122	1295	1461
60°	1059	1315	1526
65°	978	1345	1612
70°	854	1393	1717
75°	692	1464	1774
80°	511	1436	1436
85°	392	1057	1195



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	93.2	3.1
10°-20°	267.5	8.8
20°-30°	407.3	13.4
30°-40°	494.5	16.3
40°-50°	522.4	17.2
50°-60°	493.0	16.3
60°-70°	409.9	13.5
70°-80°	269.7	8.9
80°-90°	73.5	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°	767.9	25.3
0°-40°	1262.5	41.7
0°-60°	2277.9	75.2
0°-90°	3031.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3031.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	983	983	983	983	983	
5°	981	981	977	981	981	93
15°	943	944	945	954	954	266
25°	868	873	881	896	898	400
35°	763	772	789	810	816	477
45°	632	645	676	709	722	487
55°	478	499	552	604	623	426
65°	307	343	422	485	506	304
75°	133	194	282	334	341	144
85°	25	56	68	76	77	31
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	983.4	983.4	983.4	983.4	983.4
2.5°	984.7	983.4	978.3	983.4	983.4
5°	980.9	980.9	977.1	980.9	980.9
7.5°	974.5	974.5	972.0	977.1	977.1
10°	966.9	966.9	965.6	972.0	972.0
12.5°	955.5	956.8	955.5	963.1	963.1
15°	942.8	944.1	945.3	954.2	954.2
17.5°	926.3	928.8	931.4	941.5	942.8
20°	911.1	912.4	917.4	928.8	930.1
22.5°	890.8	894.6	900.9	912.4	916.2
25°	867.9	873.0	880.6	895.9	898.4
27.5°	846.4	850.2	860.3	876.8	881.9
30°	819.7	826.1	838.8	855.2	861.6
32.5°	794.3	800.7	815.9	833.7	838.8
35°	762.6	771.5	789.3	809.6	815.9
37.5°	732.2	741.0	762.6	785.5	793.1
40°	700.4	710.6	733.4	760.1	770.2
42.5°	666.2	680.1	705.5	734.7	746.1
45°	631.9	644.6	676.3	709.3	722.0
47.5°	595.1	610.3	644.6	683.9	699.2
50°	555.8	574.8	614.2	657.3	673.8
52.5°	516.4	538.0	582.4	630.7	648.4
55°	478.4	498.7	552.0	604.0	623.0
57.5°	436.5	461.9	520.3	576.1	595.1
60°	393.4	421.3	488.5	546.9	567.2
62.5°	350.2	381.9	458.1	516.4	538.0
65°	307.1	342.6	422.5	484.7	506.3
67.5°	265.2	304.5	389.6	451.7	473.3
70°	217.0	266.5	354.0	414.9	436.5
72.5°	172.6	229.7	319.8	376.9	395.9
75°	133.2	194.1	281.7	333.7	341.3
77.5°	97.7	158.6	242.4	260.1	261.4
80°	66.0	126.9	185.3	182.7	185.3
82.5°	43.1	95.2	116.7	130.7	132.0
85°	25.4	55.8	68.5	76.1	77.4
87.5°	12.7	19.0	24.1	25.4	27.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)