

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: P309464

Luminaire Tested: **24FCZ2-45-UNV-L82765-HRP-CA125-W2A-U-2700K**

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: P309464
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-L82765-HRP-CA125-W2A-U-2700K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" ACRYLIC SHEET
Light Source: (168) 2700K 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: 2874.0 lumens
Efficiency: N/A
Efficacy: 76.4 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

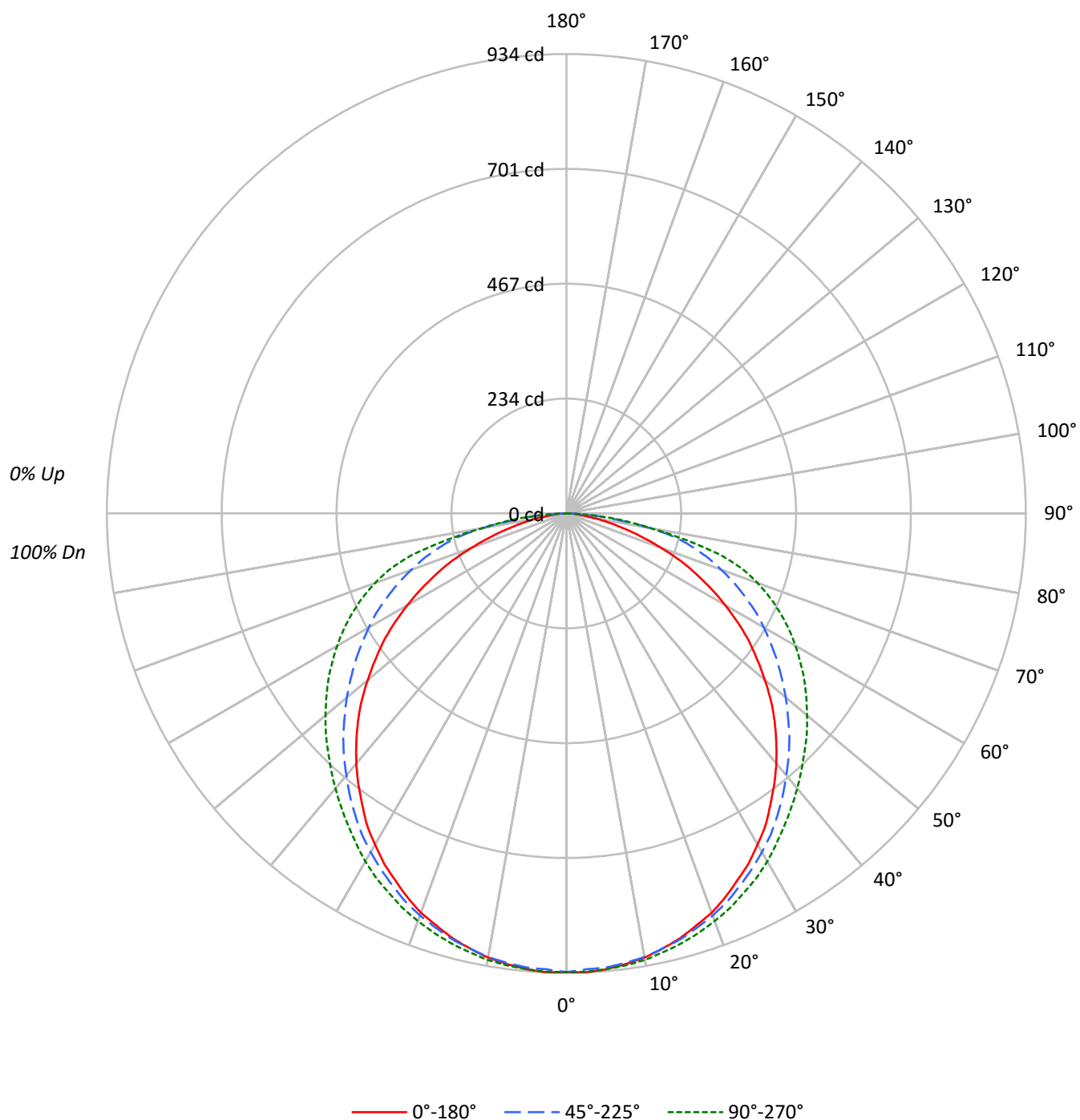
Input Watts (W): 37.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1255	1255	1255
5°	1256	1251	1256
10°	1253	1251	1259
15°	1245	1249	1260
20°	1237	1246	1263
25°	1222	1240	1265
30°	1208	1236	1269
35°	1188	1229	1271
40°	1167	1221	1283
45°	1140	1220	1303
50°	1103	1219	1337
55°	1064	1228	1386
60°	1004	1246	1447
65°	927	1276	1528
70°	809	1321	1628
75°	657	1389	1683
80°	485	1361	1361
85°	372	1003	1133



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	88.3	3.1
10°-20°	253.7	8.8
20°-30°	386.2	13.4
30°-40°	468.9	16.3
40°-50°	495.4	17.2
50°-60°	467.5	16.3
60°-70°	388.7	13.5
70°-80°	255.7	8.9
80°-90°	69.7	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°	728.2	25.3
0°-40°	1197.1	41.7
0°-60°	2159.9	75.2
0°-90°	2874.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2874.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	932	932	932	932	932	
5°	930	930	926	930	930	88
15°	894	895	896	905	905	252
25°	823	828	835	850	852	380
35°	723	732	748	768	774	453
45°	599	611	641	673	685	461
55°	454	473	523	573	591	404
65°	291	325	401	460	480	288
75°	126	184	267	316	324	136
85°	24	53	65	72	73	29
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	932.5	932.5	932.5	932.5	932.5
2.5°	933.7	932.5	927.7	932.5	932.5
5°	930.1	930.1	926.5	930.1	930.1
7.5°	924.0	924.0	921.6	926.5	926.5
10°	916.8	916.8	915.6	921.6	921.6
12.5°	906.0	907.2	906.0	913.2	913.2
15°	894.0	895.2	896.4	904.8	904.8
17.5°	878.3	880.7	883.1	892.8	894.0
20°	863.9	865.1	869.9	880.7	881.9
22.5°	844.6	848.2	854.3	865.1	868.7
25°	823.0	827.8	835.0	849.5	851.9
27.5°	802.5	806.1	815.8	831.4	836.2
30°	777.3	783.3	795.3	810.9	817.0
32.5°	753.2	759.2	773.7	790.5	795.3
35°	723.1	731.5	748.4	767.6	773.7
37.5°	694.2	702.7	723.1	744.8	752.0
40°	664.2	673.8	695.4	720.7	730.3
42.5°	631.7	644.9	669.0	696.6	707.5
45°	599.2	611.2	641.3	672.6	684.6
47.5°	564.3	578.7	611.2	648.5	663.0
50°	527.0	545.0	582.3	623.3	638.9
52.5°	489.7	510.2	552.3	598.0	614.8
55°	453.6	472.9	523.4	572.7	590.8
57.5°	413.9	438.0	493.3	546.2	564.3
60°	373.0	399.5	463.2	518.6	537.8
62.5°	332.1	362.2	434.4	489.7	510.2
65°	291.2	324.9	400.7	459.6	480.1
67.5°	251.5	288.8	369.4	428.3	448.8
70°	205.7	252.7	335.7	393.4	413.9
72.5°	163.6	217.8	303.2	357.3	375.4
75°	126.3	184.1	267.1	316.4	323.7
77.5°	92.6	150.4	229.8	246.7	247.9
80°	62.6	120.3	175.7	173.3	175.7
82.5°	40.9	90.2	110.7	123.9	125.1
85°	24.1	52.9	65.0	72.2	73.4
87.5°	12.0	18.0	22.9	24.1	26.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)