

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: P309462

Luminaire Tested: **24FCZ2-45-UNV-L82765-HRP-CA08-W2A-U-5700K**

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: P309462
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-CA08-W2A-U-5700K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" ACRYLIC SHEET
Light Source: (168) 5700K 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: 3277.0 lumens
Efficiency: N/A
Efficacy: 84.7 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

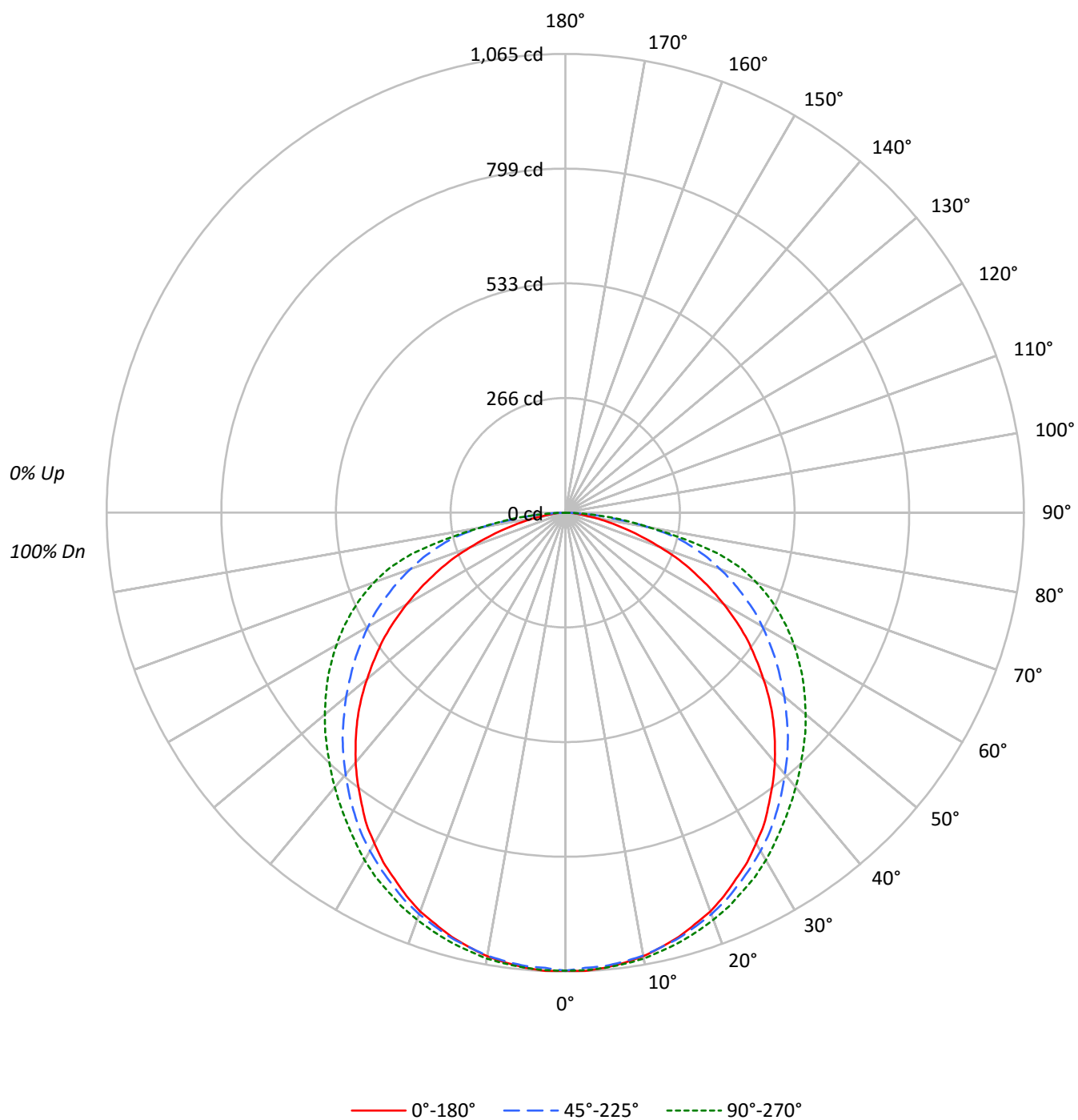
Input Watts (W): 38.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1431	1431	1431
5°	1432	1427	1432
10°	1428	1426	1436
15°	1420	1424	1437
20°	1410	1420	1440
25°	1393	1413	1442
30°	1377	1409	1447
35°	1354	1402	1449
40°	1330	1393	1463
45°	1300	1391	1485
50°	1258	1390	1525
55°	1213	1400	1580
60°	1144	1421	1650
65°	1057	1454	1743
70°	923	1506	1856
75°	749	1583	1918
80°	552	1552	1552
85°	423	1144	1292



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	100.7	3.1
10°-20°	289.2	8.8
20°-30°	440.3	13.4
30°-40°	534.6	16.3
40°-50°	564.9	17.2
50°-60°	533.0	16.3
60°-70°	443.2	13.5
70°-80°	291.6	8.9
80°-90°	79.5	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°	830.3	25.3
0°-40°	1364.9	41.7
0°-60°	2462.8	75.2
0°-90°	3277.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3277.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1063	1063	1063	1063	1063	
5°	1060	1060	1056	1060	1060	101
15°	1019	1021	1022	1032	1032	287
25°	938	944	952	969	971	433
35°	824	834	853	875	882	516
45°	683	697	731	767	781	526
55°	517	539	597	653	674	461
65°	332	370	457	524	547	328
75°	144	210	305	361	369	155
85°	27	60	74	82	84	34
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1063.2	1063.2	1063.2	1063.2	1063.2
2.5°	1064.6	1063.2	1057.7	1063.2	1063.2
5°	1060.5	1060.5	1056.4	1060.5	1060.5
7.5°	1053.6	1053.6	1050.9	1056.4	1056.4
10°	1045.4	1045.4	1044.0	1050.9	1050.9
12.5°	1033.0	1034.4	1033.0	1041.3	1041.3
15°	1019.3	1020.7	1022.1	1031.7	1031.7
17.5°	1001.5	1004.2	1007.0	1018.0	1019.3
20°	985.0	986.4	991.9	1004.2	1005.6
22.5°	963.1	967.2	974.1	986.4	990.5
25°	938.4	943.9	952.1	968.6	971.3
27.5°	915.1	919.2	930.2	948.0	953.5
30°	886.2	893.1	906.8	924.7	931.5
32.5°	858.8	865.7	882.1	901.3	906.8
35°	824.5	834.1	853.3	875.3	882.1
37.5°	791.6	801.2	824.5	849.2	857.4
40°	757.3	768.3	793.0	821.8	832.7
42.5°	720.2	735.3	762.8	794.3	806.7
45°	683.2	696.9	731.2	766.9	780.6
47.5°	643.4	659.9	696.9	739.5	755.9
50°	600.9	621.5	664.0	710.6	728.5
52.5°	558.4	581.7	629.7	681.8	701.0
55°	517.2	539.2	596.8	653.0	673.6
57.5°	471.9	499.4	562.5	622.8	643.4
60°	425.3	455.5	528.2	591.3	613.2
62.5°	378.6	412.9	495.3	558.4	581.7
65°	332.0	370.4	456.8	524.1	547.4
67.5°	286.7	329.3	421.2	488.4	511.7
70°	234.6	288.1	382.8	448.6	471.9
72.5°	186.6	248.3	345.7	407.5	428.0
75°	144.0	209.9	304.6	360.8	369.0
77.5°	105.6	171.5	262.0	281.2	282.6
80°	71.3	137.2	200.3	197.6	200.3
82.5°	46.6	102.9	126.2	141.3	142.7
85°	27.4	60.4	74.1	82.3	83.7
87.5°	13.7	20.6	26.1	27.4	30.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)