

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: P306984

Luminaire Tested: **14FCZ2-20-UNV-L82765-HRP-CA08-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: P306984
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-18)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 14FCZ2-20-UNV-L82765-HRP-CA08-W2A-U-4500K
Description: 1'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" ACRYLIC SHEET
Light Source: (168) 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: 1548.0 lumens
Efficiency: N/A
Efficacy: 92.1 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.29 / 1.39
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

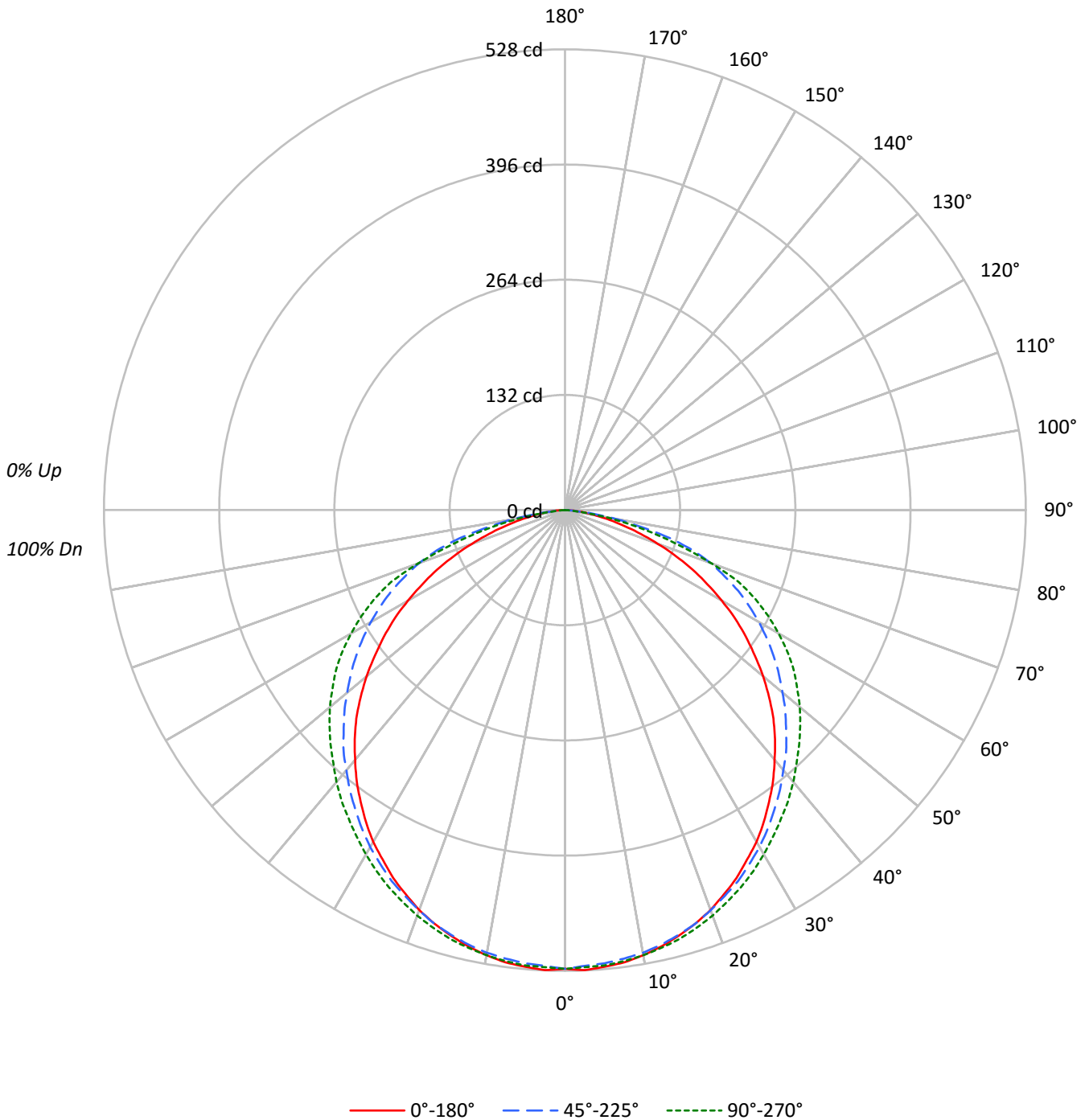
Input Watts (W): 16.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	109	104	100	96	106	102	98	94	97	94	91	93	91	88	90	88	86	84
2	99	90	83	78	96	88	82	77	85	79	75	82	77	73	78	75	71	69
3	90	79	71	64	87	77	70	64	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	64	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	69	56	47	40	68	55	46	40	53	45	40	51	45	39	50	44	39	37
7	64	51	42	36	63	50	41	35	48	41	35	47	40	35	45	39	35	33
8	60	46	38	32	58	45	37	32	44	37	31	43	36	31	42	36	31	29
9	56	42	34	28	54	42	34	28	41	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	38	31	26	37	30	26	37	30	25	36	30	25	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1415	1415	1415
5°	1419	1408	1415
10°	1415	1407	1415
15°	1406	1404	1417
20°	1397	1398	1416
25°	1382	1393	1416
30°	1364	1386	1416
35°	1340	1375	1418
40°	1313	1368	1429
45°	1286	1364	1445
50°	1241	1363	1471
55°	1187	1370	1503
60°	1116	1380	1522
65°	1029	1394	1531
70°	896	1398	1409
75°	739	1301	1138
80°	581	936	762
85°	451	361	179



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	49.8	3.2
10°-20°	142.8	9.2
20°-30°	216.9	14.0
30°-40°	262.8	17.0
40°-50°	276.9	17.9
50°-60°	258.5	16.7
60°-70°	206.6	13.3
70°-80°	113.7	7.3
80°-90°	20.1	1.3
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°	409.5	26.5
0°-40°	672.2	43.4
0°-60°	1207.7	78.0
0°-90°	1548.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1548.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	526	526	526	526	526	
5°	525	524	521	525	524	50
15°	505	505	504	509	509	142
25°	465	466	469	476	477	214
35°	408	412	419	429	432	255
45°	338	344	358	374	380	260
55°	253	266	292	312	320	226
65°	162	182	219	237	240	159
75°	71	102	125	112	110	77
85°	15	18	12	7	6	18
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	525.7	525.7	525.7	525.7	525.7
2.5°	527.7	526.2	522.8	525.7	524.2
5°	525.2	523.8	521.3	524.7	523.8
7.5°	522.8	520.8	518.4	522.3	521.3
10°	517.9	516.5	515.0	518.4	517.9
12.5°	512.1	511.6	510.1	514.0	513.5
15°	504.8	504.8	503.8	508.7	508.7
17.5°	497.0	496.5	497.0	502.3	501.9
20°	487.7	487.7	488.2	494.6	494.6
22.5°	476.5	477.0	478.5	486.3	485.8
25°	465.3	466.3	469.2	476.1	477.0
27.5°	451.7	454.2	457.6	465.8	466.8
30°	439.1	440.5	445.9	453.7	455.6
32.5°	424.0	426.9	432.7	441.5	443.9
35°	407.9	411.8	418.6	429.3	431.8
37.5°	391.8	395.3	404.5	415.7	420.1
40°	373.8	379.7	389.4	402.1	406.9
42.5°	356.3	362.2	375.3	388.4	392.8
45°	337.8	344.1	358.3	374.3	379.7
47.5°	317.4	324.7	342.7	359.7	365.6
50°	296.4	305.7	325.6	344.6	351.4
52.5°	274.5	286.2	309.1	329.1	335.4
55°	253.1	265.8	292.1	312.5	320.3
57.5°	231.2	244.8	274.5	297.9	302.3
60°	207.4	223.9	256.5	277.0	282.8
62.5°	184.0	203.0	238.0	257.5	262.4
65°	161.6	182.1	219.0	237.1	240.5
67.5°	137.3	161.6	198.1	214.7	215.6
70°	113.9	142.1	177.7	185.5	179.1
72.5°	91.0	121.2	153.8	147.5	142.1
75°	71.1	101.7	125.1	112.4	109.5
77.5°	52.6	83.2	89.6	82.8	77.4
80°	37.5	65.7	60.4	51.6	49.2
82.5°	25.8	41.4	33.1	25.8	22.4
85°	14.6	18.5	11.7	7.3	5.8
87.5°	6.3	4.4	2.4	1.9	1.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)