

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: P308919

Luminaire Tested: **22FCZ2-24HE-UNV-L82765-S-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: P308919
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-23)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 22FCZ2-24HE-UNV-L82765-S-CA08-W2A-U-4500K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.08" 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: 2352.0 lumens
Efficiency: N/A
Efficacy: 121.9 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

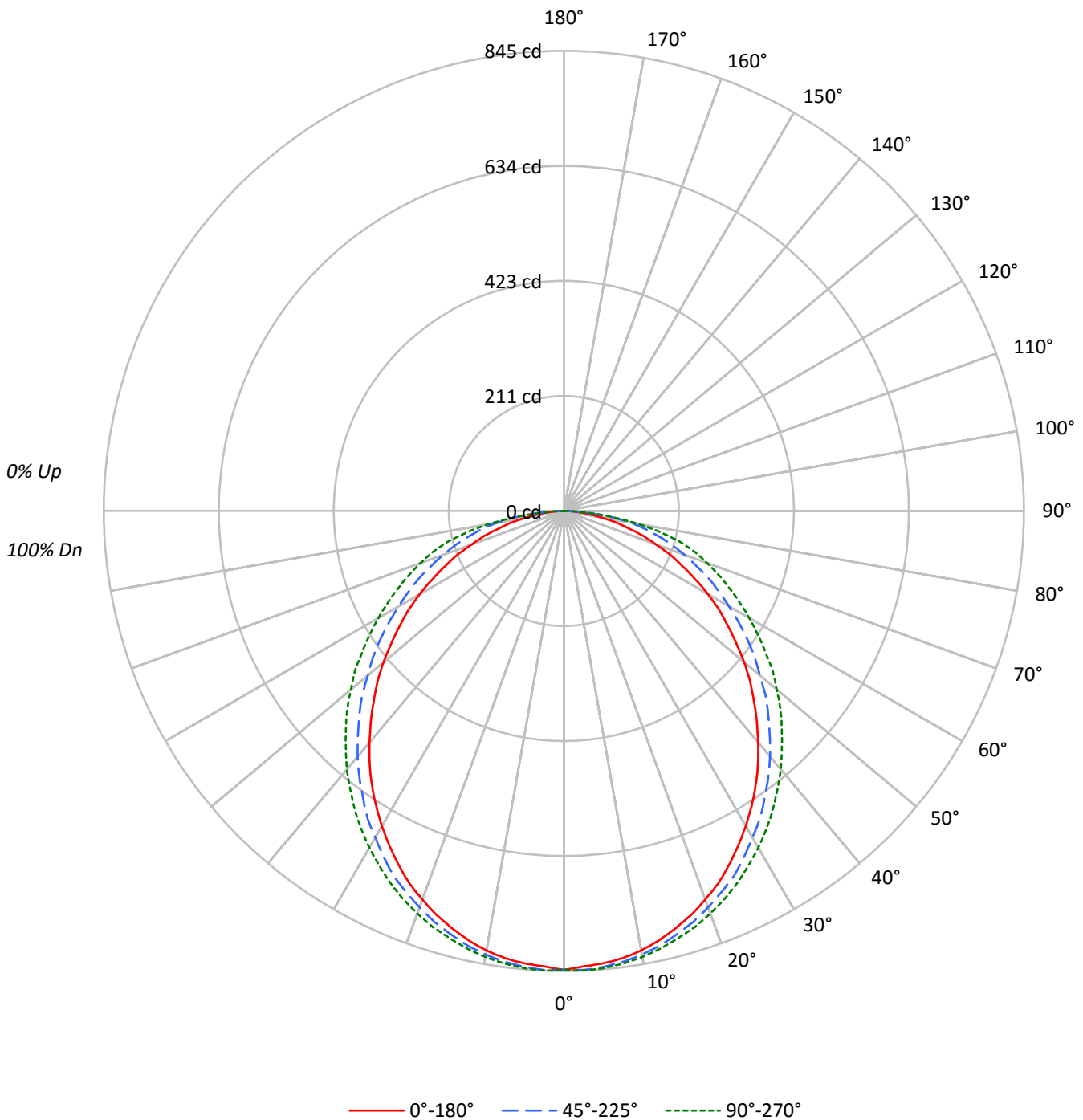
Input Watts (W): 19.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	71	69
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	61	56	52	49
5	75	62	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	43
6	70	56	47	41	68	55	47	41	53	46	40	52	45	40	50	44	39	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27
10	53	40	32	26	51	39	31	26	38	31	26	37	31	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2268	2268	2268
5°	2253	2271	2277
10°	2240	2261	2273
15°	2210	2241	2262
20°	2175	2219	2253
25°	2131	2196	2238
30°	2077	2152	2220
35°	2019	2113	2199
40°	1951	2070	2178
45°	1879	2021	2155
50°	1810	1966	2136
55°	1725	1931	2121
60°	1648	1884	2115
65°	1537	1873	2138
70°	1416	1856	2201
75°	1278	1883	2316
80°	1105	1939	2177
85°	914	1627	1627



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	79.7	3.4
10°-20°	226.8	9.6
20°-30°	339.4	14.4
30°-40°	401.9	17.1
40°-50°	409.6	17.4
50°-60°	367.1	15.6
60°-70°	287.4	12.2
70°-80°	185.3	7.9
80°-90°	54.8	2.3
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°	645.9	27.5
0°-40°	1047.8	44.5
0°-60°	1824.5	77.6
0°-90°	2352.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2352.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	843	843	843	843	843	
5°	834	836	841	842	843	79
15°	793	798	804	811	812	224
25°	718	724	740	750	754	330
35°	614	622	643	663	669	384
45°	494	505	531	559	566	381
55°	368	380	412	440	452	330
65°	241	256	294	323	336	240
75°	123	142	181	212	223	132
85°	30	41	53	53	53	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	842.8	842.8	842.8	842.8	842.8
2.5°	837.3	839.5	843.9	845.0	845.0
5°	834.0	836.2	840.6	841.7	842.8
7.5°	828.5	829.6	835.1	837.3	838.4
10°	819.7	821.9	827.4	830.7	831.8
12.5°	807.7	811.0	817.6	821.9	823.0
15°	793.4	797.8	804.4	811.0	812.1
17.5°	778.0	782.4	791.2	798.9	801.1
20°	759.4	764.9	774.8	783.5	786.8
22.5°	740.7	745.1	757.2	768.2	771.5
25°	717.7	724.3	739.6	749.5	753.9
27.5°	693.5	701.2	716.6	729.8	734.2
30°	668.3	676.0	692.5	708.9	714.4
32.5°	642.0	650.8	670.5	687.0	692.5
35°	614.5	622.2	643.1	662.8	669.4
37.5°	586.0	592.6	616.7	637.6	644.2
40°	555.3	564.1	589.3	613.4	620.0
42.5°	524.6	534.4	559.7	586.0	592.6
45°	493.8	504.8	531.1	558.6	566.3
47.5°	464.2	473.0	502.6	528.9	539.9
50°	432.4	441.2	469.7	499.3	510.3
52.5°	399.4	411.5	442.2	470.8	483.9
55°	367.6	379.7	411.5	440.1	452.1
57.5°	338.0	347.9	380.8	410.4	422.5
60°	306.2	315.0	350.1	381.9	392.9
62.5°	272.2	285.3	321.5	351.2	364.3
65°	241.4	255.7	294.1	322.6	335.8
67.5°	212.9	226.1	263.4	294.1	308.4
70°	180.0	197.5	235.9	266.7	279.8
72.5°	153.6	169.0	208.5	239.2	253.5
75°	122.9	141.6	181.1	211.8	222.8
77.5°	97.7	116.3	153.6	177.8	183.3
80°	71.3	90.0	125.1	137.2	140.5
82.5°	48.3	65.8	90.0	93.3	94.4
85°	29.6	40.6	52.7	52.7	52.7
87.5°	14.3	16.5	18.7	17.6	17.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)