

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: P312940

Luminaire Tested: **22FCZ2-29HE-UNV-L83050-S-CA08-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: P312940
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: 22FCZ2-29HE-UNV-L83050-S-CA08-W2A-U-3000K
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: 2558.0 lumens
Efficiency: N/A
Efficacy: 114.2 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

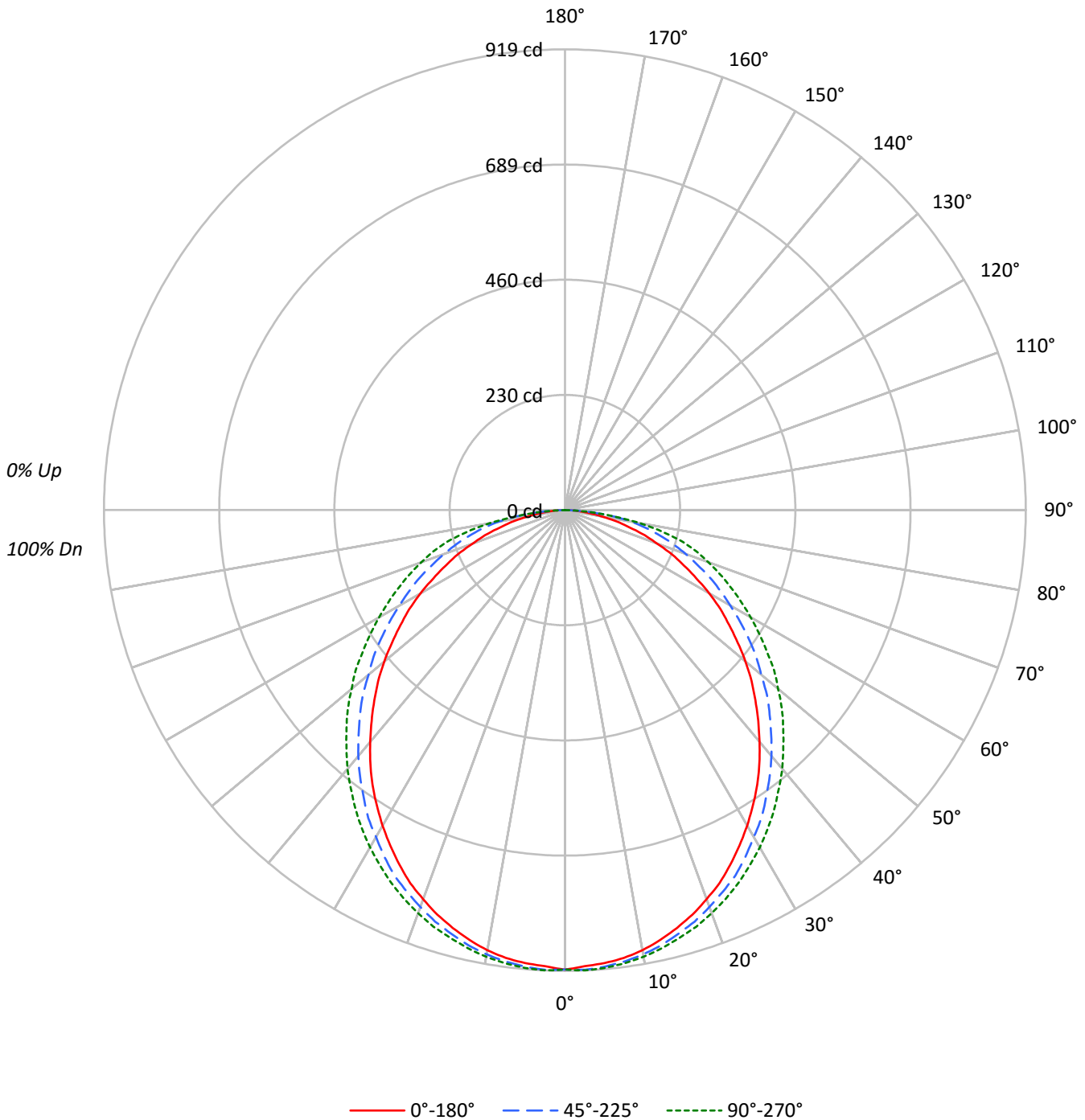
Input Watts (W): 22.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2467	2467	2467
5°	2450	2469	2476
10°	2436	2459	2472
15°	2404	2437	2461
20°	2365	2413	2450
25°	2318	2388	2434
30°	2258	2340	2414
35°	2196	2298	2392
40°	2121	2251	2369
45°	2044	2199	2343
50°	1968	2138	2323
55°	1876	2100	2307
60°	1792	2049	2300
65°	1672	2037	2325
70°	1540	2019	2394
75°	1390	2047	2519
80°	1203	2109	2368
85°	994	1769	1769



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.7	3.4
10°-20°	246.7	9.6
20°-30°	369.1	14.4
30°-40°	437.1	17.1
40°-50°	445.5	17.4
50°-60°	399.3	15.6
60°-70°	312.6	12.2
70°-80°	201.6	7.9
80°-90°	59.6	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°	702.5	27.5
0°-40°	1139.6	44.5
0°-60°	1984.3	77.6
0°-90°	2558.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2558.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	917	917	917	917	917	
5°	907	910	914	915	917	86
15°	863	868	875	882	883	243
25°	781	788	804	815	820	359
35°	668	677	699	721	728	418
45°	537	549	578	608	616	415
55°	400	413	448	479	492	358
65°	263	278	320	351	365	261
75°	134	154	197	230	242	143
85°	32	44	57	57	57	38
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	916.6	916.6	916.6	916.6	916.6
2.5°	910.6	913.0	917.8	919.0	919.0
5°	907.1	909.5	914.2	915.4	916.6
7.5°	901.1	902.3	908.3	910.6	911.8
10°	891.5	893.9	899.9	903.5	904.7
12.5°	878.4	882.0	889.2	893.9	895.1
15°	862.9	867.7	874.8	882.0	883.2
17.5°	846.2	851.0	860.5	868.9	871.3
20°	825.9	831.9	842.6	852.2	855.7
22.5°	805.6	810.4	823.5	835.5	839.0
25°	780.6	787.7	804.4	815.2	819.9
27.5°	754.3	762.6	779.4	793.7	798.5
30°	726.8	735.2	753.1	771.0	777.0
32.5°	698.2	707.7	729.2	747.1	753.1
35°	668.4	676.7	699.4	720.9	728.0
37.5°	637.3	644.5	670.7	693.4	700.6
40°	603.9	613.5	640.9	667.2	674.3
42.5°	570.5	581.2	608.7	637.3	644.5
45°	537.1	549.0	577.7	607.5	615.8
47.5°	504.9	514.4	546.6	575.3	587.2
50°	470.2	479.8	510.8	543.0	555.0
52.5°	434.4	447.6	481.0	512.0	526.3
55°	399.8	413.0	447.6	478.6	491.7
57.5°	367.6	378.3	414.1	446.4	459.5
60°	333.0	342.5	380.7	415.3	427.3
62.5°	296.0	310.3	349.7	381.9	396.2
65°	262.6	278.1	319.9	350.9	365.2
67.5°	231.5	245.9	286.4	319.9	335.4
70°	195.7	214.8	256.6	290.0	304.3
72.5°	167.1	183.8	226.8	260.2	275.7
75°	133.7	154.0	196.9	230.3	242.3
77.5°	106.2	126.5	167.1	193.3	199.3
80°	77.6	97.9	136.1	149.2	152.8
82.5°	52.5	71.6	97.9	101.4	102.6
85°	32.2	44.2	57.3	57.3	57.3
87.5°	15.5	17.9	20.3	19.1	19.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)