

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: P308409

Luminaire Tested: **22FCZ2-24HE-UNV-L82765-RDP-CP187-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: P308409
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-24)
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-RDP-CP187-W2A-U-5700K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" POLYCARB 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: 1433.0 lumens
Efficiency: N/A
Efficacy: 73.9 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

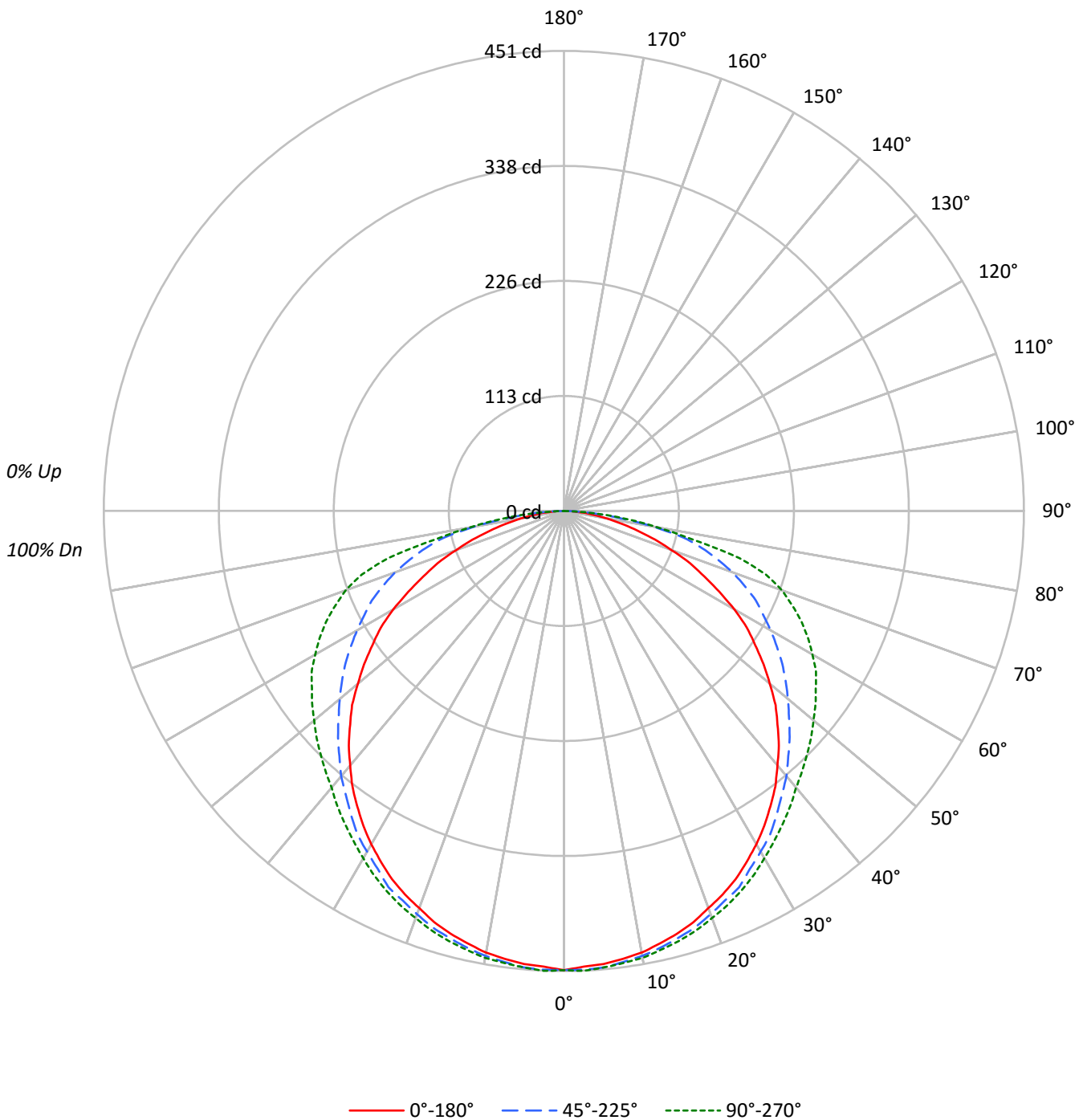
Input Watts (W): 19.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	108	103	98	94	105	100	96	92	96	92	89	92	89	86	88	86	84	82
2	97	88	81	75	95	86	80	74	83	77	72	80	75	71	76	72	69	67
3	88	77	68	61	86	75	67	61	72	65	60	70	64	59	67	62	58	55
4	80	68	59	51	78	66	58	51	64	56	50	61	55	50	59	54	49	47
5	74	60	51	44	72	59	50	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	44	38	51	43	38	50	43	37	48	42	37	35
7	63	49	40	33	61	48	39	33	47	39	33	45	38	33	44	37	33	31
8	59	45	36	30	57	44	35	30	43	35	29	41	34	29	40	34	29	27
9	55	41	32	27	53	40	32	27	39	32	26	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1211	1211	1211
5°	1204	1213	1213
10°	1201	1210	1216
15°	1195	1207	1216
20°	1186	1204	1216
25°	1183	1208	1221
30°	1173	1199	1222
35°	1160	1195	1229
40°	1144	1192	1244
45°	1127	1192	1284
50°	1103	1200	1337
55°	1073	1226	1415
60°	1038	1259	1515
65°	967	1323	1638
70°	887	1385	1792
75°	778	1458	1853
80°	669	1389	1454
85°	587	1010	1105



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	42.6	3.0
10°-20°	122.3	8.5
20°-30°	186.5	13.0
30°-40°	227.7	15.9
40°-50°	243.5	17.0
50°-60°	235.0	16.4
60°-70°	202.3	14.1
70°-80°	136.9	9.6
80°-90°	36.1	2.5
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°	351.3	24.5
0°-40°	579.1	40.4
0°-60°	1057.6	73.8
0°-90°	1433.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1433.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	450	450	450	450	450	
5°	446	447	449	449	449	42
15°	429	430	433	435	436	121
25°	398	401	407	409	411	183
35°	353	356	364	371	374	221
45°	296	302	313	329	337	229
55°	229	236	261	288	302	205
65°	152	167	208	240	257	151
75°	75	99	140	169	178	80
85°	19	26	33	34	36	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	450.1	450.1	450.1	450.1	450.1
2.5°	447.0	448.0	450.1	450.1	451.2
5°	445.9	447.0	449.1	449.1	449.1
7.5°	442.8	443.8	445.9	447.0	447.0
10°	439.6	440.6	442.8	443.8	444.9
12.5°	434.3	435.4	438.5	440.6	440.6
15°	429.0	430.1	433.3	435.4	436.4
17.5°	422.7	424.8	428.0	430.1	431.2
20°	414.3	416.4	420.6	423.8	424.8
22.5°	406.9	409.0	413.2	416.4	418.5
25°	398.5	400.6	406.9	409.0	411.1
27.5°	387.9	390.0	395.3	399.5	402.7
30°	377.4	379.5	385.8	391.1	393.2
32.5°	365.8	369.0	376.3	380.6	383.7
35°	353.1	356.3	363.7	371.1	374.2
37.5°	340.5	343.7	351.0	360.5	364.7
40°	325.7	330.0	339.4	352.1	354.2
42.5°	312.0	317.3	325.7	340.5	345.8
45°	296.2	301.5	313.1	328.9	337.3
47.5°	281.5	286.7	299.4	318.4	328.9
50°	263.5	270.9	286.7	308.9	319.4
52.5°	246.7	253.0	274.1	298.3	311.0
55°	228.8	236.1	261.4	287.8	301.5
57.5°	212.9	219.3	247.7	277.2	293.1
60°	192.9	201.3	234.0	265.7	281.5
62.5°	171.8	184.5	220.3	253.0	269.9
65°	151.8	166.6	207.7	240.4	257.2
67.5°	133.9	149.7	191.9	226.6	242.5
70°	112.8	132.8	176.0	209.8	227.7
72.5°	93.8	116.0	158.1	191.9	207.7
75°	74.8	99.1	140.2	168.7	178.2
77.5°	58.0	81.2	120.2	128.6	129.7
80°	43.2	64.3	89.6	90.7	93.8
82.5°	29.5	45.3	58.0	63.3	64.3
85°	19.0	26.4	32.7	33.7	35.8
87.5°	8.4	9.5	11.6	10.5	10.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)