

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: P308405

Luminaire Tested: **22FCZ2-24HE-UNV-L82765-RDP-CP187-W2A-U-4000K**

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: P308405
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-4000K
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: 1372.0 lumens
Efficiency: N/A
Efficacy: 71.8 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

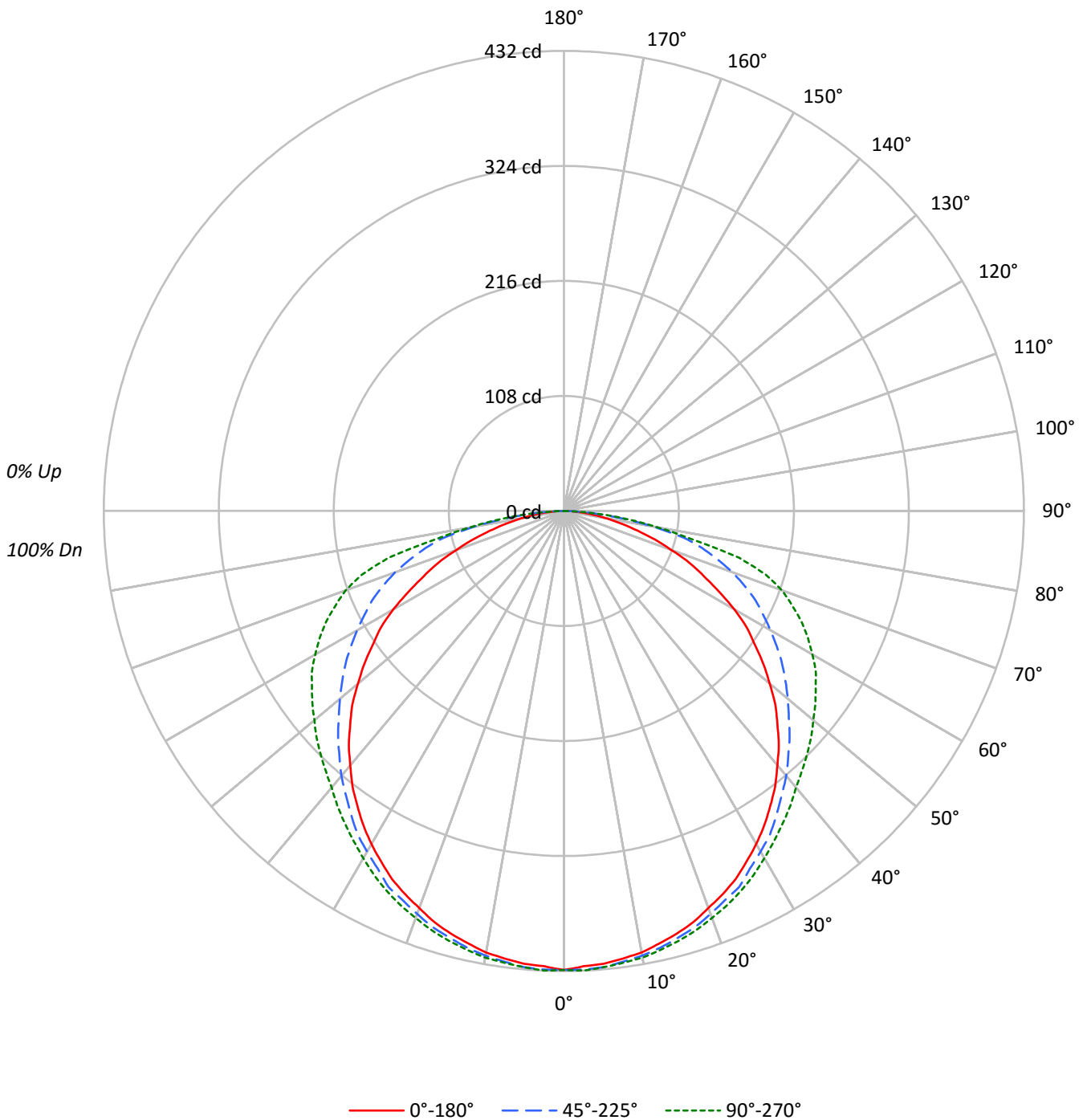
Input Watts (W): 19.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1160	1160	1160
5°	1153	1162	1162
10°	1150	1158	1164
15°	1144	1156	1164
20°	1136	1153	1165
25°	1133	1157	1169
30°	1123	1148	1170
35°	1111	1144	1177
40°	1096	1142	1191
45°	1079	1141	1229
50°	1056	1149	1280
55°	1027	1174	1354
60°	994	1206	1450
65°	925	1266	1568
70°	850	1327	1715
75°	745	1395	1774
80°	642	1330	1392
85°	562	966	1059



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	40.8	3.0
10°-20°	117.0	8.5
20°-30°	178.6	13.0
30°-40°	218.0	15.9
40°-50°	233.1	17.0
50°-60°	225.0	16.4
60°-70°	193.7	14.1
70°-80°	131.1	9.6
80°-90°	34.6	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°	336.4	24.5
0°-40°	554.4	40.4
0°-60°	1012.6	73.8
0°-90°	1372.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1372.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	431	431	431	431	431	
5°	427	428	430	430	430	41
15°	411	412	415	417	418	116
25°	382	384	390	392	394	176
35°	338	341	348	355	358	212
45°	284	289	300	315	323	219
55°	219	226	250	276	289	196
65°	145	160	199	230	246	145
75°	72	95	134	162	171	77
85°	18	25	31	32	34	20
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	431.0	431.0	431.0	431.0	431.0
2.5°	427.9	429.0	431.0	431.0	432.0
5°	426.9	427.9	430.0	430.0	430.0
7.5°	423.9	424.9	426.9	427.9	427.9
10°	420.9	421.9	423.9	424.9	425.9
12.5°	415.8	416.8	419.9	421.9	421.9
15°	410.8	411.8	414.8	416.8	417.8
17.5°	404.7	406.7	409.8	411.8	412.8
20°	396.7	398.7	402.7	405.7	406.7
22.5°	389.6	391.6	395.6	398.7	400.7
25°	381.5	383.5	389.6	391.6	393.6
27.5°	371.4	373.4	378.5	382.5	385.6
30°	361.3	363.3	369.4	374.4	376.5
32.5°	350.2	353.3	360.3	364.4	367.4
35°	338.1	341.1	348.2	355.3	358.3
37.5°	326.0	329.0	336.1	345.2	349.2
40°	311.9	315.9	325.0	337.1	339.1
42.5°	298.8	303.8	311.9	326.0	331.0
45°	283.6	288.7	299.8	314.9	323.0
47.5°	269.5	274.5	286.6	304.8	314.9
50°	252.3	259.4	274.5	295.7	305.8
52.5°	236.2	242.2	262.4	285.6	297.7
55°	219.0	226.1	250.3	275.5	288.7
57.5°	203.9	209.9	237.2	265.4	280.6
60°	184.7	192.8	224.1	254.3	269.5
62.5°	164.5	176.6	210.9	242.2	258.4
65°	145.3	159.5	198.8	230.1	246.3
67.5°	128.2	143.3	183.7	217.0	232.1
70°	108.0	127.2	168.6	200.8	218.0
72.5°	89.8	111.0	151.4	183.7	198.8
75°	71.7	94.9	134.2	161.5	170.6
77.5°	55.5	77.7	115.1	123.1	124.1
80°	41.4	61.6	85.8	86.8	89.8
82.5°	28.3	43.4	55.5	60.6	61.6
85°	18.2	25.2	31.3	32.3	34.3
87.5°	8.1	9.1	11.1	10.1	10.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)