

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: P308410

Luminaire Tested: **22FCZ2-24HE-UNV-L82765-RDP-CP187-W2A-U-6500K**

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: P308410
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-6500K
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: 1437.0 lumens
Efficiency: N/A
Efficacy: 72.9 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

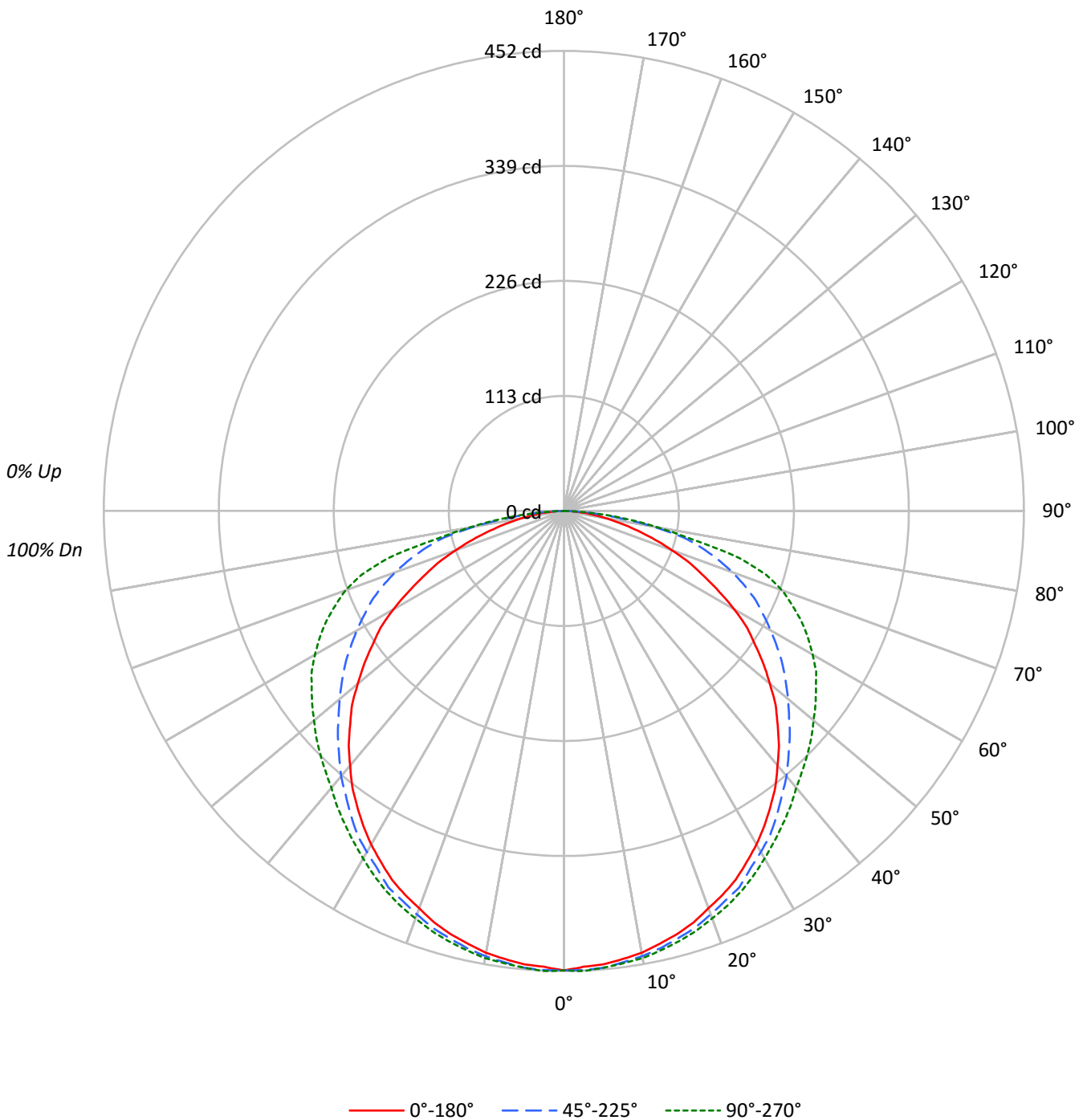
Input Watts (W): 19.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1215	1215	1215
5°	1208	1216	1216
10°	1204	1213	1219
15°	1198	1210	1219
20°	1190	1208	1220
25°	1186	1211	1224
30°	1176	1202	1225
35°	1163	1198	1233
40°	1147	1196	1248
45°	1130	1195	1287
50°	1106	1204	1341
55°	1076	1230	1418
60°	1041	1263	1519
65°	969	1326	1642
70°	890	1389	1796
75°	781	1462	1858
80°	671	1393	1458
85°	587	1013	1108



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	42.7	3.0
10°-20°	122.6	8.5
20°-30°	187.0	13.0
30°-40°	228.4	15.9
40°-50°	244.2	17.0
50°-60°	235.7	16.4
60°-70°	202.9	14.1
70°-80°	137.3	9.6
80°-90°	36.2	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°	352.3	24.5
0°-40°	580.7	40.4
0°-60°	1060.6	73.8
0°-90°	1437.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1437.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	451	451	451	451	451	
5°	447	448	450	450	450	42
15°	430	431	434	437	438	121
25°	400	402	408	410	412	184
35°	354	357	365	372	375	222
45°	297	302	314	330	338	229
55°	229	237	262	289	302	206
65°	152	167	208	241	258	151
75°	75	99	141	169	179	81
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°	451.4	451.4	451.4	451.4	451.4
2.5°	448.2	449.3	451.4	451.4	452.4
5°	447.2	448.2	450.3	450.3	450.3
7.5°	444.0	445.0	447.2	448.2	448.2
10°	440.8	441.9	444.0	445.0	446.1
12.5°	435.5	436.6	439.8	441.9	441.9
15°	430.2	431.3	434.5	436.6	437.6
17.5°	423.9	426.0	429.2	431.3	432.4
20°	415.4	417.6	421.8	425.0	426.0
22.5°	408.0	410.2	414.4	417.6	419.7
25°	399.6	401.7	408.0	410.2	412.3
27.5°	389.0	391.1	396.4	400.6	403.8
30°	378.4	380.6	386.9	392.2	394.3
32.5°	366.8	370.0	377.4	381.6	384.8
35°	354.1	357.3	364.7	372.1	375.3
37.5°	341.4	344.6	352.0	361.5	365.8
40°	326.6	330.9	340.4	353.1	355.2
42.5°	312.9	318.2	326.6	341.4	346.7
45°	297.0	302.3	314.0	329.8	338.3
47.5°	282.2	287.5	300.2	319.2	329.8
50°	264.3	271.7	287.5	309.7	320.3
52.5°	247.4	253.7	274.8	299.2	311.8
55°	229.4	236.8	262.2	288.6	302.3
57.5°	213.5	219.9	248.4	278.0	293.9
60°	193.5	201.9	234.7	266.4	282.2
62.5°	172.3	185.0	220.9	253.7	270.6
65°	152.2	167.0	208.3	241.0	257.9
67.5°	134.3	150.1	192.4	227.3	243.1
70°	113.1	133.2	176.5	210.4	228.3
72.5°	94.1	116.3	158.6	192.4	208.3
75°	75.1	99.4	140.6	169.1	178.7
77.5°	58.1	81.4	120.5	129.0	130.0
80°	43.3	64.5	89.9	90.9	94.1
82.5°	29.6	45.5	58.1	63.4	64.5
85°	19.0	26.4	32.8	33.8	35.9
87.5°	8.5	9.5	11.6	10.6	10.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)