

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: P310163

Luminaire Tested: **24FCZ2-45-UNV-L82765-RDP-CP187-W2A-U-5500K**

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: P310163
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-45-UNV-L82765-RDP-CP187-W2A-U-5500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" POLYCARB SHEET
Light Source: (168) 5500K 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: 2712.0 lumens
Efficiency: N/A
Efficacy: 70.1 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

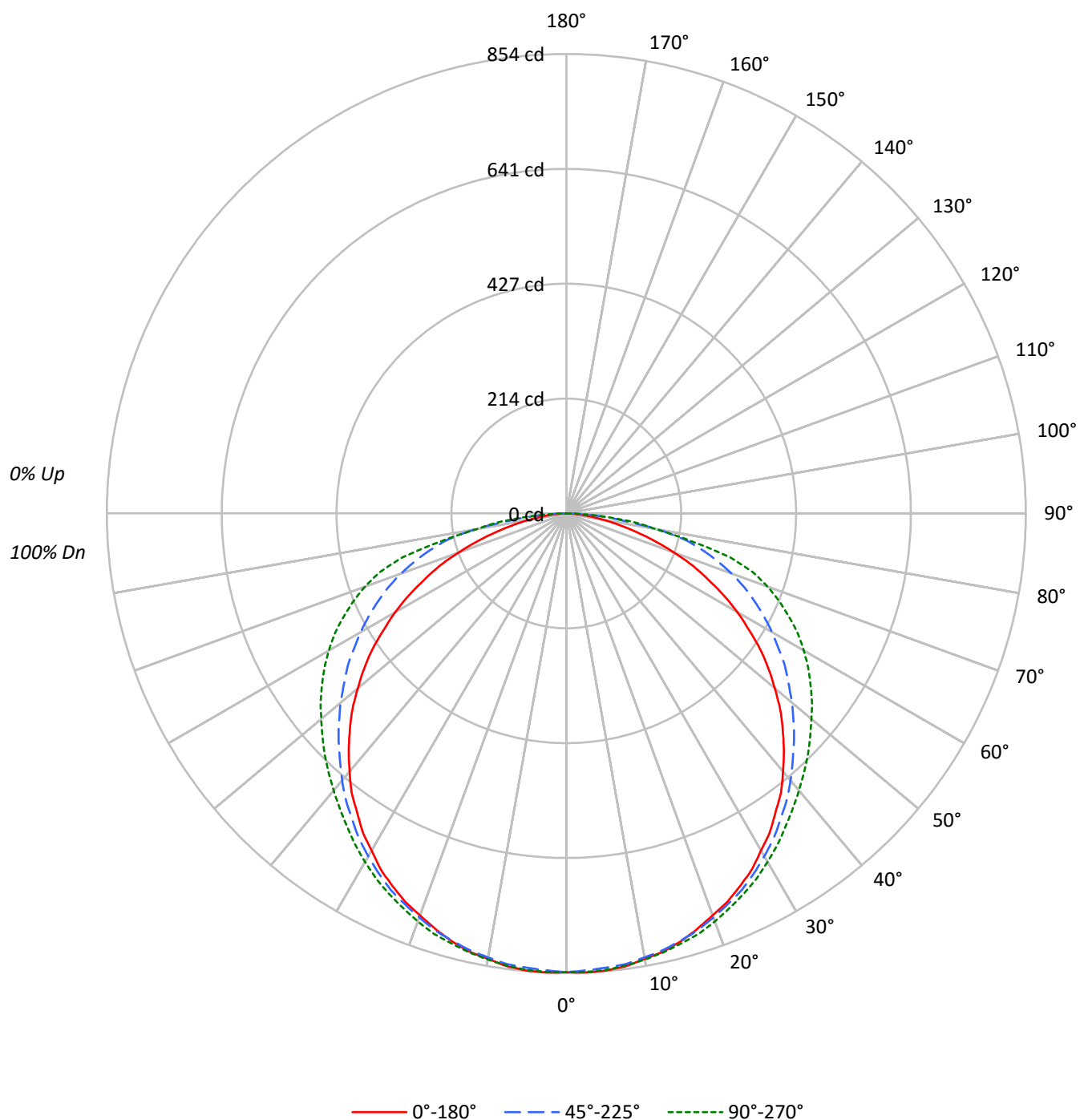
Input Watts (W): 38.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				0
RW	70	50	30	10	70	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		100
1	108	103	98	94	105	100	96	92	96	93	89		92	89	87		82
2	97	89	81	75	95	87	80	74	83	77	72		80	75	71		67
3	88	77	68	62	86	76	67	61	72	66	60		70	64	59		56
4	81	68	59	52	78	67	58	51	64	57	51		62	55	50		47
5	74	60	51	44	72	59	51	44	57	49	43		55	48	43		40
6	68	54	45	38	66	53	45	38	51	44	38		50	43	37		35
7	63	49	40	34	61	48	40	34	47	39	33		45	38	33		31
8	59	45	36	30	57	44	36	30	43	35	30		41	34	29		27
9	55	41	33	27	53	40	32	27	39	32	27		38	31	26		24
10	51	38	30	24	50	37	29	24	36	29	24		35	29	24		22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1147	1147	1147
5°	1152	1145	1150
10°	1149	1145	1151
15°	1147	1145	1152
20°	1138	1144	1156
25°	1134	1146	1158
30°	1124	1143	1162
35°	1114	1140	1167
40°	1101	1139	1181
45°	1083	1139	1208
50°	1059	1146	1245
55°	1032	1164	1300
60°	988	1187	1372
65°	925	1229	1456
70°	841	1286	1566
75°	713	1357	1637
80°	563	1365	1323
85°	415	1039	1162



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	80.9	3.0
10°-20°	232.8	8.6
20°-30°	356.0	13.1
30°-40°	435.3	16.0
40°-50°	463.9	17.1
50°-60°	443.5	16.4
60°-70°	375.7	13.9
70°-80°	252.5	9.3
80°-90°	71.2	2.6
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°	669.8	24.7
0°-40°	1105.0	40.7
0°-60°	2012.5	74.2
0°-90°	2712.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2712.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	853	853	853	853	853	
5°	853	852	848	852	852	81
15°	823	823	822	829	827	232
25°	764	767	772	779	780	352
35°	678	683	694	708	710	425
45°	569	578	599	624	635	439
55°	440	456	496	535	554	392
65°	291	320	386	437	457	288
75°	137	187	261	305	315	147
85°	27	55	67	73	75	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	852.8	852.8	852.8	852.8	852.8
2.5°	854.2	854.2	850.2	852.8	852.8
5°	852.8	851.5	847.5	851.5	851.5
7.5°	848.8	847.5	844.8	848.8	847.5
10°	840.7	840.7	838.0	842.1	842.1
12.5°	834.0	832.7	831.3	836.7	835.4
15°	823.3	823.3	821.9	828.6	827.3
17.5°	809.8	811.1	812.5	817.9	819.2
20°	795.0	797.7	799.0	807.1	807.1
22.5°	781.6	782.9	785.6	793.7	793.7
25°	764.1	766.8	772.1	778.9	780.2
27.5°	746.6	747.9	754.6	764.1	765.4
30°	723.7	727.7	735.8	746.6	747.9
32.5°	703.5	707.6	717.0	727.7	730.4
35°	678.0	683.4	694.1	707.6	710.3
37.5°	655.1	659.1	672.6	687.4	691.4
40°	626.9	634.9	648.4	665.9	672.6
42.5°	598.6	606.7	622.8	645.7	653.8
45°	569.0	578.4	598.6	624.2	634.9
47.5°	539.4	550.2	573.0	602.6	614.7
50°	505.8	519.2	547.5	581.1	594.6
52.5°	473.5	489.6	520.6	558.3	575.7
55°	439.9	456.0	496.4	535.4	554.2
57.5°	402.2	423.7	468.1	512.5	532.7
60°	367.2	387.4	441.2	489.6	509.8
62.5°	329.6	356.5	414.3	465.4	485.6
65°	290.6	320.2	386.1	437.2	457.4
67.5°	255.6	287.9	357.8	408.9	429.1
70°	213.9	254.2	326.9	378.0	398.2
72.5°	174.9	219.3	294.6	344.4	363.2
75°	137.2	187.0	261.0	305.4	314.8
77.5°	102.2	154.7	226.0	244.8	238.1
80°	72.6	123.8	176.2	166.8	170.8
82.5°	47.1	94.2	109.0	123.8	127.8
85°	26.9	55.2	67.3	72.6	75.3
87.5°	12.1	20.2	26.9	26.9	25.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)