

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: P313139

Luminaire Tested: **24FCZ2-35-UNV-L83050-HRP-CP250-W2A-U-5000K**

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: P313139
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-35-UNV-L83050-HRP-CP250-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
POLYCARB SHEET
Light Source: (168) 5000K 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: 2485.0 lumens
Efficiency: N/A
Efficacy: 84.5 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

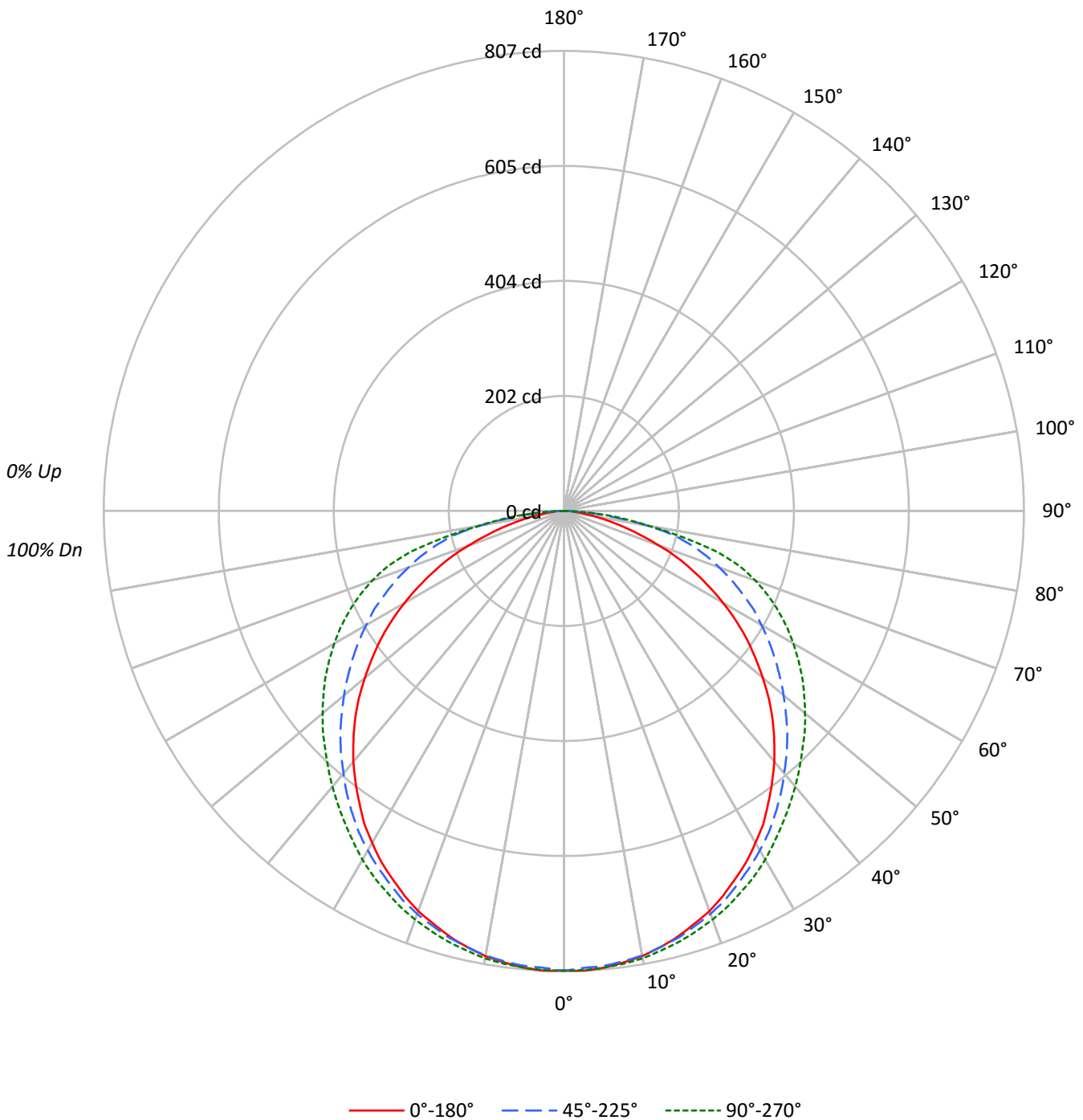
Input Watts (W): 29.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	101	96	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	24	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1085	1085	1085
5°	1086	1082	1086
10°	1083	1082	1089
15°	1077	1080	1090
20°	1070	1077	1092
25°	1056	1072	1094
30°	1044	1068	1097
35°	1027	1063	1099
40°	1009	1056	1109
45°	986	1055	1126
50°	954	1054	1156
55°	920	1061	1198
60°	868	1078	1251
65°	802	1103	1322
70°	700	1142	1408
75°	568	1201	1455
80°	419	1177	1177
85°	321	868	980



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	76.4	3.1
10°-20°	219.3	8.8
20°-30°	333.9	13.4
30°-40°	405.4	16.3
40°-50°	428.3	17.2
50°-60°	404.2	16.3
60°-70°	336.1	13.5
70°-80°	221.1	8.9
80°-90°	60.3	2.4
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°	629.6	25.3
0°-40°	1035.0	41.7
0°-60°	1867.6	75.2
0°-90°	2485.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2485.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	806	806	806	806	806	
5°	804	804	801	804	804	76
15°	773	774	775	782	782	218
25°	712	716	722	734	737	328
35°	625	632	647	664	669	391
45°	518	528	554	582	592	399
55°	392	409	452	495	511	349
65°	252	281	346	397	415	249
75°	109	159	231	274	280	118
85°	21	46	56	62	64	25
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	806.3	806.3	806.3	806.3	806.3
2.5°	807.3	806.3	802.1	806.3	806.3
5°	804.2	804.2	801.1	804.2	804.2
7.5°	799.0	799.0	796.9	801.1	801.1
10°	792.7	792.7	791.7	796.9	796.9
12.5°	783.4	784.4	783.4	789.6	789.6
15°	773.0	774.0	775.1	782.3	782.3
17.5°	759.4	761.5	763.6	771.9	773.0
20°	747.0	748.0	752.2	761.5	762.6
22.5°	730.3	733.4	738.6	748.0	751.1
25°	711.6	715.8	722.0	734.5	736.6
27.5°	693.9	697.0	705.3	718.9	723.0
30°	672.1	677.3	687.7	701.2	706.4
32.5°	651.3	656.5	668.9	683.5	687.7
35°	625.2	632.5	647.1	663.7	668.9
37.5°	600.3	607.6	625.2	644.0	650.2
40°	574.3	582.6	601.3	623.2	631.5
42.5°	546.2	557.6	578.4	602.4	611.7
45°	518.1	528.5	554.5	581.5	592.0
47.5°	487.9	500.4	528.5	560.7	573.2
50°	455.7	471.3	503.5	538.9	552.4
52.5°	423.4	441.1	477.5	517.0	531.6
55°	392.2	408.9	452.5	495.2	510.8
57.5°	357.9	378.7	426.5	472.3	487.9
60°	322.5	345.4	400.5	448.4	465.0
62.5°	287.1	313.1	375.6	423.4	441.1
65°	251.8	280.9	346.4	397.4	415.1
67.5°	217.4	249.7	319.4	370.4	388.0
70°	177.9	218.5	290.3	340.2	357.9
72.5°	141.5	188.3	262.2	309.0	324.6
75°	109.2	159.2	231.0	273.6	279.9
77.5°	80.1	130.0	198.7	213.3	214.3
80°	54.1	104.0	151.9	149.8	151.9
82.5°	35.4	78.0	95.7	107.2	108.2
85°	20.8	45.8	56.2	62.4	63.5
87.5°	10.4	15.6	19.8	20.8	22.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)