

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: P311937

Luminaire Tested: **14FCZ2-35-UNV-L83050-HRP-CP250-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: P311937
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-18)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 14FCZ2-35-UNV-L83050-HRP-CP250-W2A-U-4000K
Description: 1'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
POLYCARB SHEET
Light Source: (168) 4000K 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: 2490.0 lumens
Efficiency: N/A
Efficacy: 82.4 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.29 / 1.39
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

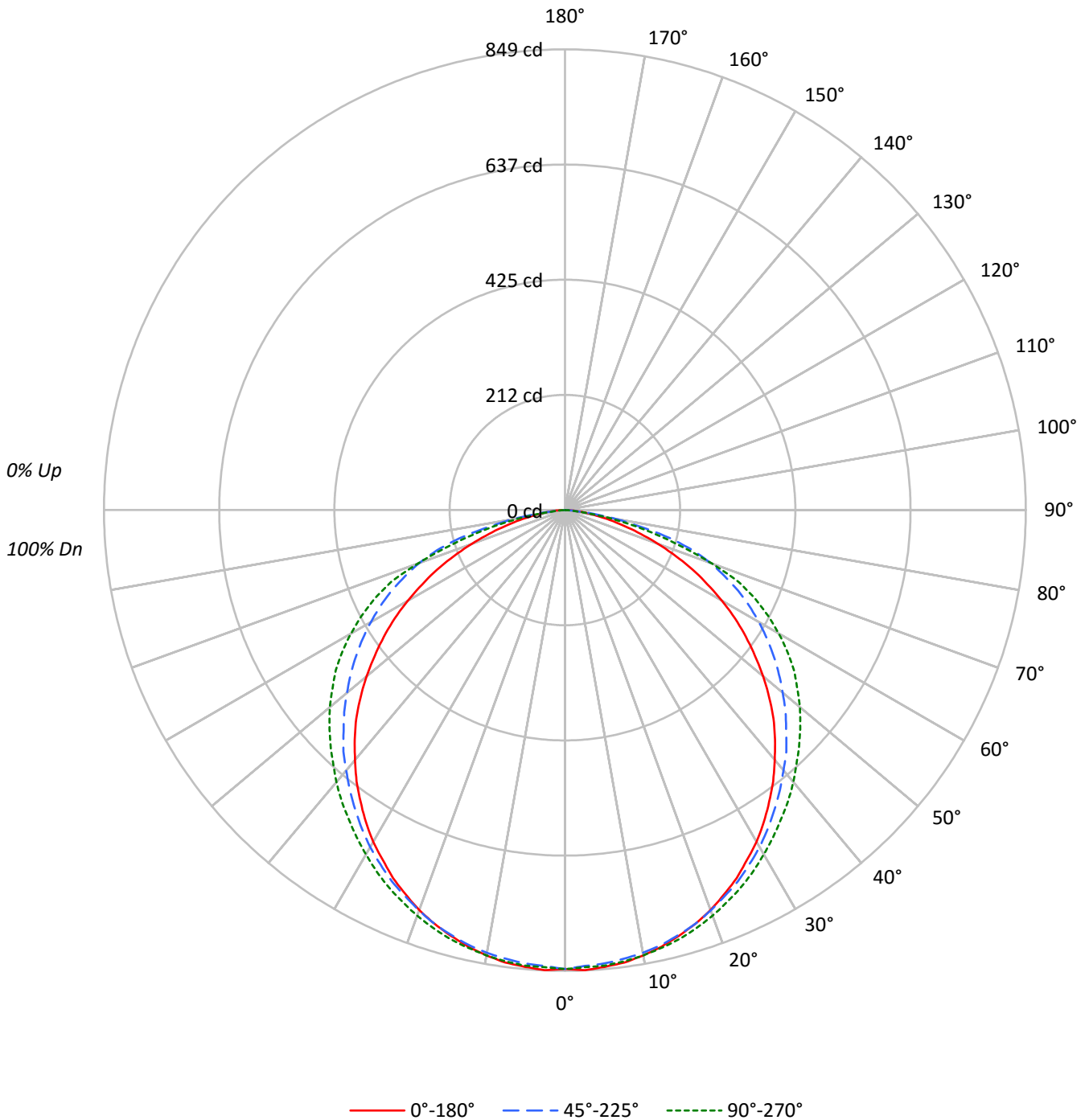
Input Watts (W): 30.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	109	104	100	96	106	102	98	94	97	94	91	93	91	88	90	88	86	84
2	99	90	83	78	96	88	82	77	85	79	75	82	77	73	78	75	71	69
3	90	79	71	64	87	77	70	64	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	64	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	69	56	47	40	68	55	46	40	53	45	40	51	45	39	50	44	39	37
7	64	51	42	36	63	50	41	35	48	41	35	47	40	35	45	39	35	33
8	60	46	38	32	58	45	37	32	44	37	31	43	36	31	42	36	31	29
9	56	42	34	28	54	42	34	28	41	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	38	31	26	37	30	26	37	30	25	36	30	25	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2275	2275	2275
5°	2282	2265	2276
10°	2276	2264	2276
15°	2262	2258	2279
20°	2247	2249	2278
25°	2222	2241	2278
30°	2194	2229	2277
35°	2155	2212	2281
40°	2112	2200	2299
45°	2068	2193	2324
50°	1996	2193	2367
55°	1910	2204	2417
60°	1795	2221	2448
65°	1655	2243	2463
70°	1441	2249	2267
75°	1188	2092	1832
80°	934	1505	1226
85°	726	580	290



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	80.1	3.2
10°-20°	229.7	9.2
20°-30°	348.9	14.0
30°-40°	422.7	17.0
40°-50°	445.4	17.9
50°-60°	415.8	16.7
60°-70°	332.3	13.3
70°-80°	182.8	7.3
80°-90°	32.3	1.3
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°	658.6	26.5
0°-40°	1081.3	43.4
0°-60°	1942.5	78.0
0°-90°	2490.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2490.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	846	846	846	846	846	
5°	845	842	839	844	842	80
15°	812	812	810	818	818	229
25°	748	750	755	766	767	345
35°	656	662	673	691	694	411
45°	543	554	576	602	611	418
55°	407	428	470	503	515	363
65°	260	293	352	381	387	256
75°	114	164	201	181	176	123
85°	24	30	19	12	9	29
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	845.6	845.6	845.6	845.6	845.6
2.5°	848.7	846.4	840.9	845.6	843.3
5°	844.8	842.5	838.6	844.1	842.5
7.5°	840.9	837.8	833.9	840.1	838.6
10°	833.1	830.7	828.4	833.9	833.1
12.5°	823.7	822.9	820.6	826.8	826.0
15°	811.9	811.9	810.4	818.2	818.2
17.5°	799.4	798.6	799.4	808.0	807.3
20°	784.5	784.5	785.3	795.5	795.5
22.5°	766.5	767.3	769.7	782.2	781.4
25°	748.5	750.1	754.8	765.8	767.3
27.5°	726.6	730.5	736.0	749.3	750.9
30°	706.2	708.6	717.2	729.7	732.9
32.5°	682.0	686.7	696.1	710.2	714.1
35°	656.1	662.4	673.4	690.6	694.5
37.5°	630.3	635.8	650.7	668.7	675.7
40°	601.3	610.7	626.4	646.7	654.6
42.5°	573.1	582.5	603.7	624.8	631.9
45°	543.4	553.6	576.3	602.1	610.7
47.5°	510.5	522.2	551.2	578.6	588.0
50°	476.8	491.7	523.8	554.3	565.3
52.5°	441.6	460.4	497.2	529.3	539.5
55°	407.1	427.5	469.8	502.7	515.2
57.5°	371.9	393.8	441.6	479.2	486.2
60°	333.5	360.2	412.6	445.5	454.9
62.5°	296.0	326.5	382.9	414.2	422.0
65°	259.9	292.8	352.3	381.3	386.8
67.5°	220.8	259.9	318.7	345.3	346.9
70°	183.2	228.6	285.8	298.3	288.1
72.5°	146.4	195.0	247.4	237.2	228.6
75°	114.3	163.6	201.2	180.9	176.2
77.5°	84.6	133.9	144.1	133.1	124.5
80°	60.3	105.7	97.1	83.0	79.1
82.5°	41.5	66.6	53.2	41.5	36.0
85°	23.5	29.8	18.8	11.7	9.4
87.5°	10.2	7.0	3.9	3.1	3.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)