

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: P314211

Luminaire Tested: **24FCZ2-30-UNV-L83050-S-CP250-W2A-U-3500K**

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: P314211
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-30-UNV-L83050-S-CP250-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.250" POLYCARB SHEET
Light Source: (168) 3500K 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: 2704.0 lumens
Efficiency: N/A
Efficacy: 115.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

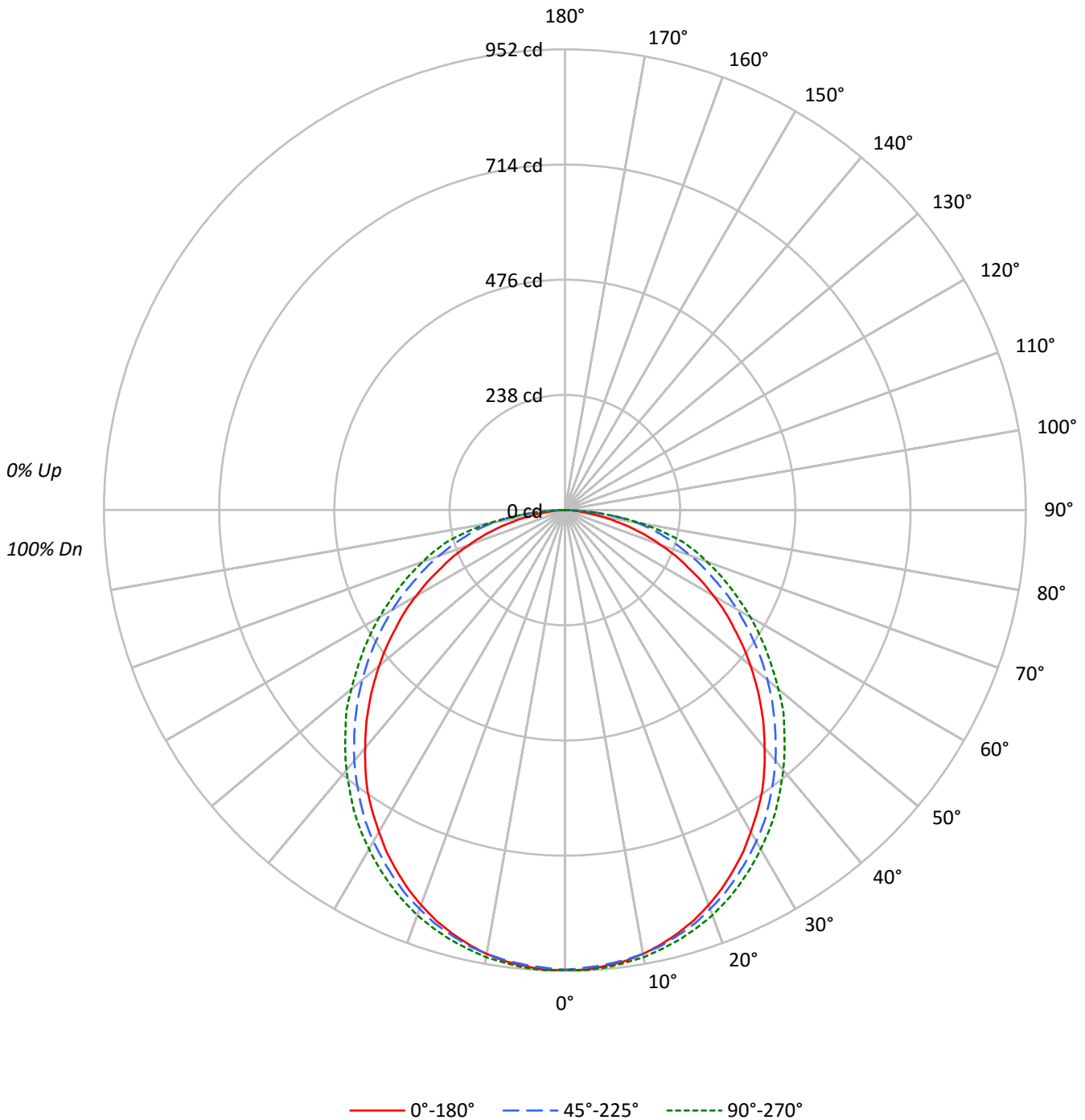
Input Watts (W): 23.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	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	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1278	1278	1278
5°	1277	1274	1282
10°	1272	1272	1281
15°	1260	1266	1279
20°	1243	1256	1275
25°	1220	1243	1267
30°	1193	1229	1257
35°	1167	1209	1247
40°	1127	1189	1232
45°	1090	1165	1219
50°	1048	1144	1205
55°	1001	1122	1193
60°	954	1105	1190
65°	894	1086	1198
70°	828	1091	1230
75°	741	1112	1299
80°	599	1178	1271
85°	451	1034	1008



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.9	3.3
10°-20°	257.0	9.5
20°-30°	386.3	14.3
30°-40°	460.1	17.0
40°-50°	470.9	17.4
50°-60°	424.0	15.7
60°-70°	332.9	12.3
70°-80°	216.1	8.0
80°-90°	66.8	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°	733.2	27.1
0°-40°	1193.3	44.1
0°-60°	2088.2	77.2
0°-90°	2704.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2704.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	950	950	950	950	950	
5°	946	947	943	948	949	90
15°	904	907	909	916	918	255
25°	822	829	837	851	854	379
35°	710	719	736	754	759	443
45°	573	587	612	636	641	442
55°	427	446	478	503	508	383
65°	281	302	341	369	376	280
75°	143	170	214	243	250	151
85°	29	54	67	65	65	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	949.9	949.9	949.9	949.9	949.9
2.5°	950.8	950.8	946.5	950.8	951.7
5°	945.6	947.4	943.1	948.2	949.1
7.5°	940.5	940.5	937.9	943.1	943.9
10°	931.0	931.9	931.0	937.0	937.9
12.5°	919.0	920.7	921.6	927.6	928.5
15°	904.4	907.0	908.7	916.4	918.2
17.5°	888.1	890.7	895.0	903.6	905.3
20°	868.3	871.8	876.9	888.1	890.7
22.5°	846.9	850.3	858.9	869.2	873.5
25°	822.0	828.8	837.4	851.2	853.7
27.5°	797.1	803.1	814.2	828.8	832.3
30°	767.8	777.3	791.0	805.6	809.1
32.5°	739.5	749.0	765.3	780.7	785.0
35°	710.3	718.9	736.1	754.1	759.3
37.5°	676.8	688.0	706.9	724.9	730.1
40°	641.6	655.3	676.8	695.7	701.7
42.5°	608.1	622.7	644.2	664.8	671.7
45°	572.9	586.6	612.4	635.6	640.7
47.5°	536.8	552.3	579.8	602.9	611.5
50°	500.7	517.1	546.3	570.3	575.5
52.5°	464.7	481.8	512.8	538.5	541.1
55°	426.9	445.8	478.4	503.3	508.5
57.5°	392.5	408.8	444.0	469.8	475.8
60°	354.7	372.8	410.5	434.6	442.3
62.5°	318.6	337.5	377.1	401.1	408.0
65°	280.9	302.3	341.0	369.3	376.2
67.5°	248.2	268.8	310.1	337.5	344.4
70°	210.4	233.6	277.4	305.8	312.6
72.5°	177.8	201.8	245.6	273.1	283.4
75°	142.6	170.1	213.9	243.1	249.9
77.5°	108.2	140.0	184.7	207.0	207.0
80°	77.3	110.8	152.0	162.3	164.0
82.5°	50.7	83.3	112.5	111.7	111.7
85°	29.2	54.1	67.0	65.3	65.3
87.5°	11.2	22.3	24.0	24.0	23.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)