

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: P313585

Luminaire Tested: **24FCZ2-45HE-UNV-L83050-RDP-CP250-W2A-U-3000K**

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: P313585
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: 24FCZ2-45HE-UNV-L83050-RDP-CP250-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" POLYCARB SHEET
Light Source: (336) 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: 2419.0 lumens
Efficiency: N/A
Efficacy: 71.8 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

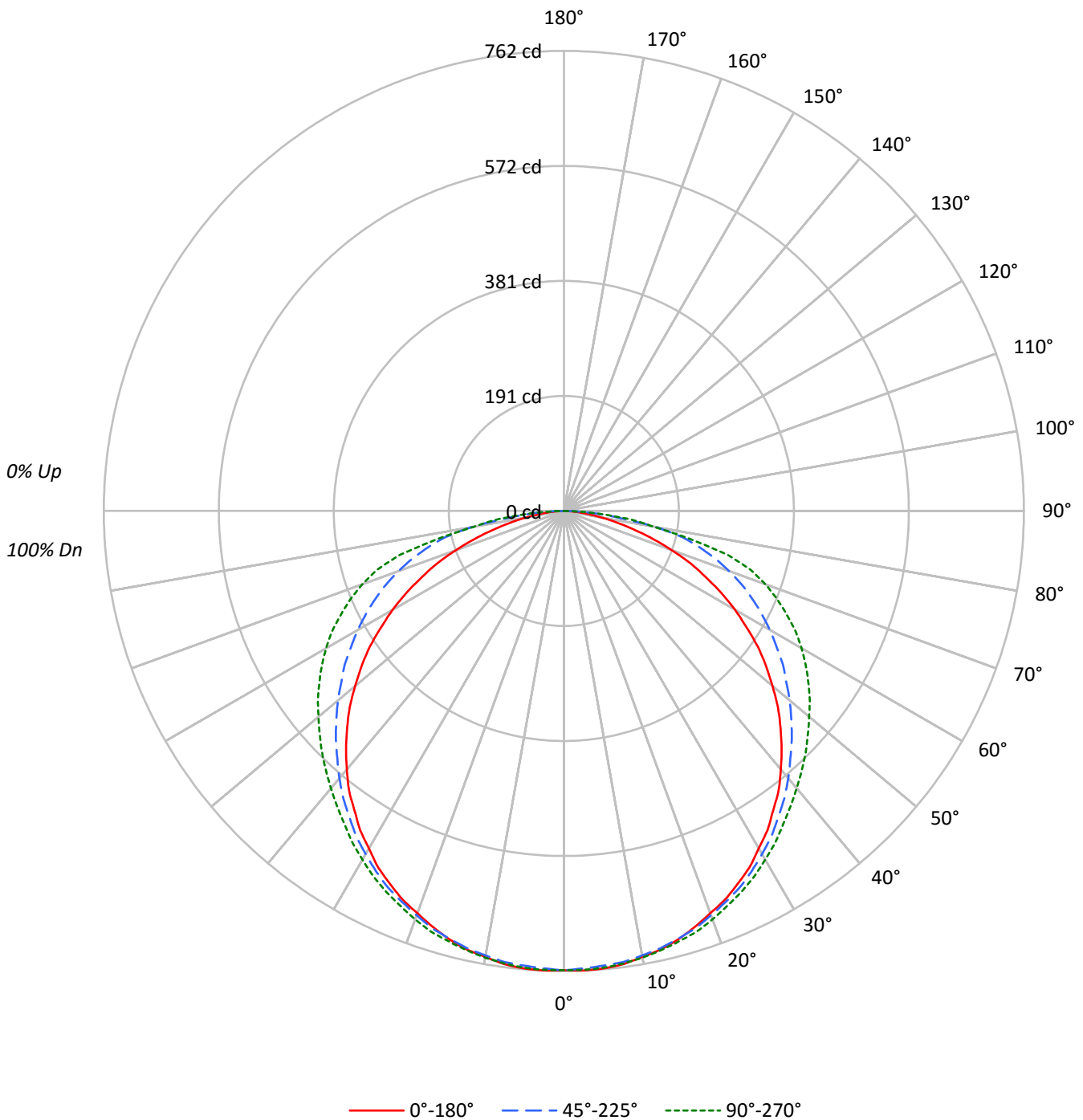
Input Watts (W): 33.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				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	93	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	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°	1024	1024	1024
5°	1027	1021	1026
10°	1025	1021	1026
15°	1023	1021	1028
20°	1015	1020	1031
25°	1012	1022	1033
30°	1003	1020	1036
35°	993	1017	1041
40°	982	1016	1054
45°	966	1016	1078
50°	944	1022	1110
55°	920	1038	1160
60°	882	1059	1224
65°	825	1096	1299
70°	751	1147	1397
75°	636	1210	1460
80°	502	1218	1181
85°	371	926	1037



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.2	3.0
10°-20°	207.7	8.6
20°-30°	317.6	13.1
30°-40°	388.2	16.0
40°-50°	413.8	17.1
50°-60°	395.6	16.4
60°-70°	335.2	13.9
70°-80°	225.3	9.3
80°-90°	63.5	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°	597.4	24.7
0°-40°	985.6	40.7
0°-60°	1795.0	74.2
0°-90°	2419.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2419.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	761	761	761	761	761	
5°	761	760	756	760	760	72
15°	734	734	733	739	738	207
25°	682	684	689	695	696	314
35°	605	610	619	631	634	379
45°	508	516	534	557	566	391
55°	392	407	443	478	494	349
65°	259	286	344	390	408	257
75°	122	167	233	272	281	131
85°	24	49	60	65	67	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	760.7	760.7	760.7	760.7	760.7
2.5°	761.9	761.9	758.3	760.7	760.7
5°	760.7	759.5	755.9	759.5	759.5
7.5°	757.1	755.9	753.5	757.1	755.9
10°	749.9	749.9	747.5	751.1	751.1
12.5°	743.9	742.7	741.5	746.3	745.1
15°	734.3	734.3	733.1	739.1	737.9
17.5°	722.3	723.5	724.7	729.5	730.7
20°	709.1	711.5	712.7	719.9	719.9
22.5°	697.1	698.3	700.7	707.9	707.9
25°	681.5	683.9	688.7	694.7	695.9
27.5°	665.9	667.1	673.1	681.5	682.7
30°	645.5	649.1	656.3	665.9	667.1
32.5°	627.5	631.1	639.5	649.1	651.5
35°	604.7	609.5	619.1	631.1	633.5
37.5°	584.3	587.9	599.9	613.1	616.7
40°	559.1	566.3	578.3	593.9	599.9
42.5°	533.9	541.1	555.5	575.9	583.1
45°	507.5	515.9	533.9	556.7	566.3
47.5°	481.1	490.7	511.1	537.5	548.3
50°	451.1	463.1	488.3	518.3	530.3
52.5°	422.3	436.7	464.3	497.9	513.5
55°	392.4	406.7	442.7	477.5	494.3
57.5°	358.8	378.0	417.5	457.1	475.1
60°	327.6	345.6	393.6	436.7	454.7
62.5°	294.0	318.0	369.6	415.1	433.1
65°	259.2	285.6	344.4	390.0	407.9
67.5°	228.0	256.8	319.2	364.8	382.8
70°	190.8	226.8	291.6	337.2	355.2
72.5°	156.0	195.6	262.8	307.2	324.0
75°	122.4	166.8	232.8	272.4	280.8
77.5°	91.2	138.0	201.6	218.4	212.4
80°	64.8	110.4	157.2	148.8	152.4
82.5°	42.0	84.0	97.2	110.4	114.0
85°	24.0	49.2	60.0	64.8	67.2
87.5°	10.8	18.0	24.0	24.0	22.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)