

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: P309358

Luminaire Tested: **24FCZ2-40HE-UNV-L82765-HRP-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: P309358
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: 24FCZ2-40HE-UNV-L82765-HRP-CP250-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
POLYCARB SHEET
Light Source: (336) 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: 2561.0 lumens
Efficiency: N/A
Efficacy: 84.0 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

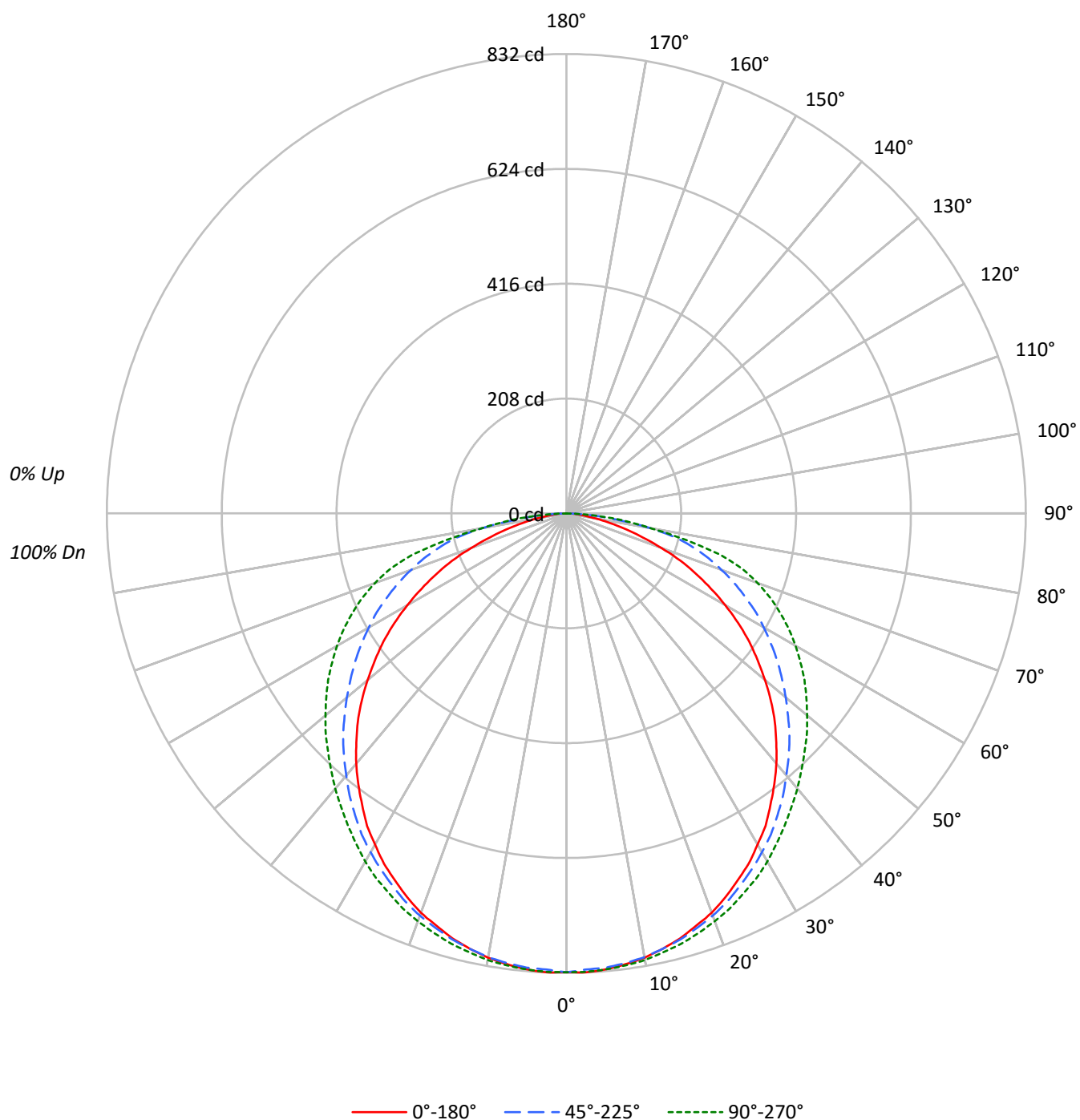
Input Watts (W): 30.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1118	1118	1118
5°	1119	1115	1119
10°	1116	1115	1122
15°	1110	1113	1123
20°	1102	1110	1125
25°	1089	1105	1127
30°	1076	1101	1131
35°	1058	1095	1132
40°	1039	1088	1143
45°	1016	1087	1161
50°	983	1086	1192
55°	948	1094	1235
60°	894	1111	1290
65°	826	1137	1362
70°	721	1177	1451
75°	585	1237	1499
80°	432	1213	1213
85°	330	894	1010



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	78.7	3.1
10°-20°	226.0	8.8
20°-30°	344.1	13.4
30°-40°	417.8	16.3
40°-50°	441.4	17.2
50°-60°	416.6	16.3
60°-70°	346.4	13.5
70°-80°	227.9	8.9
80°-90°	62.1	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°	648.9	25.3
0°-40°	1066.7	41.7
0°-60°	1924.7	75.2
0°-90°	2561.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2561.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	831	831	831	831	831	
5°	829	829	826	829	829	79
15°	797	798	799	806	806	225
25°	733	738	744	757	759	338
35°	644	652	667	684	689	403
45°	534	545	572	599	610	411
55°	404	421	466	510	526	360
65°	260	290	357	410	428	256
75°	113	164	238	282	288	121
85°	21	47	58	64	65	26
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	830.9	830.9	830.9	830.9	830.9
2.5°	832.0	830.9	826.6	830.9	830.9
5°	828.8	828.8	825.6	828.8	828.8
7.5°	823.4	823.4	821.3	825.6	825.6
10°	817.0	817.0	815.9	821.3	821.3
12.5°	807.3	808.4	807.3	813.8	813.8
15°	796.6	797.7	798.8	806.3	806.3
17.5°	782.7	784.8	787.0	795.5	796.6
20°	769.8	770.9	775.2	784.8	785.9
22.5°	752.7	755.9	761.2	770.9	774.1
25°	733.4	737.6	744.1	756.9	759.1
27.5°	715.1	718.3	726.9	740.9	745.1
30°	692.6	698.0	708.7	722.6	728.0
32.5°	671.2	676.5	689.4	704.4	708.7
35°	644.4	651.9	666.9	684.0	689.4
37.5°	618.6	626.1	644.4	663.7	670.1
40°	591.8	600.4	619.7	642.2	650.8
42.5°	562.9	574.7	596.1	620.8	630.4
45°	533.9	544.7	571.5	599.3	610.1
47.5°	502.8	515.7	544.7	577.9	590.8
50°	469.6	485.7	518.9	555.4	569.3
52.5°	436.4	454.6	492.1	532.9	547.9
55°	404.2	421.4	466.4	510.3	526.4
57.5°	368.8	390.3	439.6	486.8	502.8
60°	332.4	356.0	412.8	462.1	479.3
62.5°	295.9	322.7	387.0	436.4	454.6
65°	259.5	289.5	357.0	409.6	427.8
67.5°	224.1	257.3	329.2	381.7	399.9
70°	183.3	225.2	299.1	350.6	368.8
72.5°	145.8	194.1	270.2	318.4	334.5
75°	112.6	164.0	238.0	282.0	288.4
77.5°	82.6	134.0	204.8	219.8	220.9
80°	55.8	107.2	156.5	154.4	156.5
82.5°	36.5	80.4	98.6	110.4	111.5
85°	21.4	47.2	57.9	64.3	65.4
87.5°	10.7	16.1	20.4	21.4	23.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)