

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: P309357

Luminaire Tested: **24FCZ2-40HE-UNV-L82765-HRP-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: P309357
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-3000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 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: 2475.0 lumens
Efficiency: N/A
Efficacy: 82.0 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

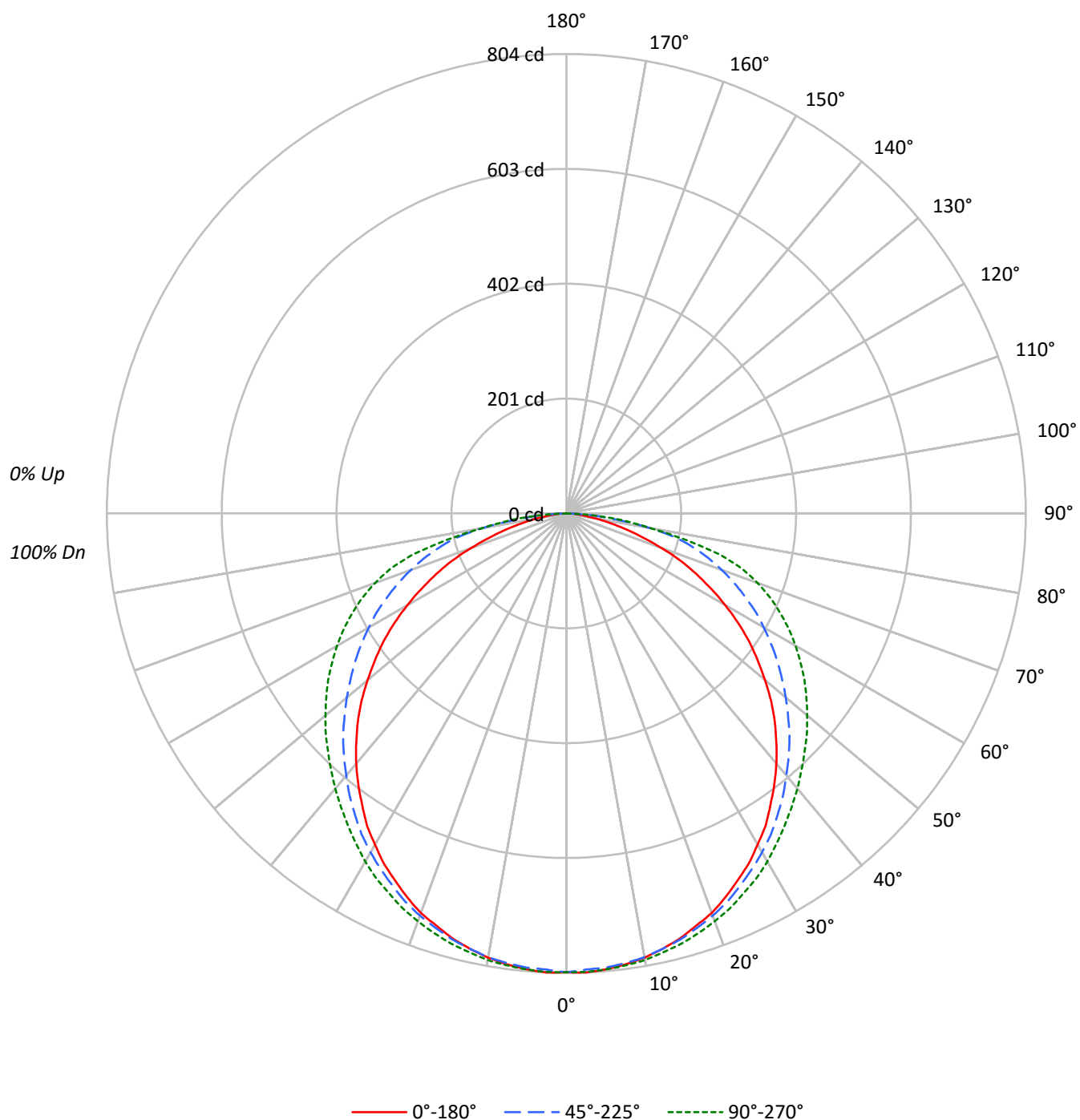
Input Watts (W): 30.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1080	1080	1080
5°	1082	1078	1082
10°	1079	1077	1084
15°	1072	1075	1085
20°	1065	1073	1087
25°	1052	1068	1089
30°	1040	1064	1093
35°	1023	1059	1094
40°	1005	1052	1105
45°	982	1051	1122
50°	950	1050	1152
55°	916	1057	1193
60°	864	1073	1246
65°	798	1098	1316
70°	697	1137	1402
75°	566	1196	1449
80°	418	1172	1172
85°	320	865	976



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	76.1	3.1
10°-20°	218.4	8.8
20°-30°	332.6	13.4
30°-40°	403.8	16.3
40°-50°	426.6	17.2
50°-60°	402.6	16.3
60°-70°	334.7	13.5
70°-80°	220.2	8.9
80°-90°	60.0	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°	627.1	25.3
0°-40°	1030.9	41.7
0°-60°	1860.1	75.2
0°-90°	2475.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2475.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	803	803	803	803	803	
5°	801	801	798	801	801	76
15°	770	771	772	779	779	217
25°	709	713	719	732	734	327
35°	623	630	644	661	666	390
45°	516	526	552	579	590	397
55°	391	407	451	493	509	348
65°	251	280	345	396	413	248
75°	109	158	230	272	279	117
85°	21	46	56	62	63	25
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	803.0	803.0	803.0	803.0	803.0
2.5°	804.1	803.0	798.9	803.0	803.0
5°	800.9	800.9	797.8	800.9	800.9
7.5°	795.8	795.8	793.7	797.8	797.8
10°	789.5	789.5	788.5	793.7	793.7
12.5°	780.2	781.3	780.2	786.4	786.4
15°	769.9	770.9	771.9	779.2	779.2
17.5°	756.4	758.5	760.5	768.8	769.9
20°	744.0	745.0	749.1	758.5	759.5
22.5°	727.4	730.5	735.7	745.0	748.1
25°	708.7	712.9	719.1	731.5	733.6
27.5°	691.1	694.2	702.5	716.0	720.1
30°	669.4	674.5	684.9	698.4	703.5
32.5°	648.6	653.8	666.2	680.8	684.9
35°	622.7	630.0	644.5	661.1	666.2
37.5°	597.9	605.1	622.7	641.4	647.6
40°	572.0	580.2	598.9	620.7	628.9
42.5°	544.0	555.4	576.1	599.9	609.3
45°	516.0	526.4	552.3	579.2	589.6
47.5°	486.0	498.4	526.4	558.5	570.9
50°	453.8	469.4	501.5	536.7	550.2
52.5°	421.7	439.3	475.6	515.0	529.5
55°	390.6	407.2	450.7	493.2	508.7
57.5°	356.4	377.2	424.8	470.4	486.0
60°	321.2	344.0	398.9	446.6	463.2
62.5°	286.0	311.9	374.0	421.7	439.3
65°	250.7	279.8	345.0	395.8	413.4
67.5°	216.6	248.7	318.1	368.9	386.5
70°	177.2	217.6	289.1	338.8	356.4
72.5°	140.9	187.5	261.1	307.7	323.3
75°	108.8	158.5	230.0	272.5	278.7
77.5°	79.8	129.5	197.9	212.4	213.4
80°	53.9	103.6	151.3	149.2	151.3
82.5°	35.2	77.7	95.3	106.7	107.8
85°	20.7	45.6	56.0	62.2	63.2
87.5°	10.4	15.5	19.7	20.7	22.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)