

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: P313516

Luminaire Tested: **24FCZ2-40HE-UNV-L83050-RDP-CA08-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: P313516
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: 24FCZ2-40HE-UNV-L83050-RDP-CA08-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC 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: 2505.0 lumens
Efficiency: N/A
Efficacy: 82.4 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

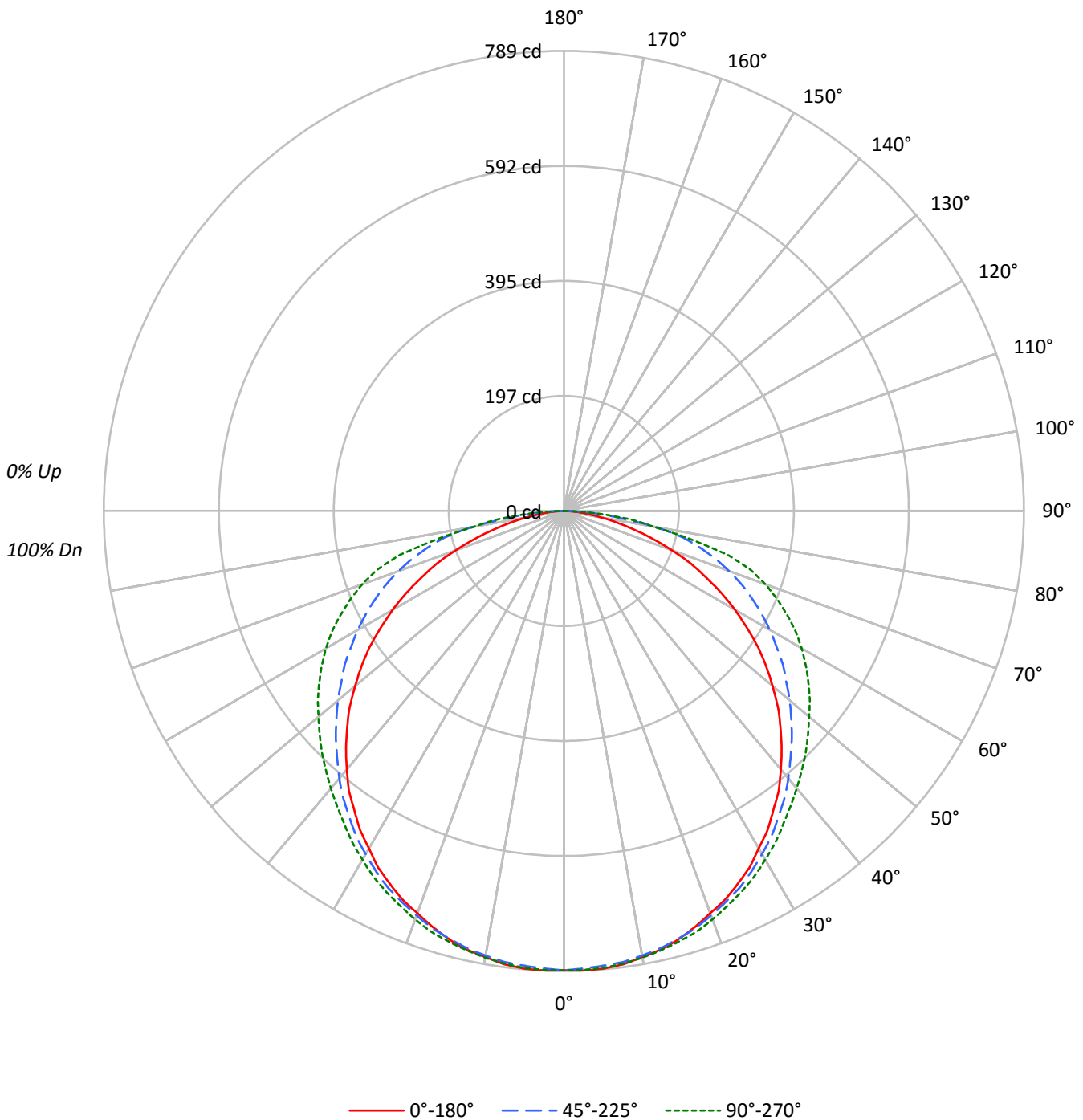
Input Watts (W): 30.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	68	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°	1060	1060	1060
5°	1064	1057	1062
10°	1061	1058	1063
15°	1059	1058	1064
20°	1051	1057	1067
25°	1048	1059	1070
30°	1039	1056	1073
35°	1029	1053	1078
40°	1017	1052	1091
45°	1000	1052	1116
50°	978	1059	1150
55°	953	1076	1201
60°	913	1097	1267
65°	855	1135	1345
70°	777	1188	1447
75°	659	1253	1511
80°	520	1261	1223
85°	384	959	1074



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	74.7	3.0
10°-20°	215.1	8.6
20°-30°	328.9	13.1
30°-40°	402.0	16.0
40°-50°	428.5	17.1
50°-60°	409.7	16.4
60°-70°	347.1	13.9
70°-80°	233.2	9.3
80°-90°	65.8	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°	618.7	24.7
0°-40°	1020.7	40.7
0°-60°	1858.9	74.2
0°-90°	2505.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2505.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	788	788	788	788	788	
5°	788	786	783	786	786	75
15°	760	760	759	765	764	214
25°	706	708	713	719	721	325
35°	626	631	641	654	656	392
45°	526	534	553	576	586	405
55°	406	421	458	494	512	362
65°	268	296	357	404	422	266
75°	127	173	241	282	291	136
85°	25	51	62	67	70	31
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	787.8	787.8	787.8	787.8	787.8
2.5°	789.0	789.0	785.3	787.8	787.8
5°	787.8	786.5	782.8	786.5	786.5
7.5°	784.0	782.8	780.3	784.0	782.8
10°	776.6	776.6	774.1	777.8	777.8
12.5°	770.4	769.1	767.9	772.8	771.6
15°	760.4	760.4	759.2	765.4	764.1
17.5°	748.0	749.2	750.5	755.4	756.7
20°	734.3	736.8	738.1	745.5	745.5
22.5°	721.9	723.1	725.6	733.1	733.1
25°	705.7	708.2	713.2	719.4	720.7
27.5°	689.6	690.8	697.0	705.7	707.0
30°	668.5	672.2	679.7	689.6	690.8
32.5°	649.8	653.6	662.3	672.2	674.7
35°	626.2	631.2	641.1	653.6	656.0
37.5°	605.1	608.8	621.3	634.9	638.6
40°	579.0	586.5	598.9	615.0	621.3
42.5°	552.9	560.4	575.3	596.4	603.9
45°	525.6	534.3	552.9	576.5	586.5
47.5°	498.2	508.2	529.3	556.6	567.8
50°	467.2	479.6	505.7	536.8	549.2
52.5°	437.4	452.3	480.9	515.6	531.8
55°	406.3	421.2	458.5	494.5	511.9
57.5°	371.5	391.4	432.4	473.4	492.0
60°	339.2	357.8	407.5	452.3	470.9
62.5°	304.4	329.3	382.7	429.9	448.5
65°	268.4	295.7	356.6	403.8	422.5
67.5°	236.1	265.9	330.5	377.7	396.4
70°	197.6	234.8	301.9	349.1	367.8
72.5°	161.5	202.5	272.1	318.1	335.5
75°	126.7	172.7	241.0	282.0	290.7
77.5°	94.4	142.9	208.7	226.1	219.9
80°	67.1	114.3	162.8	154.1	157.8
82.5°	43.5	87.0	100.6	114.3	118.0
85°	24.9	50.9	62.1	67.1	69.6
87.5°	11.2	18.6	24.9	24.9	23.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)