

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: P309537

Luminaire Tested: **24FCZ2-50HE-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: P309537
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: 24FCZ2-50HE-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: 3054.0 lumens
Efficiency: N/A
Efficacy: 80.2 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

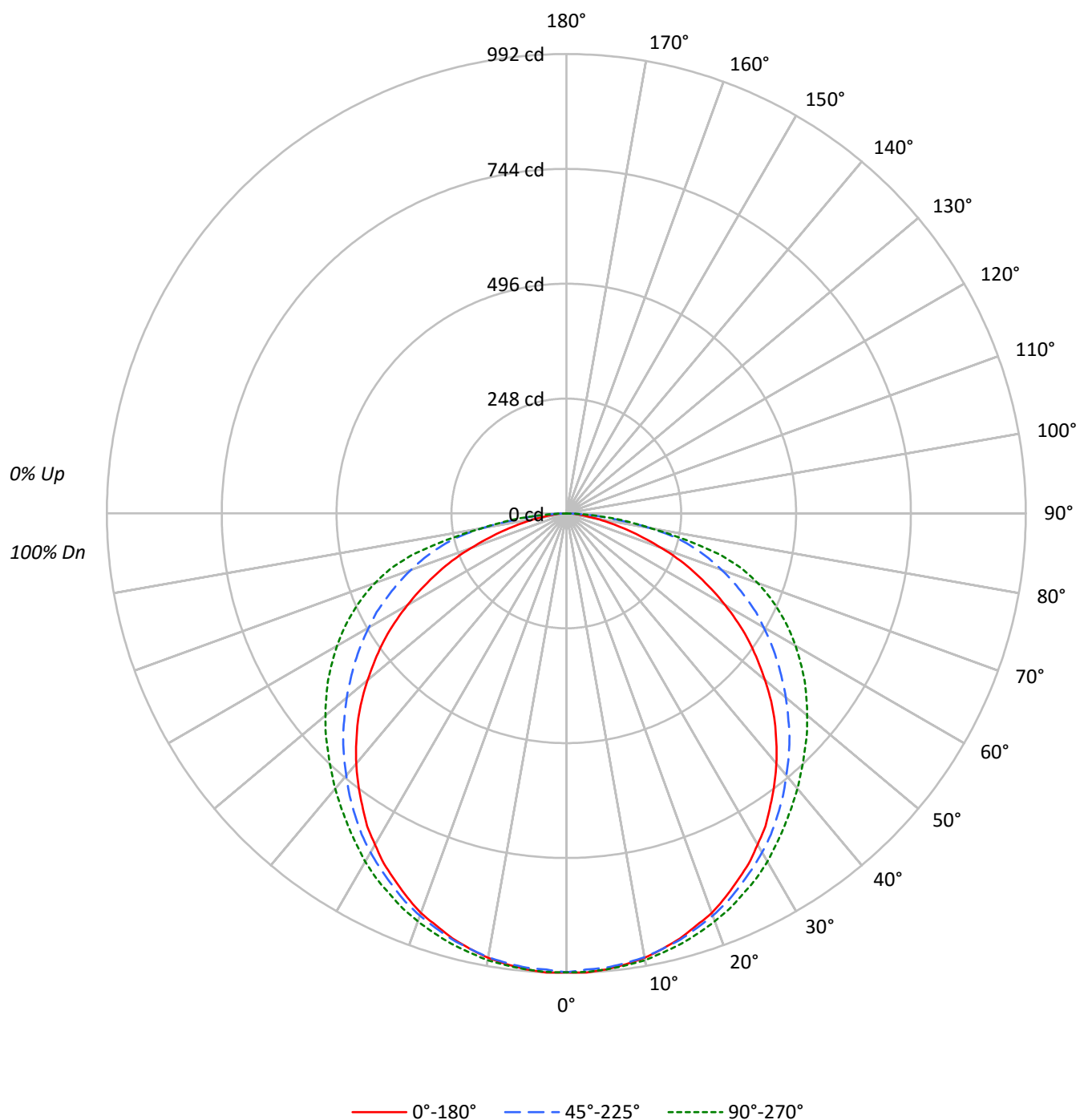
Input Watts (W): 38.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1333	1333	1333
5°	1335	1330	1335
10°	1331	1329	1338
15°	1323	1327	1339
20°	1314	1324	1342
25°	1298	1317	1344
30°	1283	1313	1349
35°	1262	1306	1350
40°	1240	1298	1363
45°	1212	1297	1384
50°	1172	1295	1421
55°	1131	1305	1473
60°	1066	1324	1538
65°	985	1356	1624
70°	860	1403	1730
75°	698	1475	1788
80°	515	1447	1447
85°	395	1065	1204



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	93.9	3.1
10°-20°	269.6	8.8
20°-30°	410.4	13.4
30°-40°	498.3	16.3
40°-50°	526.4	17.2
50°-60°	496.7	16.3
60°-70°	413.0	13.5
70°-80°	271.7	8.9
80°-90°	74.1	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°	773.8	25.3
0°-40°	1272.0	41.7
0°-60°	2295.2	75.2
0°-90°	3054.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3054.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	991	991	991	991	991	
5°	988	988	984	988	988	94
15°	950	951	952	962	962	268
25°	874	880	887	903	905	403
35°	768	777	795	816	822	481
45°	637	650	682	715	728	490
55°	482	502	556	609	628	429
65°	309	345	426	488	510	306
75°	134	196	284	336	344	145
85°	26	56	69	77	78	31
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	990.9	990.9	990.9	990.9	990.9
2.5°	992.2	990.9	985.8	990.9	990.9
5°	988.3	988.3	984.5	988.3	988.3
7.5°	981.9	981.9	979.4	984.5	984.5
10°	974.3	974.3	973.0	979.4	979.4
12.5°	962.7	964.0	962.7	970.4	970.4
15°	950.0	951.2	952.5	961.5	961.5
17.5°	933.3	935.9	938.5	948.7	950.0
20°	918.0	919.3	924.4	935.9	937.2
22.5°	897.5	901.4	907.8	919.3	923.1
25°	874.5	879.6	887.3	902.7	905.2
27.5°	852.8	856.6	866.9	883.5	888.6
30°	825.9	832.3	845.1	861.7	868.1
32.5°	800.4	806.8	822.1	840.0	845.1
35°	768.4	777.4	795.3	815.7	822.1
37.5°	737.7	746.7	768.4	791.4	799.1
40°	705.8	716.0	739.0	765.8	776.1
42.5°	671.2	685.3	710.9	740.3	751.8
45°	636.7	649.5	681.5	714.7	727.5
47.5°	599.6	615.0	649.5	689.1	704.5
50°	560.0	579.2	618.8	662.3	678.9
52.5°	520.4	542.1	586.9	635.4	653.3
55°	482.0	502.5	556.2	608.6	627.8
57.5°	439.8	465.4	524.2	580.5	599.6
60°	396.3	424.5	492.2	551.1	571.5
62.5°	352.9	384.8	461.6	520.4	542.1
65°	309.4	345.2	425.8	488.4	510.1
67.5°	267.2	306.9	392.5	455.2	476.9
70°	218.6	268.5	356.7	418.1	439.8
72.5°	173.9	231.4	322.2	379.7	398.9
75°	134.2	195.6	283.8	336.3	343.9
77.5°	98.4	159.8	244.2	262.1	263.4
80°	66.5	127.9	186.7	184.1	186.7
82.5°	43.5	95.9	117.6	131.7	133.0
85°	25.6	56.3	69.0	76.7	78.0
87.5°	12.8	19.2	24.3	25.6	28.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)