

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: P313260

Luminaire Tested: **24FCZ2-50HE-UNV-L83050-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: P313260
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-L83050-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: 3131.0 lumens
Efficiency: N/A
Efficacy: 81.7 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

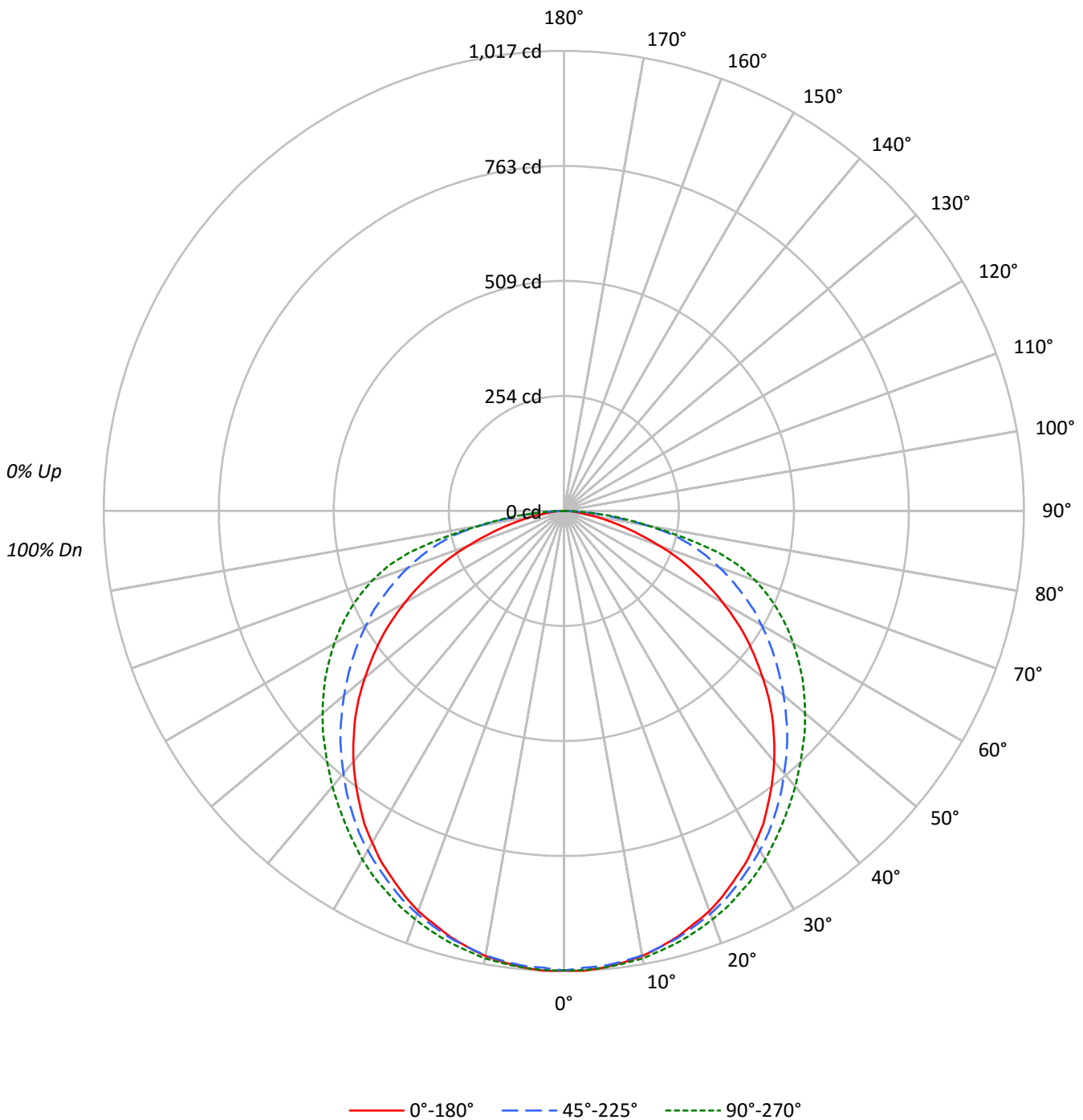
Input Watts (W): 38.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	101	96	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	24	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1367	1367	1367
5°	1368	1363	1368
10°	1365	1363	1372
15°	1357	1360	1373
20°	1348	1357	1376
25°	1331	1351	1378
30°	1316	1346	1383
35°	1294	1339	1384
40°	1271	1331	1397
45°	1242	1329	1419
50°	1202	1328	1457
55°	1159	1338	1510
60°	1093	1358	1577
65°	1010	1390	1665
70°	882	1439	1774
75°	715	1513	1833
80°	528	1483	1483
85°	404	1093	1235



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	96.2	3.1
10°-20°	276.3	8.8
20°-30°	420.7	13.4
30°-40°	510.8	16.3
40°-50°	539.7	17.2
50°-60°	509.3	16.3
60°-70°	423.4	13.5
70°-80°	278.6	8.9
80°-90°	75.9	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°	793.3	25.3
0°-40°	1304.1	41.7
0°-60°	2353.1	75.2
0°-90°	3131.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3131.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1016	1016	1016	1016	1016	
5°	1013	1013	1009	1013	1013	96
15°	974	975	976	986	986	275
25°	897	902	910	925	928	414
35°	788	797	815	836	843	493
45°	653	666	699	733	746	503
55°	494	515	570	624	644	440
65°	317	354	436	501	523	314
75°	138	200	291	345	353	148
85°	26	58	71	79	80	32
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1015.9	1015.9	1015.9	1015.9	1015.9
2.5°	1017.2	1015.9	1010.6	1015.9	1015.9
5°	1013.2	1013.2	1009.3	1013.2	1013.2
7.5°	1006.7	1006.7	1004.1	1009.3	1009.3
10°	998.8	998.8	997.5	1004.1	1004.1
12.5°	987.0	988.3	987.0	994.9	994.9
15°	973.9	975.2	976.5	985.7	985.7
17.5°	956.9	959.5	962.1	972.6	973.9
20°	941.1	942.5	947.7	959.5	960.8
22.5°	920.2	924.1	930.7	942.5	946.4
25°	896.6	901.8	909.7	925.4	928.0
27.5°	874.3	878.2	888.7	905.7	911.0
30°	846.8	853.3	866.4	883.5	890.0
32.5°	820.5	827.1	842.8	861.2	866.4
35°	787.8	797.0	815.3	836.3	842.8
37.5°	756.3	765.5	787.8	811.4	819.2
40°	723.6	734.0	757.6	785.2	795.6
42.5°	688.2	702.6	728.8	758.9	770.7
45°	652.8	665.9	698.6	732.7	745.8
47.5°	614.8	630.5	665.9	706.5	722.2
50°	574.1	593.8	634.4	679.0	696.0
52.5°	533.5	555.8	601.6	651.5	669.8
55°	494.2	515.1	570.2	623.9	643.6
57.5°	450.9	477.1	537.4	595.1	614.8
60°	406.3	435.2	504.7	564.9	585.9
62.5°	361.8	394.5	473.2	533.5	555.8
65°	317.2	353.9	436.5	500.7	523.0
67.5°	274.0	314.6	402.4	466.6	488.9
70°	224.1	275.3	365.7	428.6	450.9
72.5°	178.3	237.3	330.3	389.3	409.0
75°	137.6	200.5	291.0	344.7	352.6
77.5°	100.9	163.8	250.4	268.7	270.0
80°	68.2	131.1	191.4	188.8	191.4
82.5°	44.6	98.3	120.6	135.0	136.3
85°	26.2	57.7	70.8	78.6	80.0
87.5°	13.1	19.7	24.9	26.2	28.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)