

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: P309417

Luminaire Tested: **24FCZ2-45HE-UNV-L82765-HRP-CA08-W2A-U-5700K**

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: P309417
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: 24FCZ2-45HE-UNV-L82765-HRP-CA08-W2A-U-5700K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" ACRYLIC SHEET
Light Source: (336) 5700K 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: 3243.0 lumens
Efficiency: N/A
Efficacy: 93.5 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

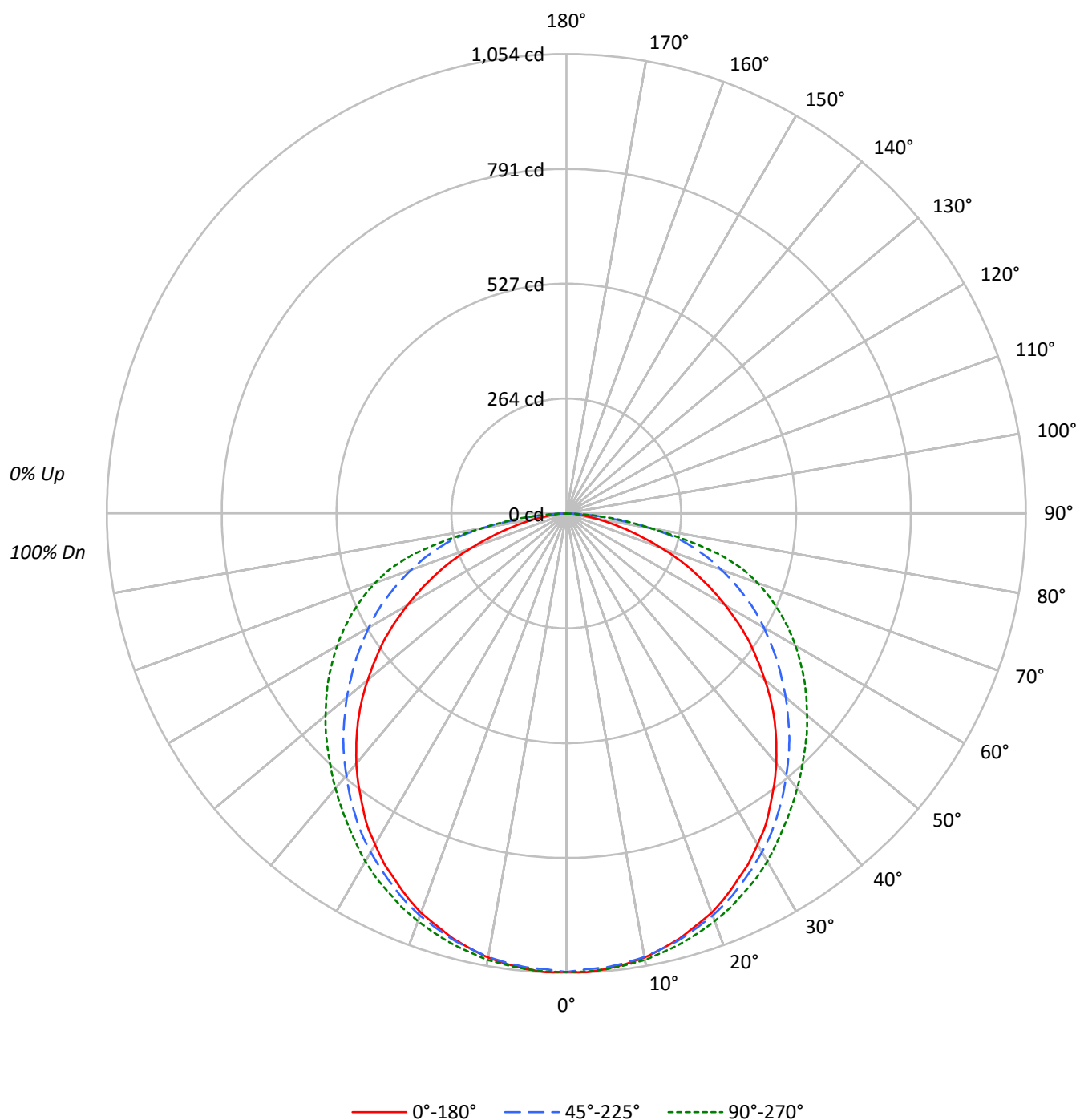
Input Watts (W): 34.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1416	1416	1416
5°	1417	1412	1417
10°	1413	1412	1421
15°	1405	1409	1422
20°	1396	1405	1425
25°	1379	1399	1427
30°	1363	1394	1432
35°	1340	1387	1434
40°	1316	1378	1447
45°	1286	1377	1470
50°	1245	1375	1509
55°	1201	1385	1564
60°	1133	1407	1633
65°	1046	1439	1725
70°	913	1490	1837
75°	741	1567	1899
80°	547	1536	1536
85°	420	1132	1278



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	99.7	3.1
10°-20°	286.2	8.8
20°-30°	435.7	13.4
30°-40°	529.1	16.3
40°-50°	559.0	17.2
50°-60°	527.5	16.3
60°-70°	438.6	13.5
70°-80°	288.5	8.9
80°-90°	78.7	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°	821.7	25.3
0°-40°	1350.8	41.7
0°-60°	2437.2	75.2
0°-90°	3243.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3243.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1052	1052	1052	1052	1052	
5°	1050	1050	1045	1050	1050	100
15°	1009	1010	1012	1021	1021	284
25°	929	934	942	958	961	428
35°	816	826	844	866	873	511
45°	676	690	724	759	772	521
55°	512	534	591	646	667	456
65°	329	367	452	519	542	325
75°	143	208	301	357	365	154
85°	27	60	73	82	83	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1052.2	1052.2	1052.2	1052.2	1052.2
2.5°	1053.6	1052.2	1046.8	1052.2	1052.2
5°	1049.5	1049.5	1045.4	1049.5	1049.5
7.5°	1042.7	1042.7	1040.0	1045.4	1045.4
10°	1034.5	1034.5	1033.2	1040.0	1040.0
12.5°	1022.3	1023.7	1022.3	1030.5	1030.5
15°	1008.7	1010.1	1011.5	1021.0	1021.0
17.5°	991.1	993.8	996.5	1007.4	1008.7
20°	974.8	976.2	981.6	993.8	995.2
22.5°	953.1	957.2	963.9	976.2	980.2
25°	928.6	934.1	942.2	958.5	961.2
27.5°	905.6	909.6	920.5	938.1	943.6
30°	877.1	883.8	897.4	915.1	921.9
32.5°	849.9	856.7	873.0	892.0	897.4
35°	816.0	825.5	844.5	866.2	873.0
37.5°	783.4	792.9	816.0	840.4	848.5
40°	749.4	760.3	784.7	813.2	824.1
42.5°	712.8	727.7	754.9	786.1	798.3
45°	676.1	689.7	723.6	758.9	772.5
47.5°	636.7	653.0	689.7	731.8	748.1
50°	594.7	615.0	657.1	703.3	720.9
52.5°	552.6	575.7	623.2	674.8	693.8
55°	511.8	533.6	590.6	646.3	666.6
57.5°	467.0	494.2	556.6	616.4	636.7
60°	420.9	450.7	522.7	585.2	606.9
62.5°	374.7	408.7	490.1	552.6	575.7
65°	328.6	366.6	452.1	518.6	541.7
67.5°	283.8	325.8	416.8	483.3	506.4
70°	232.2	285.1	378.8	444.0	467.0
72.5°	184.6	245.7	342.1	403.2	423.6
75°	142.6	207.7	301.4	357.1	365.2
77.5°	104.5	169.7	259.3	278.3	279.7
80°	70.6	135.8	198.2	195.5	198.2
82.5°	46.2	101.8	124.9	139.8	141.2
85°	27.2	59.7	73.3	81.5	82.8
87.5°	13.6	20.4	25.8	27.2	29.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)