

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: P310782

Luminaire Tested: **24FCZ2-45HE-UNV-L82765-CP125-W2A-U-4500K**

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: P310782
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-15)
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-CP125-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" POLYCARB SHEET
Light Source: (336) 4500K 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: 4070.0 lumens
Efficiency: N/A
Efficacy: 118.3 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

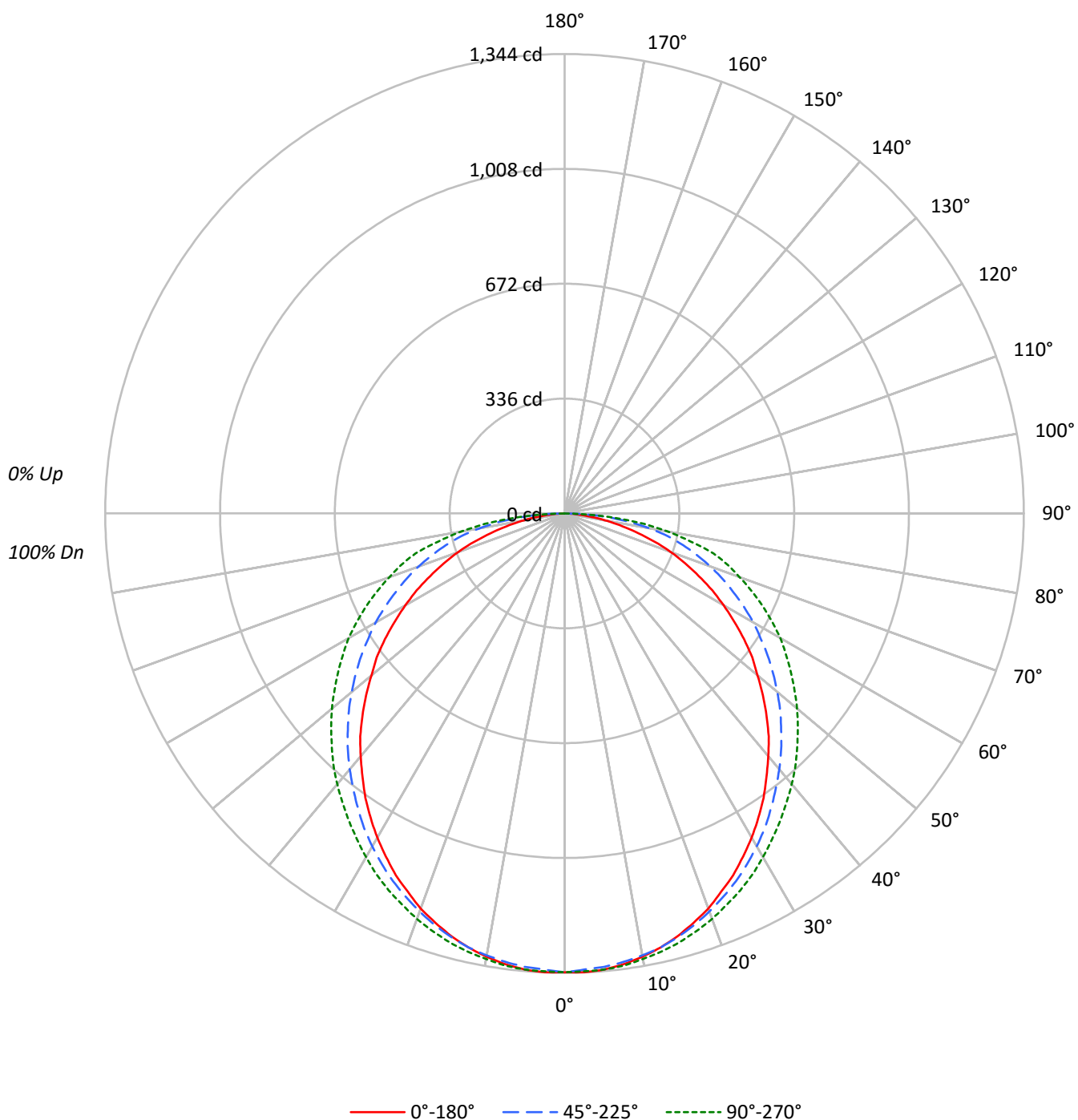
Input Watts (W): 34.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
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	92	89	92	89	87	88	86	84	82		
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67		
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56		
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47		
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41		
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36		
7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31		
8	59	45	37	31	57	45	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	25	35	29	24	23		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1806	1806	1806
5°	1809	1798	1809
10°	1799	1793	1808
15°	1783	1787	1809
20°	1761	1775	1808
25°	1734	1762	1806
30°	1701	1748	1804
35°	1668	1730	1805
40°	1629	1717	1817
45°	1591	1706	1832
50°	1543	1702	1860
55°	1505	1704	1898
60°	1446	1719	1962
65°	1380	1737	2033
70°	1307	1790	2146
75°	1166	1867	2345
80°	994	1977	2396
85°	709	1959	2293



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	127.0	3.1
10°-20°	363.2	8.9
20°-30°	548.6	13.5
30°-40°	661.2	16.2
40°-50°	694.1	17.1
50°-60°	649.4	16.0
60°-70°	536.3	13.2
70°-80°	365.5	9.0
80°-90°	124.6	3.1
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°	1038.9	25.5
0°-40°	1700.1	41.8
0°-60°	3043.6	74.8
0°-90°	4070.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4070.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1342	1342	1342	1342	1342	
5°	1340	1338	1331	1340	1340	127
15°	1280	1282	1283	1296	1299	361
25°	1168	1174	1187	1210	1217	537
35°	1016	1026	1053	1088	1099	635
45°	836	853	897	945	963	645
55°	641	667	726	786	809	572
65°	434	470	546	614	639	430
75°	224	276	359	427	451	239
85°	46	90	127	143	148	57
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1342.3	1342.3	1342.3	1342.3	1342.3
2.5°	1343.6	1342.3	1335.5	1342.3	1340.9
5°	1339.5	1338.2	1331.4	1339.5	1339.5
7.5°	1330.1	1330.1	1323.3	1332.8	1334.1
10°	1316.6	1316.6	1312.5	1323.3	1323.3
12.5°	1300.4	1300.4	1300.4	1311.2	1312.5
15°	1280.1	1281.5	1282.8	1296.3	1299.0
17.5°	1255.8	1258.5	1262.6	1278.8	1281.5
20°	1230.2	1232.9	1239.6	1258.5	1262.6
22.5°	1197.8	1204.5	1214.0	1235.6	1239.6
25°	1168.1	1173.5	1187.0	1209.9	1216.7
27.5°	1131.6	1139.7	1157.3	1181.6	1191.0
30°	1095.1	1103.2	1124.8	1153.2	1161.3
32.5°	1056.0	1068.1	1091.1	1120.8	1130.2
35°	1015.5	1026.3	1053.3	1088.4	1099.2
37.5°	970.9	985.8	1015.5	1053.3	1066.8
40°	927.7	943.9	977.7	1018.2	1034.4
42.5°	884.5	900.7	938.5	984.4	1000.6
45°	835.9	853.4	896.6	945.2	962.8
47.5°	787.3	808.9	856.1	907.4	926.3
50°	737.3	761.6	812.9	866.9	888.5
52.5°	692.7	715.7	769.7	827.8	848.0
55°	641.4	667.1	726.5	785.9	808.9
57.5°	588.8	617.1	680.6	745.4	768.4
60°	537.4	568.5	638.7	703.5	729.2
62.5°	487.5	518.5	591.5	659.0	684.6
65°	433.5	469.9	545.5	614.4	638.7
67.5°	382.1	421.3	501.0	568.5	592.8
70°	332.2	370.0	455.1	521.2	545.5
72.5°	278.2	321.4	406.5	475.3	501.0
75°	224.2	275.5	359.2	426.7	451.0
77.5°	174.2	226.9	310.6	365.9	378.1
80°	128.3	182.3	255.2	294.4	309.2
82.5°	82.4	136.4	194.5	222.8	235.0
85°	45.9	90.5	126.9	143.1	148.5
87.5°	18.9	39.2	51.3	58.1	58.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)