

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: P310784

Luminaire Tested: **24FCZ2-45HE-UNV-L82765-CP125-W2A-U-5500K**

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: P310784
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-5500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" POLYCARB SHEET
Light Source: (336) 5500K 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: 4166.0 lumens
Efficiency: N/A
Efficacy: 120.1 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

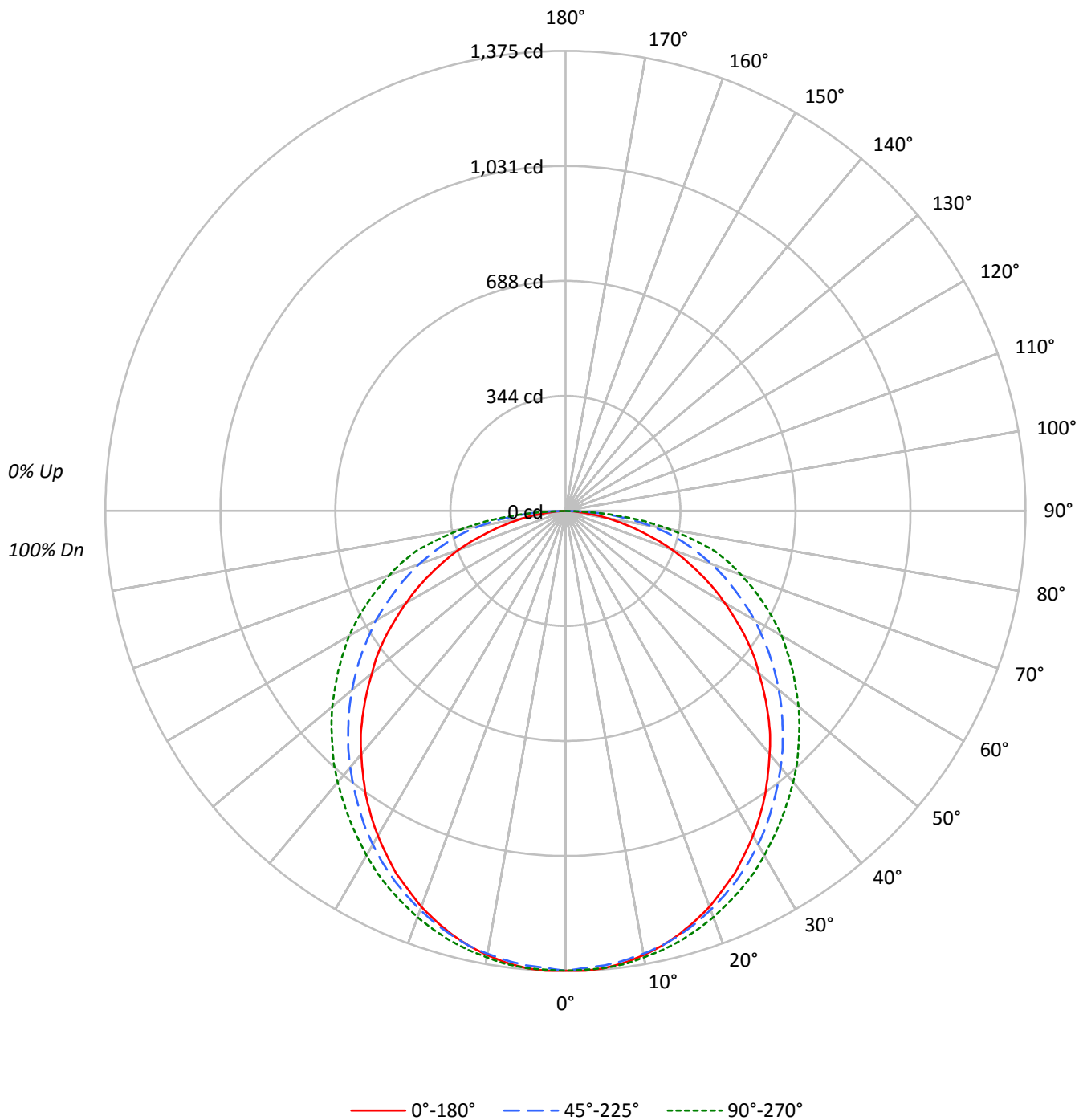
Input Watts (W): 34.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1849	1849	1849
5°	1852	1841	1852
10°	1841	1836	1851
15°	1825	1829	1852
20°	1803	1817	1851
25°	1775	1804	1849
30°	1742	1789	1847
35°	1707	1771	1848
40°	1668	1758	1860
45°	1628	1746	1875
50°	1580	1742	1904
55°	1540	1744	1942
60°	1480	1759	2009
65°	1413	1778	2082
70°	1338	1832	2197
75°	1193	1912	2400
80°	1017	2024	2452
85°	726	2005	2347

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	130.0	3.1
10°-20°	371.8	8.9
20°-30°	561.6	13.5
30°-40°	676.8	16.2
40°-50°	710.5	17.1
50°-60°	664.7	16.0
60°-70°	548.9	13.2
70°-80°	374.1	9.0
80°-90°	127.6	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°	1063.4	25.5
0°-40°	1740.2	41.8
0°-60°	3115.4	74.8
0°-90°	4166.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4166.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1374	1374	1374	1374	1374	
5°	1371	1370	1363	1371	1371	130
15°	1310	1312	1313	1327	1330	369
25°	1196	1201	1215	1238	1245	550
35°	1039	1050	1078	1114	1125	650
45°	856	874	918	968	986	660
55°	656	683	744	804	828	586
65°	444	481	558	629	654	440
75°	229	282	368	437	462	245
85°	47	93	130	146	152	59
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1373.9	1373.9	1373.9	1373.9	1373.9
2.5°	1375.3	1373.9	1367.0	1373.9	1372.5
5°	1371.1	1369.8	1362.9	1371.1	1371.1
7.5°	1361.5	1361.5	1354.6	1364.2	1365.6
10°	1347.6	1347.6	1343.5	1354.6	1354.6
12.5°	1331.1	1331.1	1331.1	1342.1	1343.5
15°	1310.3	1311.7	1313.1	1326.9	1329.7
17.5°	1285.4	1288.2	1292.4	1308.9	1311.7
20°	1259.2	1262.0	1268.9	1288.2	1292.4
22.5°	1226.0	1232.9	1242.6	1264.7	1268.9
25°	1195.6	1201.1	1215.0	1238.5	1245.4
27.5°	1158.3	1166.6	1184.5	1209.4	1219.1
30°	1121.0	1129.3	1151.4	1180.4	1188.7
32.5°	1080.9	1093.3	1116.8	1147.2	1156.9
35°	1039.4	1050.5	1078.1	1114.1	1125.1
37.5°	993.8	1009.0	1039.4	1078.1	1091.9
40°	949.6	966.2	1000.7	1042.2	1058.8
42.5°	905.3	921.9	960.6	1007.6	1024.2
45°	855.6	873.6	917.8	967.5	985.5
47.5°	805.8	827.9	876.3	928.8	948.2
50°	754.7	779.6	832.1	887.4	909.5
52.5°	709.1	732.6	787.9	847.3	868.0
55°	656.5	682.8	743.6	804.4	827.9
57.5°	602.6	631.7	696.6	763.0	786.5
60°	550.1	581.9	653.8	720.1	746.4
62.5°	499.0	530.8	605.4	674.5	700.8
65°	443.7	481.0	558.4	628.9	653.8
67.5°	391.2	431.2	512.8	581.9	606.8
70°	340.0	378.7	465.8	533.5	558.4
72.5°	284.7	329.0	416.0	486.5	512.8
75°	229.4	282.0	367.7	436.8	461.7
77.5°	178.3	232.2	317.9	374.6	387.0
80°	131.3	186.6	261.2	301.3	316.5
82.5°	84.3	139.6	199.0	228.1	240.5
85°	47.0	92.6	129.9	146.5	152.0
87.5°	19.4	40.1	52.5	59.4	59.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)