

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: P310786

Luminaire Tested: **24FCZ2-45HE-UNV-L82765-CP125-W2A-U-6500K**

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: P310786
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-6500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" POLYCARB SHEET
Light Source: (336) 6500K 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: 4188.0 lumens
Efficiency: N/A
Efficacy: 118.6 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

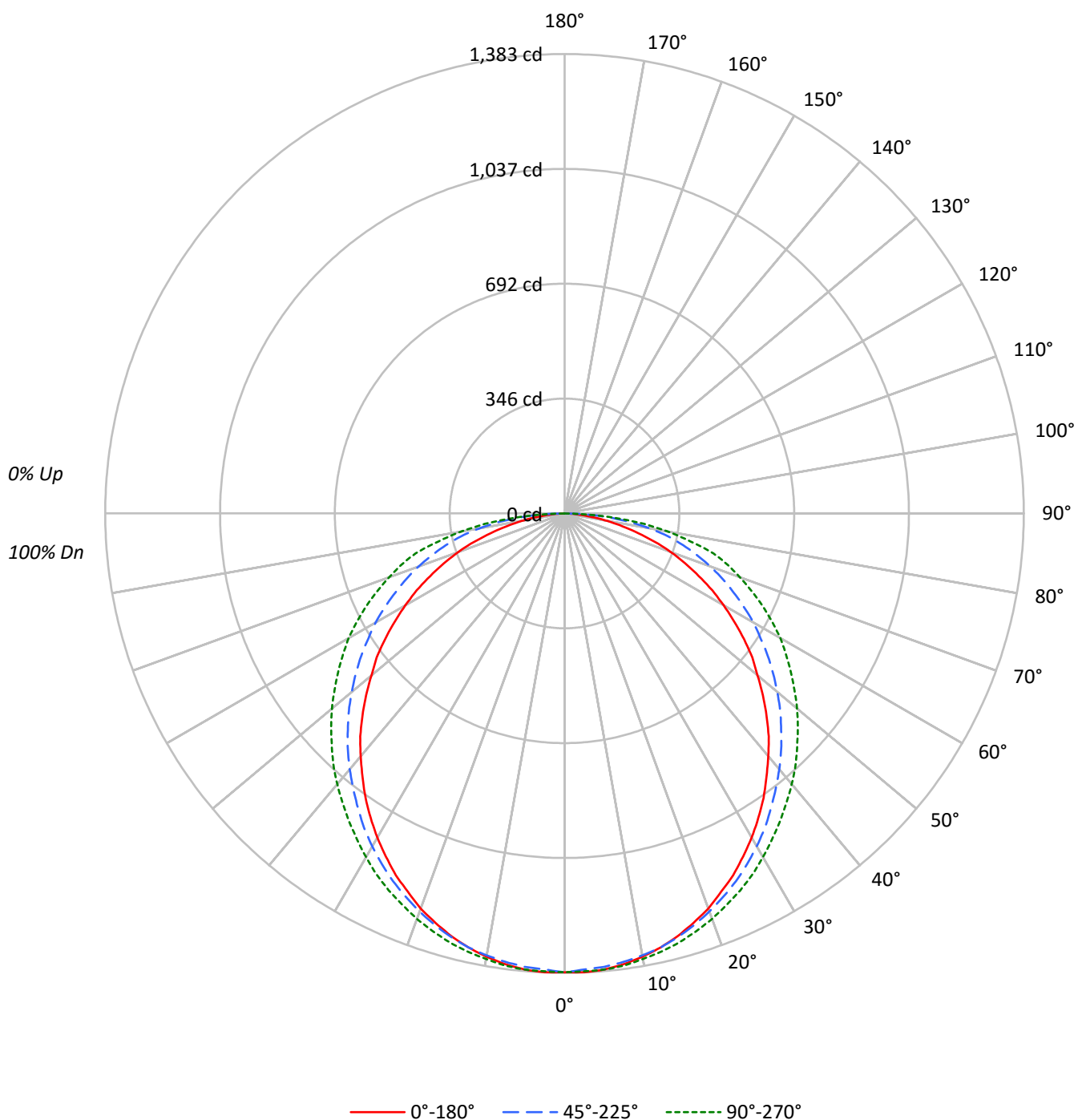
Input Watts (W): 35.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				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	100	96	92	96	92	89		92	89	87		82
2	98	89	81	75	95	87	80	74	83	78	73		80	75	71		67
3	89	77	69	62	86	76	68	61	73	66	60		70	64	59		56
4	81	68	59	52	79	67	58	52	64	57	51		62	56	50		47
5	74	61	52	45	72	60	51	44	58	50	44		56	49	43		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	64	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	37	31	57	45	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	25		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1858	1858	1858
5°	1862	1850	1862
10°	1851	1845	1860
15°	1835	1839	1862
20°	1812	1826	1860
25°	1784	1813	1859
30°	1751	1798	1857
35°	1716	1780	1858
40°	1677	1767	1870
45°	1637	1756	1885
50°	1588	1751	1914
55°	1548	1754	1952
60°	1488	1769	2019
65°	1420	1787	2092
70°	1345	1842	2209
75°	1199	1921	2413
80°	1023	2035	2466
85°	729	2016	2359



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	130.7	3.1
10°-20°	373.8	8.9
20°-30°	564.5	13.5
30°-40°	680.4	16.2
40°-50°	714.3	17.1
50°-60°	668.2	16.0
60°-70°	551.8	13.2
70°-80°	376.0	9.0
80°-90°	128.2	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°	1069.0	25.5
0°-40°	1749.4	41.8
0°-60°	3131.9	74.8
0°-90°	4188.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4188.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1381	1381	1381	1381	1381	
5°	1378	1377	1370	1378	1378	131
15°	1317	1319	1320	1334	1337	371
25°	1202	1208	1221	1245	1252	553
35°	1045	1056	1084	1120	1131	653
45°	860	878	923	973	991	663
55°	660	686	748	809	832	589
65°	446	484	561	632	657	442
75°	231	284	370	439	464	246
85°	47	93	131	147	153	59
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1381.2	1381.2	1381.2	1381.2	1381.2
2.5°	1382.6	1381.2	1374.2	1381.2	1379.8
5°	1378.4	1377.0	1370.0	1378.4	1378.4
7.5°	1368.7	1368.7	1361.7	1371.4	1372.8
10°	1354.8	1354.8	1350.6	1361.7	1361.7
12.5°	1338.1	1338.1	1338.1	1349.2	1350.6
15°	1317.2	1318.6	1320.0	1333.9	1336.7
17.5°	1292.2	1295.0	1299.2	1315.9	1318.6
20°	1265.8	1268.6	1275.6	1295.0	1299.2
22.5°	1232.5	1239.4	1249.2	1271.4	1275.6
25°	1201.9	1207.5	1221.4	1245.0	1251.9
27.5°	1164.4	1172.7	1190.8	1215.8	1225.5
30°	1126.9	1135.2	1157.5	1186.6	1195.0
32.5°	1086.6	1099.1	1122.7	1153.3	1163.0
35°	1044.9	1056.0	1083.8	1119.9	1131.1
37.5°	999.1	1014.3	1044.9	1083.8	1097.7
40°	954.6	971.3	1006.0	1047.7	1064.4
42.5°	910.1	926.8	965.7	1012.9	1029.6
45°	860.1	878.2	922.6	972.7	990.7
47.5°	810.1	832.3	880.9	933.7	953.2
50°	758.7	783.7	836.5	892.1	914.3
52.5°	712.8	736.4	792.0	851.8	872.6
55°	660.0	686.4	747.6	808.7	832.3
57.5°	605.8	635.0	700.3	767.0	790.6
60°	553.0	585.0	657.2	723.9	750.3
62.5°	501.6	533.6	608.6	678.1	704.5
65°	446.0	483.5	561.4	632.2	657.2
67.5°	393.2	433.5	515.5	585.0	610.0
70°	341.8	380.7	468.3	536.3	561.4
72.5°	286.2	330.7	418.2	489.1	515.5
75°	230.7	283.5	369.6	439.1	464.1
77.5°	179.2	233.4	319.6	376.6	389.1
80°	132.0	187.6	262.6	302.9	318.2
82.5°	84.8	140.3	200.1	229.3	241.8
85°	47.2	93.1	130.6	147.3	152.8
87.5°	19.5	40.3	52.8	59.7	59.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)