

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: P311366

Luminaire Tested: **24FCZ2-40HE-UNV-L82765-S-CP125-W2A-U-4000K**

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: P311366
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-40HE-UNV-L82765-S-CP125-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB SHEET
Light Source: (336) 4000K 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: 3816.0 lumens
Efficiency: N/A
Efficacy: 123.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

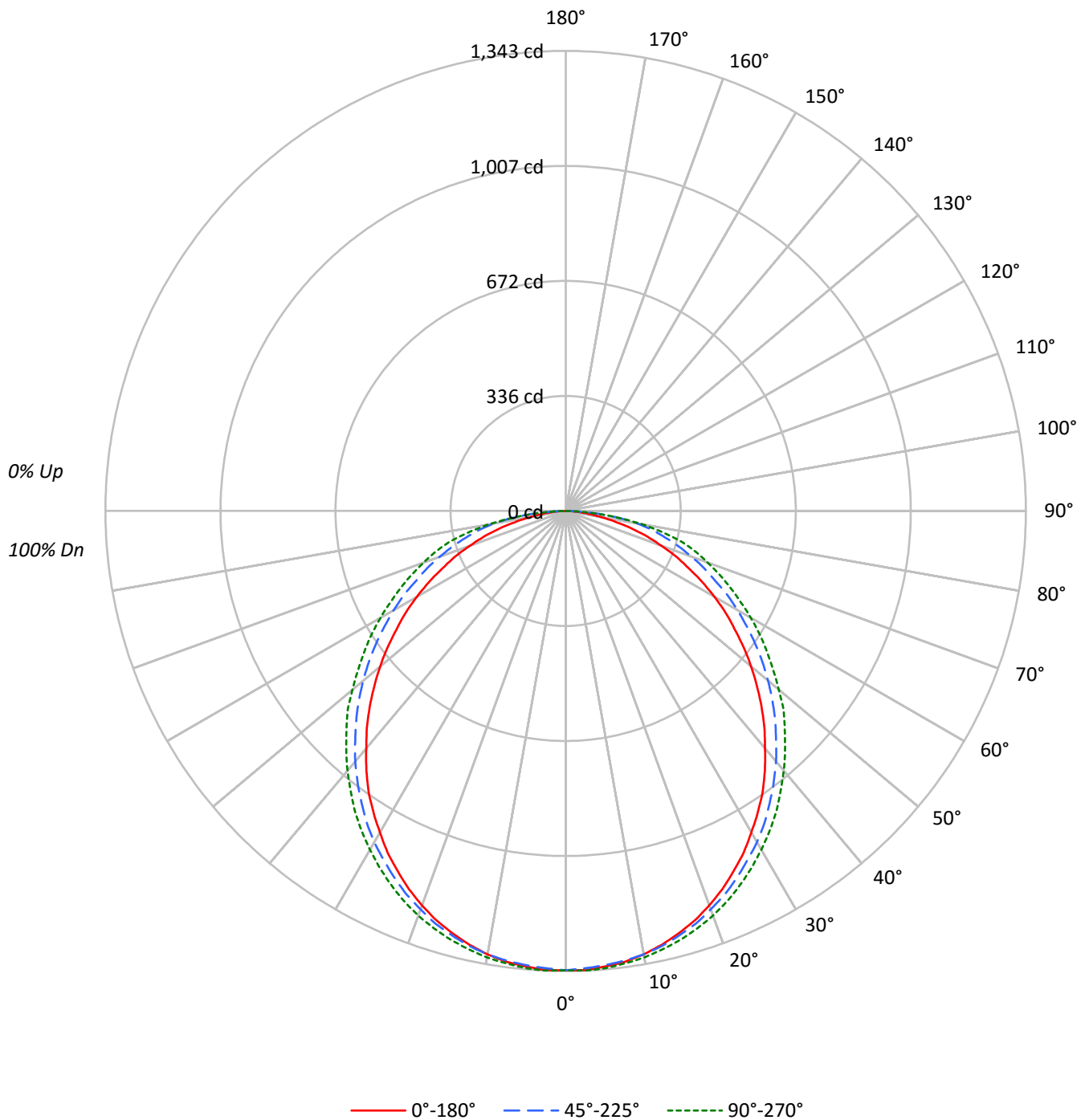
Input Watts (W): 30.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	95	106	101	97	93	97	93	90		93	90	88		83
2	98	90	83	77	96	88	81	76	84	79	74		81	76	72		69
3	89	79	70	64	87	77	69	63	74	67	62		71	66	61		58
4	82	70	61	54	80	68	60	54	66	59	53		63	57	52		49
5	75	62	53	46	73	61	53	46	59	51	46		57	50	45		42
6	70	56	47	40	68	55	47	40	53	46	40		52	45	40		37
7	64	51	42	36	63	50	42	36	48	41	35		47	40	35		33
8	60	46	38	32	58	46	37	32	44	37	32		43	36	31		29
9	56	43	34	29	55	42	34	29	41	34	28		40	33	28		26
10	53	39	31	26	51	39	31	26	38	31	26		37	30	26		24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1804	1804	1804
5°	1802	1798	1809
10°	1795	1795	1808
15°	1778	1786	1805
20°	1755	1772	1800
25°	1722	1754	1789
30°	1684	1734	1774
35°	1646	1706	1760
40°	1590	1678	1739
45°	1538	1644	1721
50°	1479	1614	1700
55°	1413	1584	1683
60°	1347	1559	1680
65°	1262	1532	1690
70°	1168	1540	1736
75°	1046	1569	1834
80°	845	1662	1794
85°	636	1459	1422



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	126.9	3.3
10°-20°	362.6	9.5
20°-30°	545.1	14.3
30°-40°	649.3	17.0
40°-50°	664.6	17.4
50°-60°	598.3	15.7
60°-70°	469.9	12.3
70°-80°	304.9	8.0
80°-90°	94.3	2.5
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°	1034.7	27.1
0°-40°	1684.0	44.1
0°-60°	2946.9	77.2
0°-90°	3816.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3816.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1341	1341	1341	1341	1341	
5°	1334	1337	1331	1338	1339	127
15°	1276	1280	1282	1293	1296	360
25°	1160	1170	1182	1201	1205	534
35°	1002	1014	1039	1064	1072	625
45°	808	828	864	897	904	623
55°	602	629	675	710	718	540
65°	396	427	481	521	531	395
75°	201	240	302	343	353	213
85°	41	76	94	92	92	50
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1340.6	1340.6	1340.6	1340.6	1340.6
2.5°	1341.8	1341.8	1335.7	1341.8	1343.0
5°	1334.5	1336.9	1330.9	1338.2	1339.4
7.5°	1327.3	1327.3	1323.6	1330.9	1332.1
10°	1313.9	1315.1	1313.9	1322.4	1323.6
12.5°	1297.0	1299.4	1300.6	1309.1	1310.3
15°	1276.3	1280.0	1282.4	1293.3	1295.7
17.5°	1253.3	1257.0	1263.0	1275.1	1277.6
20°	1225.4	1230.3	1237.6	1253.3	1257.0
22.5°	1195.1	1200.0	1212.1	1226.6	1232.7
25°	1160.0	1169.7	1181.8	1201.2	1204.8
27.5°	1124.8	1133.3	1149.1	1169.7	1174.5
30°	1083.6	1097.0	1116.3	1137.0	1141.8
32.5°	1043.6	1057.0	1080.0	1101.8	1107.9
35°	1002.4	1014.5	1038.8	1064.2	1071.5
37.5°	955.1	970.9	997.6	1023.0	1030.3
40°	905.4	924.8	955.1	981.8	990.3
42.5°	858.2	878.8	909.1	938.2	947.9
45°	808.5	827.9	864.2	897.0	904.2
47.5°	757.6	779.4	818.2	850.9	863.0
50°	706.7	729.7	770.9	804.8	812.1
52.5°	655.7	680.0	723.6	760.0	763.6
55°	602.4	629.1	675.1	710.3	717.6
57.5°	553.9	577.0	626.7	663.0	671.5
60°	500.6	526.1	579.4	613.3	624.2
62.5°	449.7	476.4	532.1	566.1	575.7
65°	396.4	426.7	481.2	521.2	530.9
67.5°	350.3	379.4	437.6	476.4	486.1
70°	297.0	329.7	391.5	431.5	441.2
72.5°	250.9	284.8	346.7	385.4	400.0
75°	201.2	240.0	301.8	343.0	352.7
77.5°	152.7	197.6	260.6	292.1	292.1
80°	109.1	156.4	214.5	229.1	231.5
82.5°	71.5	117.6	158.8	157.6	157.6
85°	41.2	76.4	94.5	92.1	92.1
87.5°	15.8	31.5	33.9	33.9	32.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)