

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: P309762

Luminaire Tested: **24FCZ2-70HE-UNV-L82765-HRP-CP250-W2A-U-3000K**

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: P309762
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: 24FCZ2-70HE-UNV-L82765-HRP-CP250-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
POLYCARB SHEET
Light Source: (336) 3000K 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: 4285.0 lumens
Efficiency: N/A
Efficacy: 74.8 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

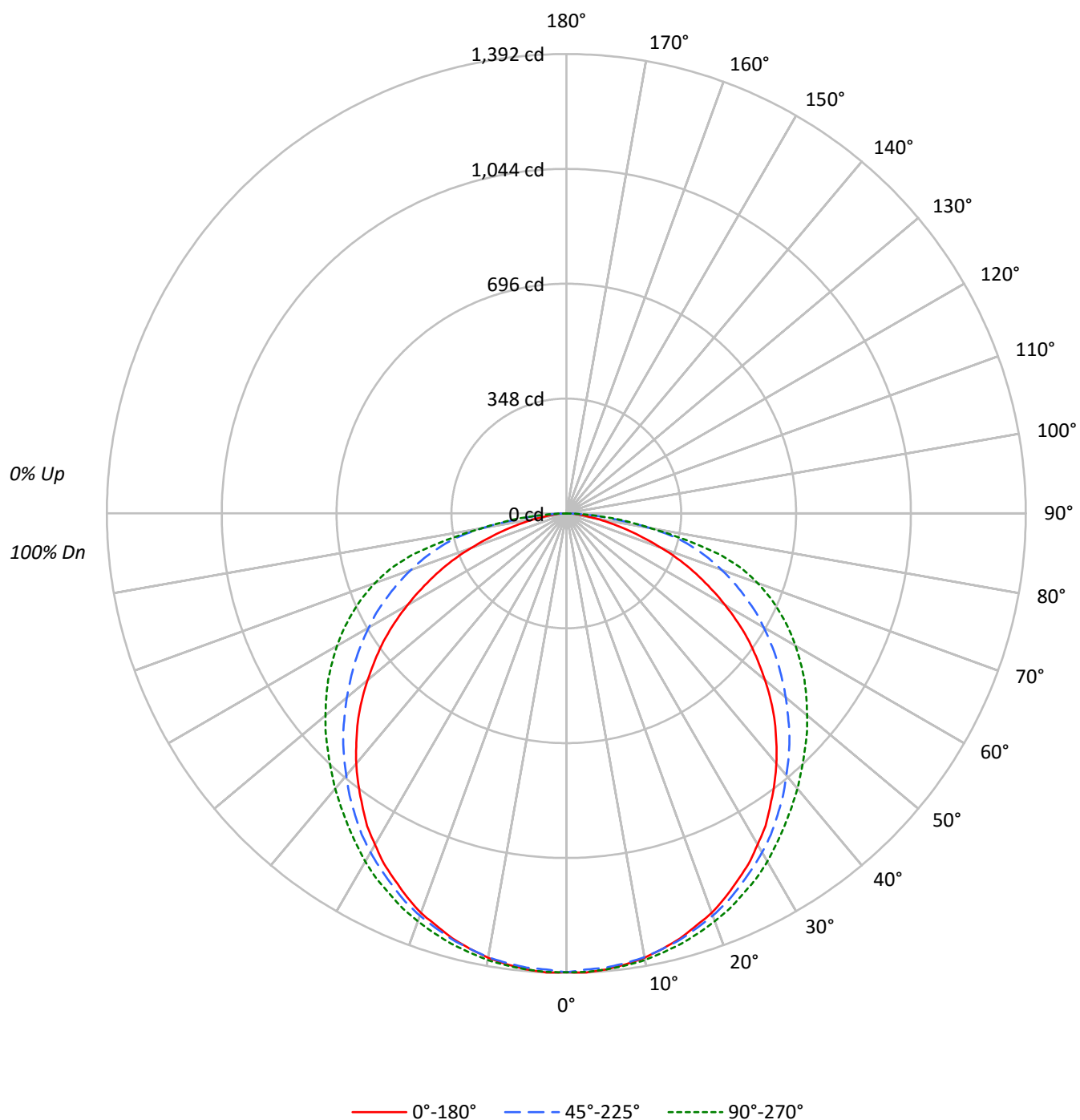
Input Watts (W): 57.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1871	1871	1871
5°	1873	1866	1873
10°	1868	1865	1877
15°	1857	1862	1879
20°	1844	1857	1883
25°	1822	1848	1886
30°	1801	1842	1892
35°	1771	1833	1895
40°	1739	1821	1913
45°	1700	1819	1942
50°	1645	1817	1994
55°	1586	1830	2066
60°	1496	1859	2158
65°	1382	1902	2279
70°	1207	1969	2428
75°	979	2070	2509
80°	723	2029	2029
85°	554	1496	1689



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	131.7	3.1
10°-20°	378.2	8.8
20°-30°	575.8	13.4
30°-40°	699.1	16.3
40°-50°	738.6	17.2
50°-60°	697.0	16.3
60°-70°	579.5	13.5
70°-80°	381.2	8.9
80°-90°	103.9	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°	1085.7	25.3
0°-40°	1784.8	41.7
0°-60°	3220.3	75.2
0°-90°	4285.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4285.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1390	1390	1390	1390	1390	
5°	1387	1387	1381	1387	1387	132
15°	1333	1335	1336	1349	1349	376
25°	1227	1234	1245	1266	1270	566
35°	1078	1091	1116	1144	1154	675
45°	893	911	956	1003	1021	688
55°	676	705	780	854	881	602
65°	434	484	597	685	716	429
75°	188	274	398	472	483	203
85°	36	79	97	108	109	44
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1390.3	1390.3	1390.3	1390.3	1390.3
2.5°	1392.1	1390.3	1383.1	1390.3	1390.3
5°	1386.7	1386.7	1381.3	1386.7	1386.7
7.5°	1377.7	1377.7	1374.1	1381.3	1381.3
10°	1367.0	1367.0	1365.2	1374.1	1374.1
12.5°	1350.8	1352.6	1350.8	1361.6	1361.6
15°	1332.9	1334.7	1336.5	1349.0	1349.0
17.5°	1309.5	1313.1	1316.7	1331.1	1332.9
20°	1288.0	1289.8	1297.0	1313.1	1314.9
22.5°	1259.3	1264.7	1273.7	1289.8	1295.2
25°	1227.0	1234.2	1245.0	1266.5	1270.1
27.5°	1196.5	1201.9	1216.3	1239.6	1246.8
30°	1158.9	1167.8	1185.8	1209.1	1218.1
32.5°	1123.0	1132.0	1153.5	1178.6	1185.8
35°	1078.1	1090.7	1115.8	1144.5	1153.5
37.5°	1035.1	1047.6	1078.1	1110.4	1121.2
40°	990.2	1004.6	1036.9	1074.5	1088.9
42.5°	941.8	961.5	997.4	1038.7	1054.8
45°	893.4	911.3	956.1	1002.8	1020.7
47.5°	841.3	862.9	911.3	966.9	988.4
50°	785.7	812.6	868.2	929.2	952.6
52.5°	730.1	760.6	823.4	891.6	916.7
55°	676.3	705.0	780.3	853.9	880.8
57.5°	617.1	653.0	735.5	814.4	841.3
60°	556.1	595.6	690.7	773.2	801.9
62.5°	495.1	540.0	647.6	730.1	760.6
65°	434.1	484.4	597.4	685.3	715.8
67.5°	374.9	430.5	550.7	638.6	669.1
70°	306.8	376.7	500.5	586.6	617.1
72.5°	244.0	324.7	452.1	532.8	559.7
75°	188.4	274.5	398.2	471.8	482.6
77.5°	138.1	224.2	342.6	367.7	369.5
80°	93.3	179.4	261.9	258.3	261.9
82.5°	61.0	134.5	165.0	184.8	186.6
85°	35.9	78.9	96.9	107.6	109.4
87.5°	17.9	26.9	34.1	35.9	39.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)