

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: P309797

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-HRP-CP187-W2A-U-2700K**

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: P309797
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: 24FCZ2-75HE-UNV-L82765-HRP-CP187-W2A-U-2700K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.187"
POLYCARB SHEET
Light Source: (336) 2700K 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: 4489.0 lumens
Efficiency: N/A
Efficacy: 71.5 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

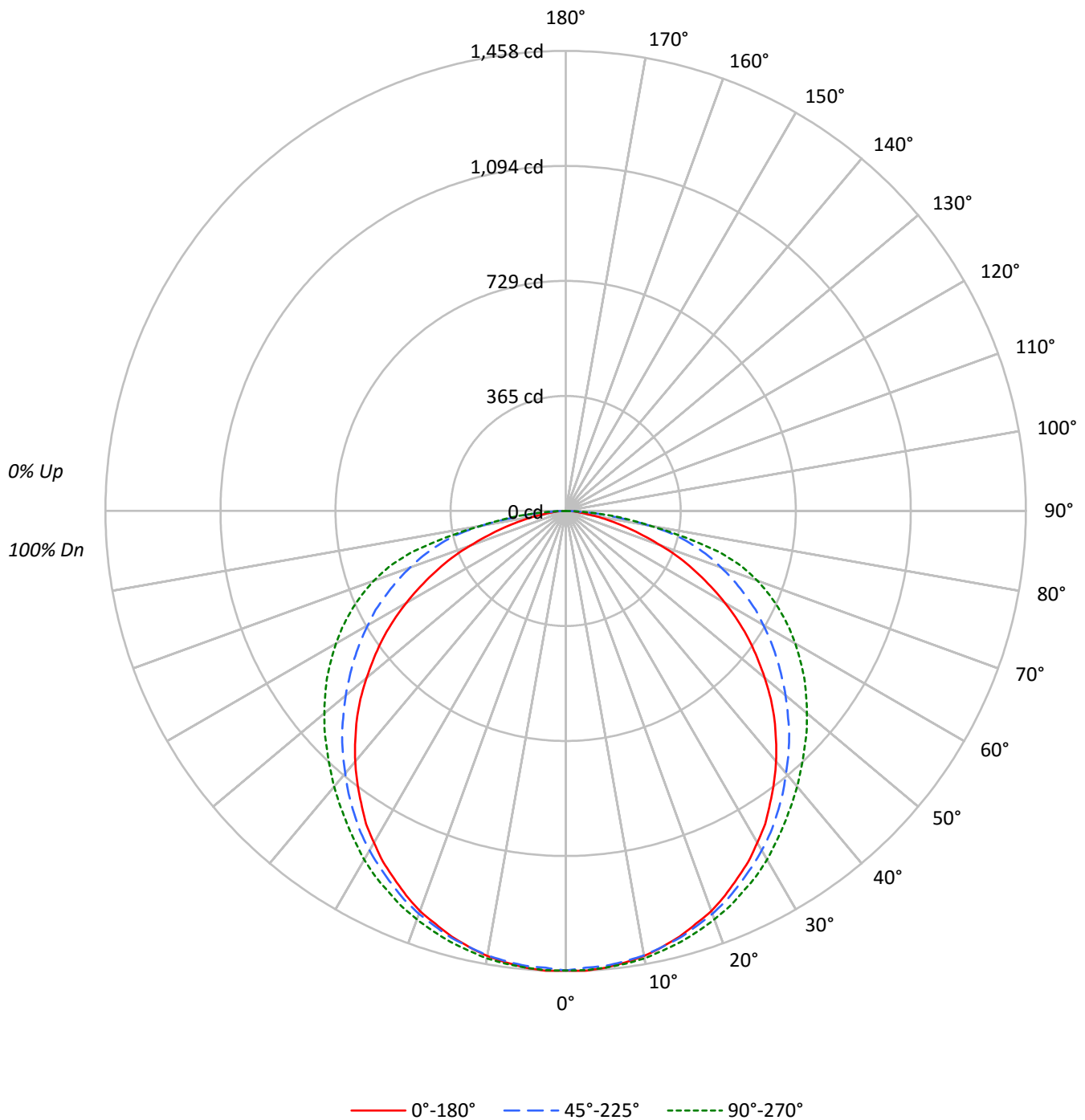
Input Watts (W): 62.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1960	1960	1960
5°	1962	1954	1962
10°	1956	1954	1967
15°	1945	1950	1969
20°	1932	1945	1972
25°	1908	1936	1975
30°	1886	1930	1982
35°	1855	1920	1985
40°	1822	1908	2004
45°	1781	1906	2035
50°	1723	1904	2089
55°	1662	1918	2164
60°	1568	1947	2260
65°	1448	1992	2387
70°	1264	2063	2543
75°	1026	2169	2628
80°	757	2126	2126
85°	580	1567	1769



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	138.0	3.1
10°-20°	396.2	8.8
20°-30°	603.2	13.4
30°-40°	732.4	16.3
40°-50°	773.8	17.2
50°-60°	730.1	16.3
60°-70°	607.1	13.5
70°-80°	399.4	8.9
80°-90°	108.9	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°	1137.3	25.3
0°-40°	1869.7	41.7
0°-60°	3373.6	75.2
0°-90°	4489.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4489.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1456	1456	1456	1456	1456	
5°	1453	1453	1447	1453	1453	138
15°	1396	1398	1400	1413	1413	394
25°	1285	1293	1304	1327	1330	593
35°	1130	1143	1169	1199	1208	707
45°	936	955	1002	1050	1069	721
55°	708	739	818	894	923	631
65°	455	507	626	718	750	450
75°	197	288	417	494	506	213
85°	38	83	102	113	115	46
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1456.5	1456.5	1456.5	1456.5	1456.5
2.5°	1458.3	1456.5	1448.9	1456.5	1456.5
5°	1452.7	1452.7	1447.1	1452.7	1452.7
7.5°	1443.3	1443.3	1439.5	1447.1	1447.1
10°	1432.0	1432.0	1430.1	1439.5	1439.5
12.5°	1415.1	1417.0	1415.1	1426.4	1426.4
15°	1396.3	1398.2	1400.1	1413.2	1413.2
17.5°	1371.9	1375.6	1379.4	1394.4	1396.3
20°	1349.3	1351.2	1358.7	1375.6	1377.5
22.5°	1319.3	1324.9	1334.3	1351.2	1356.9
25°	1285.4	1293.0	1304.2	1326.8	1330.5
27.5°	1253.5	1259.1	1274.2	1298.6	1306.1
30°	1214.0	1223.4	1242.2	1266.6	1276.0
32.5°	1176.4	1185.8	1208.4	1234.7	1242.2
35°	1129.5	1142.6	1168.9	1199.0	1208.4
37.5°	1084.4	1097.5	1129.5	1163.3	1174.6
40°	1037.4	1052.4	1086.2	1125.7	1140.7
42.5°	986.6	1007.3	1044.9	1088.1	1105.0
45°	935.9	954.7	1001.7	1050.5	1069.3
47.5°	881.4	903.9	954.7	1012.9	1035.5
50°	823.1	851.3	909.6	973.5	997.9
52.5°	764.9	796.8	862.6	934.0	960.3
55°	708.5	738.6	817.5	894.5	922.7
57.5°	646.5	684.1	770.5	853.2	881.4
60°	582.6	623.9	723.5	810.0	840.0
62.5°	518.7	565.7	678.4	764.9	796.8
65°	454.8	507.4	625.8	717.9	749.8
67.5°	392.8	451.0	576.9	669.0	701.0
70°	321.4	394.7	524.3	614.5	646.5
72.5°	255.6	340.2	473.6	558.2	586.3
75°	197.3	287.5	417.2	494.3	505.5
77.5°	144.7	234.9	358.9	385.3	387.1
80°	97.7	187.9	274.4	270.6	274.4
82.5°	63.9	140.9	172.9	193.6	195.4
85°	37.6	82.7	101.5	112.8	114.6
87.5°	18.8	28.2	35.7	37.6	41.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)