

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P929992

Luminaire Tested: DFN2DS-4P4F0-060DS850-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P929992
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P333882)
Test Lab: INNOVATION CENTER
Issue Date: 11/20/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DS-4P4F0-060DS850-RLL
Description: 4 foot, 90deg - 4way Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

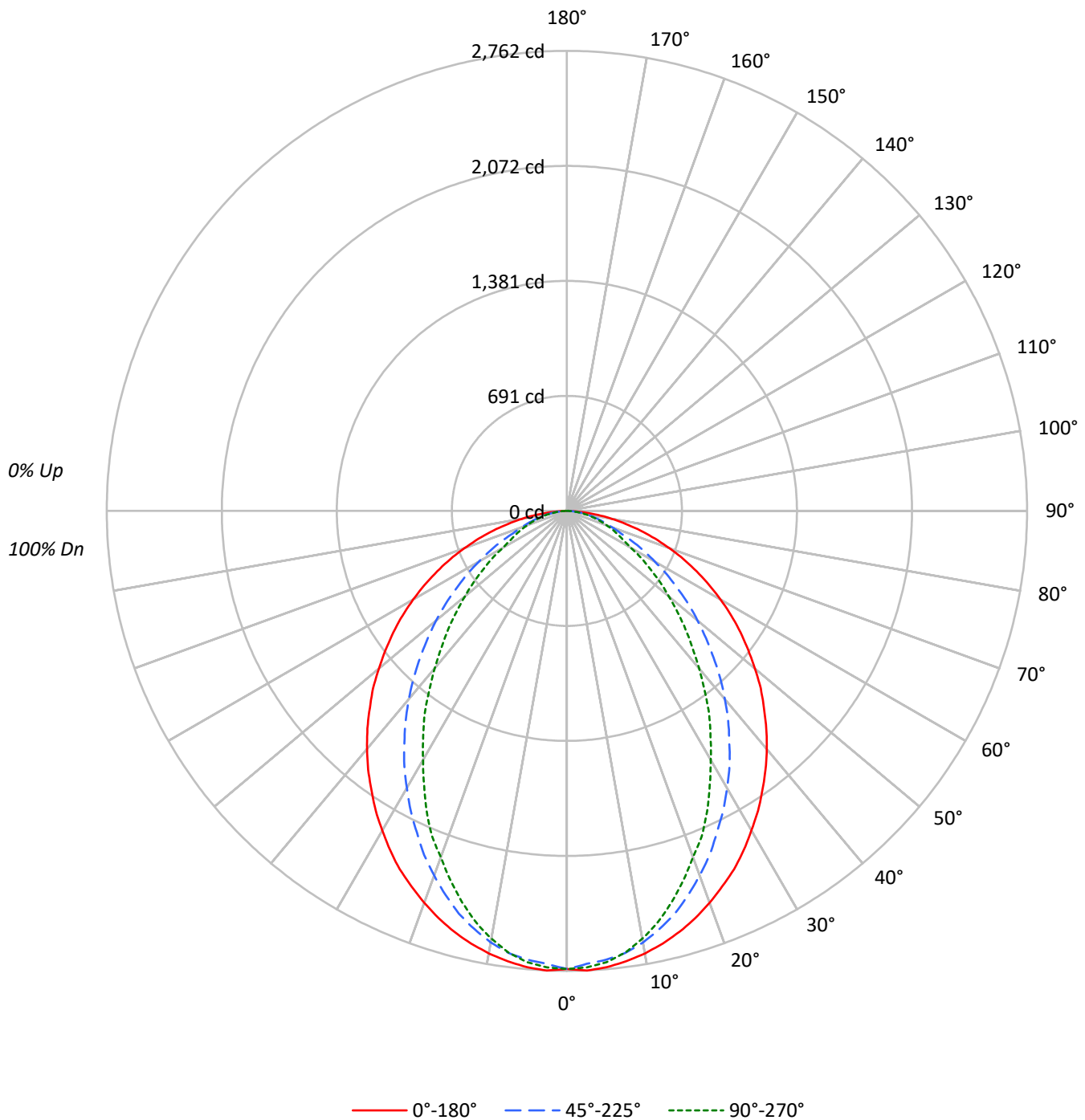
Lumens per Lamp: N/A
Luminaire Lumens: 5655.9 lumens
Efficiency: N/A
Efficacy: 91.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 4.07' x L: 4.07' x H: 0')
CIE Type: Direct

Input Watts (W): 62
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9933
Total Harmonic Distortion (THDi): 0.066
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P929992

CATALOG NUMBER: DFN2DS-4P4F0-060DS850-RLL

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				10
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102
1	110	106	102	98	107	103	100	97	99	96	94		95	93	91		92
2	101	94	87	82	98	92	86	81	88	83	79		85	81	78		82
3	93	83	76	70	90	82	75	69	79	73	68		76	71	67		74
4	86	75	66	60	83	73	66	60	71	64	59		69	63	58		66
5	79	67	59	53	77	66	58	52	64	57	52		62	56	51		60
6	74	61	53	47	72	60	52	46	58	51	46		57	50	46		55
7	68	56	47	42	67	55	47	42	53	46	41		52	46	41		51
8	64	51	43	38	62	51	43	37	49	42	37		48	42	37		47
9	60	47	39	34	59	47	39	34	46	39	34		44	38	34		44
10	56	44	36	31	55	43	36	31	42	36	31		41	35	31		41

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1784	1784	1784
5°	1791	1762	1772
10°	1777	1733	1718
15°	1757	1682	1633
20°	1728	1608	1527
25°	1700	1525	1425
30°	1659	1439	1294
35°	1620	1346	1179
40°	1581	1250	1045
45°	1534	1142	925
50°	1487	1032	806
55°	1438	915	693
60°	1382	791	575
65°	1318	665	523
70°	1241	547	481
75°	1148	499	449
80°	1013	446	409
85°	796	351	351

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1534 cd/sqm

TEST NUMBER: P929992

CATALOG NUMBER: DFN2DS-4P4F0-060DS850-RLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	257.7	4.6
10°-20°	707.6	12.5
20°-30°	993.4	17.6
30°-40°	1082.8	19.1
40°-50°	995.2	17.6
50°-60°	781.6	13.8
60°-70°	508.8	9.0
70°-80°	261.9	4.6
80°-90°	66.9	1.2
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°	1958.7	34.6
0°-40°	3041.5	53.8
0°-60°	4818.4	85.2
0°-90°	5655.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5655.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2750	2750	2750	2750	2750	
5°	2750	2738	2705	2728	2720	261
15°	2616	2588	2504	2456	2432	737
25°	2374	2295	2130	2028	1991	1092
35°	2046	1919	1700	1543	1488	1281
45°	1672	1506	1244	1068	1008	1292
55°	1272	1078	809	660	612	1136
65°	859	657	433	349	341	851
75°	458	284	199	182	179	484
85°	107	55	47	47	47	128
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2750.1	2750.1	2750.1	2750.1	2750.1
2.5°	2762.5	2750.1	2722.6	2747.7	2742.7
5°	2750.1	2737.7	2705.2	2727.7	2720.3
7.5°	2727.7	2712.8	2678.0	2687.8	2675.4
10°	2697.8	2680.3	2630.8	2623.1	2608.3
12.5°	2660.6	2638.1	2570.8	2556.0	2528.5
15°	2615.7	2588.2	2503.7	2456.4	2431.6
17.5°	2563.5	2523.5	2419.0	2364.3	2324.5
20°	2503.7	2453.8	2329.5	2267.4	2212.5
22.5°	2439.0	2381.7	2237.3	2152.8	2115.5
25°	2374.4	2294.6	2130.4	2028.5	1991.0
27.5°	2297.3	2212.5	2030.8	1913.8	1856.6
30°	2215.1	2120.3	1921.2	1794.5	1727.2
32.5°	2135.4	2020.8	1817.0	1667.5	1605.2
35°	2045.9	1918.9	1700.0	1543.1	1488.2
37.5°	1958.7	1821.6	1590.4	1418.5	1356.4
40°	1866.6	1717.4	1475.7	1299.1	1234.4
42.5°	1772.1	1612.8	1361.4	1177.1	1115.1
45°	1672.5	1505.6	1244.5	1067.5	1007.9
47.5°	1578.0	1401.3	1132.5	955.6	901.0
50°	1473.4	1296.8	1022.9	851.0	799.0
52.5°	1371.2	1184.5	918.4	754.1	706.9
55°	1271.7	1077.6	808.8	659.6	612.3
57.5°	1169.8	970.6	711.9	572.5	532.5
60°	1065.2	866.1	609.7	483.0	443.0
62.5°	963.3	764.2	522.6	403.2	383.4
65°	858.7	657.0	433.1	348.6	340.9
67.5°	759.1	557.4	348.6	306.1	298.7
70°	654.5	460.5	288.6	263.8	253.7
72.5°	555.1	370.7	241.3	221.6	216.5
75°	457.9	283.6	199.1	181.7	179.3
77.5°	361.0	201.5	156.8	146.8	141.8
80°	271.2	144.4	119.3	109.6	109.6
82.5°	189.1	97.1	82.1	77.1	77.1
85°	106.9	54.7	47.2	47.2	47.2
87.5°	39.9	19.9	19.9	17.4	17.4
90°	0.0	0.0	0.0	0.0	0.0

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CIE UGR TABLE:

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	13.25	14.77	13.61	15.08	15.40	9.21	10.73	9.57	11.04	11.36
	3H	15.01	16.38	15.39	16.70	17.07	10.47	11.84	10.85	12.17	12.53
	4H	15.68	16.96	16.08	17.31	17.69	10.97	12.25	11.37	12.60	12.98
	6H	16.17	17.35	16.58	17.72	18.11	11.35	12.54	11.77	12.90	13.30
	8H	16.33	17.46	16.76	17.85	18.25	11.48	12.61	11.91	13.00	13.40
	12H	16.44	17.51	16.87	17.90	18.32	11.56	12.64	11.99	13.02	13.45
4H	2H	13.35	14.63	13.75	14.98	15.36	9.90	11.18	10.30	11.53	11.91
	3H	15.28	16.35	15.69	16.75	17.15	11.35	12.41	11.76	12.81	13.21
	4H	16.03	16.99	16.47	17.40	17.84	11.95	12.90	12.38	13.32	13.76
	6H	16.62	17.46	17.08	17.90	18.36	12.43	13.27	12.89	13.71	14.17
	8H	16.84	17.62	17.30	18.06	18.53	12.60	13.37	13.06	13.82	14.28
	12H	16.99	17.69	17.47	18.17	18.64	12.71	13.41	13.19	13.89	14.36
8H	4H	16.06	16.83	16.52	17.28	17.75	12.30	13.08	12.76	13.52	13.99
	6H	16.69	17.34	17.19	17.83	18.31	12.89	13.53	13.38	14.02	14.50
	8H	16.94	17.52	17.46	18.03	18.52	13.11	13.68	13.62	14.19	14.68
	12H	17.15	17.66	17.66	18.15	18.72	13.29	13.80	13.79	14.29	14.85
12H	4H	16.04	16.74	16.52	17.21	17.69	12.34	13.04	12.82	13.51	13.99
	6H	16.68	17.25	17.19	17.76	18.25	12.95	13.53	13.46	14.04	14.52
	8H	16.96	17.47	17.47	17.96	18.53	13.22	13.73	13.73	14.22	14.79