

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: P930873

Luminaire Tested: DFN2DS-SQ2F0-070DS850-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930873
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P333812)
Test Lab: INNOVATION CENTER
Issue Date: 11/20/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DS-SQ2F0-070DS850-FLL
Description: 2 foot, Square Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

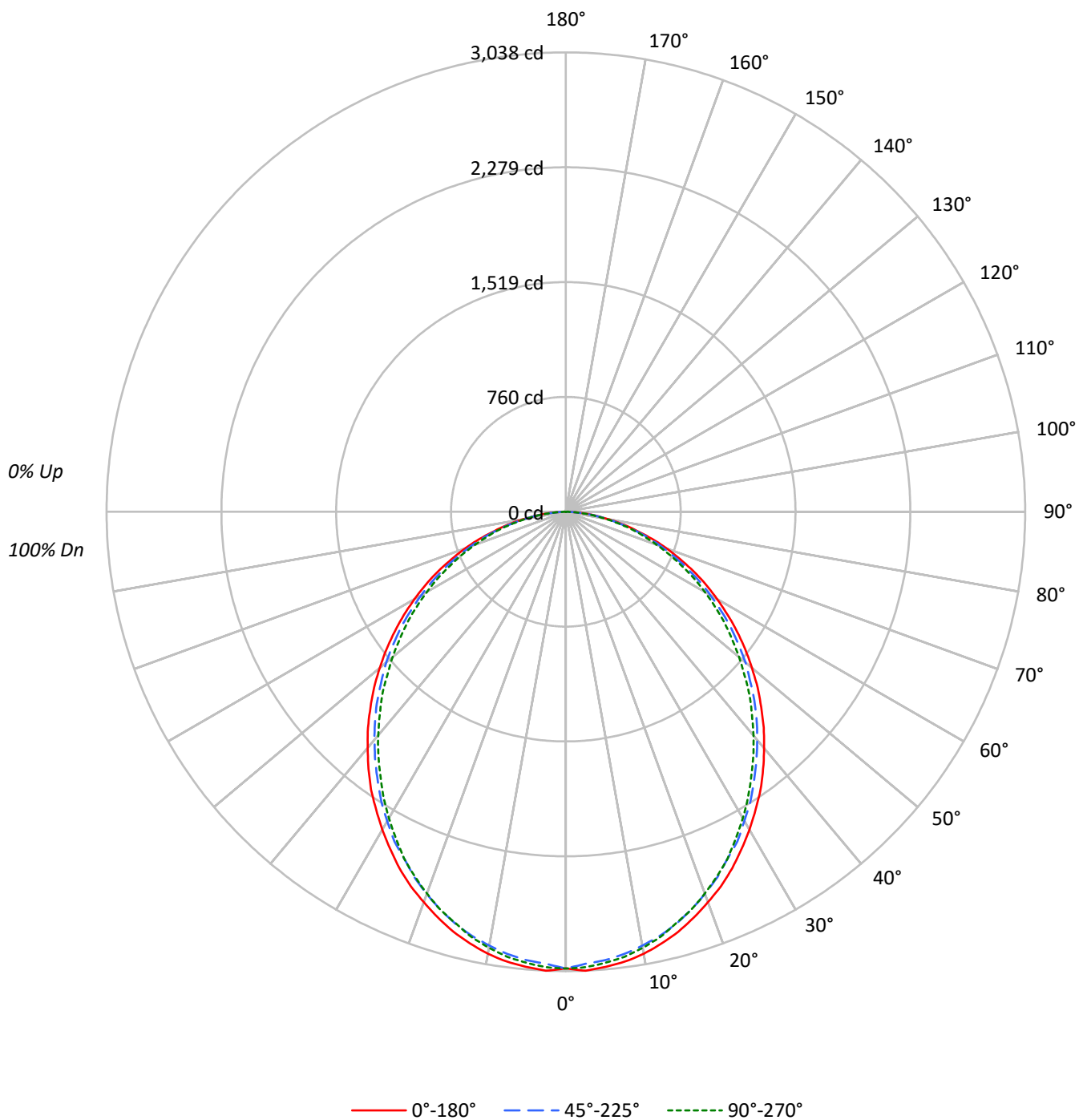
Lumens per Lamp: N/A
Luminaire Lumens: 7685.4 lumens
Efficiency: N/A
Efficacy: 107.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 2.21' x L: 2.21' x H: 0')
CIE Type: Direct

Input Watts (W): 71.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9977
Total Harmonic Distortion (THDi): 0.049
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P930873

CATALOG NUMBER: DFN2DS-SQ2F0-070DS850-FLL

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	109	104	100	96	106	102	98	95	98	95	92		94	91	89		90
2	99	91	85	79	97	89	83	78	86	81	76		83	78	74		80
3	91	80	72	66	88	79	71	65	76	69	64		73	68	63		71
4	83	71	63	56	81	70	62	56	68	61	55		65	59	54		63
5	77	64	55	49	75	63	55	48	61	53	48		59	52	47		57
6	71	58	49	43	69	57	48	42	55	48	42		53	47	42		52
7	66	52	44	38	64	52	43	38	50	43	37		49	42	37		47
8	61	48	40	34	60	47	39	34	46	39	33		45	38	33		44
9	57	44	36	30	56	43	36	30	42	35	30		41	35	30		40
10	54	41	33	28	53	40	33	28	39	32	27		38	32	27		37

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6642	6642	6642
5°	6667	6572	6610
10°	6628	6505	6537
15°	6546	6420	6414
20°	6429	6294	6287
25°	6314	6139	6139
30°	6166	5996	5944
35°	6027	5825	5738
40°	5853	5652	5544
45°	5682	5482	5347
50°	5495	5305	5117
55°	5301	5100	4911
60°	5083	4855	4676
65°	4852	4610	4398
70°	4557	4313	4109
75°	4144	3971	3875
80°	3680	3567	3384
85°	3002	2864	2566

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 5682 cd/sqm

TEST NUMBER: P930873

CATALOG NUMBER: DFN2DS-SQ2F0-070DS850-FLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	284.3	3.7
10°-20°	799.9	10.4
20°-30°	1175.6	15.3
30°-40°	1365.3	17.8
40°-50°	1363.6	17.7
50°-60°	1189.1	15.5
60°-70°	879.0	11.4
70°-80°	497.3	6.5
80°-90°	131.3	1.7
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°	2259.8	29.4
0°-40°	3625.1	47.2
0°-60°	6177.8	80.4
0°-90°	7685.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7685.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3021	3021	3021	3021	3021	
5°	3021	3009	2977	3000	2995	287
15°	2876	2858	2820	2832	2818	810
25°	2602	2579	2530	2536	2530	1198
35°	2245	2216	2170	2152	2138	1402
45°	1827	1807	1763	1731	1720	1410
55°	1383	1365	1330	1296	1281	1236
65°	933	915	886	860	845	922
75°	488	482	467	450	456	521
85°	119	116	114	104	102	140
90°	0	0	0	0	0	

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CATALOG NUMBER: DFN2DS-SQ2F0-070DS850-FLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3020.6	3020.6	3020.6	3020.6	3020.6
2.5°	3038.2	3023.7	2991.6	3020.6	3015.0
5°	3020.6	3009.3	2977.2	3000.3	2994.7
7.5°	3000.3	2983.0	2950.9	2974.4	2968.6
10°	2968.6	2948.2	2913.3	2936.5	2927.9
12.5°	2924.8	2907.6	2872.8	2887.2	2881.3
15°	2875.5	2858.2	2820.3	2832.1	2817.5
17.5°	2814.4	2797.2	2759.3	2773.8	2759.3
20°	2747.5	2730.4	2689.7	2698.3	2686.9
22.5°	2681.0	2654.8	2616.9	2616.9	2611.0
25°	2602.5	2579.3	2530.1	2535.6	2530.1
27.5°	2515.2	2494.9	2457.3	2448.7	2434.1
30°	2428.4	2404.9	2361.5	2352.9	2341.1
32.5°	2335.2	2318.0	2271.5	2253.9	2242.2
35°	2245.3	2216.3	2169.8	2152.2	2137.7
37.5°	2143.6	2117.4	2070.8	2050.5	2036.0
40°	2039.1	2015.7	1969.1	1943.3	1931.5
42.5°	1937.4	1914.0	1867.8	1838.5	1821.2
45°	1827.1	1806.8	1763.0	1731.3	1719.5
47.5°	1719.5	1699.2	1652.6	1620.6	1603.4
50°	1606.2	1591.6	1550.9	1510.3	1495.8
52.5°	1495.8	1475.5	1437.9	1405.9	1385.5
55°	1382.7	1365.2	1330.4	1295.5	1281.0
57.5°	1269.4	1254.8	1216.9	1182.1	1170.4
60°	1155.9	1144.5	1103.9	1071.8	1063.2
62.5°	1045.6	1025.3	996.3	967.4	955.6
65°	932.6	914.9	886.0	859.8	845.3
67.5°	816.3	801.6	775.6	755.3	743.6
70°	708.8	697.1	670.8	650.5	639.1
72.5°	598.4	586.8	572.2	551.9	543.3
75°	487.8	482.3	467.4	450.3	456.1
77.5°	389.3	377.5	371.6	363.0	354.4
80°	290.6	287.6	281.7	273.0	267.2
82.5°	197.5	197.5	194.7	183.1	183.1
85°	119.0	116.2	113.5	104.5	101.7
87.5°	52.3	46.6	40.7	32.1	28.9
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	17.86	19.47	18.23	19.79	20.10	17.42	19.03	17.78	19.34	19.66
	3H	19.61	21.07	19.99	21.39	21.75	19.12	20.57	19.50	20.90	21.26
	4H	20.26	21.63	20.66	21.97	22.35	19.76	21.13	20.16	21.48	21.86
	6H	20.73	22.00	21.14	22.36	22.75	20.23	21.49	20.64	21.86	22.25
	8H	20.87	22.08	21.29	22.47	22.87	20.37	21.58	20.79	21.97	22.37
	12H	20.96	22.12	21.39	22.50	22.93	20.45	21.61	20.88	21.99	22.42
4H	2H	18.42	19.79	18.82	20.14	20.51	18.07	19.44	18.47	19.79	20.16
	3H	20.40	21.54	20.81	21.94	22.34	19.99	21.14	20.40	21.53	21.93
	4H	21.17	22.21	21.60	22.62	23.06	20.75	21.79	21.18	22.20	22.63
	6H	21.77	22.67	22.22	23.12	23.57	21.34	22.24	21.79	22.68	23.14
	8H	21.96	22.81	22.42	23.25	23.71	21.52	22.37	21.98	22.81	23.28
	12H	22.09	22.85	22.57	23.33	23.80	21.64	22.40	22.12	22.87	23.34
8H	4H	21.45	22.29	21.91	22.74	23.20	21.07	21.92	21.53	22.36	22.83
	6H	22.16	22.86	22.65	23.35	23.83	21.78	22.48	22.27	22.97	23.45
	8H	22.42	23.05	22.93	23.56	24.04	22.03	22.66	22.54	23.17	23.65
	12H	22.62	23.18	23.13	23.67	24.23	22.21	22.76	22.71	23.26	23.82
12H	4H	21.47	22.23	21.95	22.71	23.18	21.11	21.87	21.59	22.34	22.81
	6H	22.21	22.84	22.72	23.34	23.83	21.84	22.47	22.35	22.98	23.46
	8H	22.52	23.08	23.03	23.57	24.13	22.14	22.70	22.65	23.19	23.75