

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: P930622

Luminaire Tested: DFN2DS-PN3F0-090DS850-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930622
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-PN3F0-090DS850-RLL
Description: 3 foot, Pentagon Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

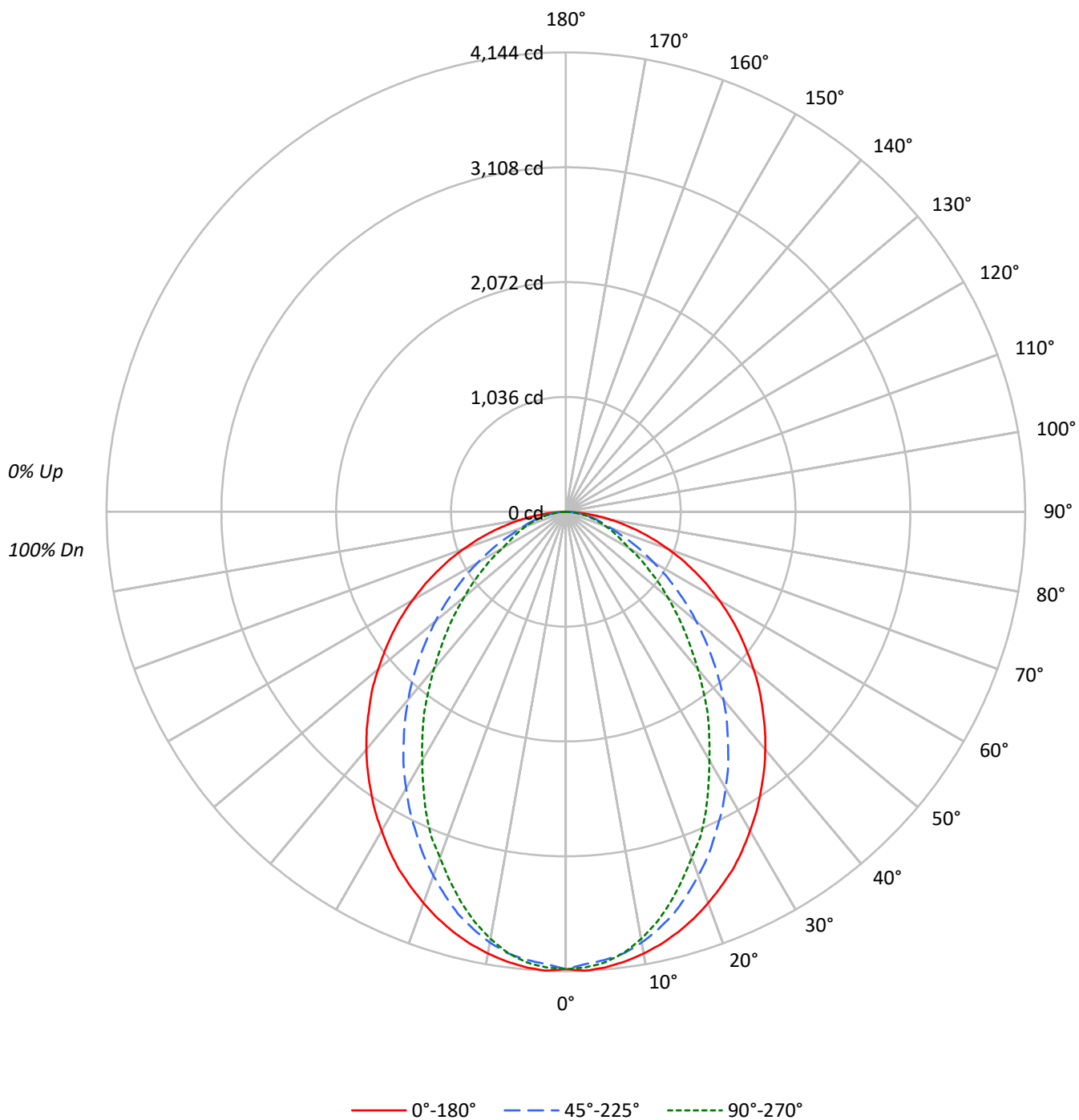
Lumens per Lamp: N/A
Luminaire Lumens: 8483.9 lumens
Efficiency: N/A
Efficacy: 87.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 3.11' x L: 2.96' x H: 0')
CIE Type: Direct

Input Watts (W): 97.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9954
Total Harmonic Distortion (THDi): 0.076
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P930622

CATALOG NUMBER: DFN2DS-PN3F0-090DS850-RLL

Luminous Intensity Polar Plot



TEST NUMBER: P930622

CATALOG NUMBER: DFN2DS-PN3F0-090DS850-RLL

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20				20
RC	80				70				50				30				10				0
RW	70	50	30	10	70	50	30	10	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		102	102	102		100
1	110	106	102	98	107	103	100	97	99	96	94		95	93	91		92	90	88		86
2	101	94	87	82	98	92	86	81	88	83	79		85	81	78		82	79	76		74
3	93	83	76	70	90	82	75	69	79	73	68		76	71	67		74	69	66		64
4	86	75	66	60	83	73	66	60	71	64	59		69	63	58		66	62	57		55
5	79	67	59	53	77	66	58	52	64	57	52		62	56	51		60	55	51		49
6	74	61	53	47	72	60	52	46	58	51	46		57	50	46		55	50	45		43
7	68	56	47	42	67	55	47	42	53	46	41		52	46	41		51	45	41		39
8	64	51	43	38	62	51	43	37	49	42	37		48	42	37		47	41	37		35
9	60	47	39	34	59	47	39	34	46	39	34		44	38	34		44	38	34		32
10	56	44	36	31	55	43	36	31	42	36	31		41	35	31		41	35	31		29

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4822	4822	4822
5°	4841	4762	4788
10°	4803	4684	4644
15°	4748	4545	4414
20°	4672	4347	4128
25°	4594	4122	3852
30°	4485	3890	3497
35°	4379	3639	3186
40°	4273	3378	2826
45°	4148	3086	2499
50°	4019	2790	2180
55°	3888	2472	1872
60°	3735	2138	1554
65°	3563	1797	1415
70°	3356	1480	1301
75°	3102	1349	1215
80°	2739	1205	1107
85°	2151	951	951

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 4148 cd/sqm

TEST NUMBER: P930622

CATALOG NUMBER: DFN2DS-PN3F0-090DS850-RLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	386.6	4.6
10°-20°	1061.3	12.5
20°-30°	1490.1	17.6
30°-40°	1624.3	19.1
40°-50°	1492.9	17.6
50°-60°	1172.4	13.8
60°-70°	763.1	9.0
70°-80°	392.8	4.6
80°-90°	100.3	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°	2938.0	34.6
0°-40°	4562.3	53.8
0°-60°	7227.6	85.2
0°-90°	8483.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8483.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4125	4125	4125	4125	4125	
5°	4125	4106	4058	4091	4080	391
15°	3924	3882	3756	3685	3648	1106
25°	3562	3442	3196	3043	2986	1638
35°	3069	2878	2550	2315	2232	1921
45°	2509	2258	1867	1601	1512	1937
55°	1908	1616	1213	989	918	1705
65°	1288	986	650	523	511	1277
75°	687	425	299	272	269	726
85°	160	82	71	71	71	192
90°	0	0	0	0	0	

TEST NUMBER: P930622

CATALOG NUMBER: DFN2DS-PN3F0-090DS850-RLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4125.1	4125.1	4125.1	4125.1	4125.1
2.5°	4143.8	4125.1	4083.9	4121.6	4114.1
5°	4125.1	4106.5	4057.8	4091.4	4080.3
7.5°	4091.4	4069.3	4017.0	4031.7	4013.0
10°	4046.7	4020.6	3946.2	3934.6	3912.4
12.5°	3990.8	3957.2	3856.2	3834.0	3792.8
15°	3923.5	3882.4	3755.6	3684.7	3647.5
17.5°	3845.1	3785.3	3628.4	3546.5	3486.7
20°	3755.6	3680.8	3494.1	3401.1	3318.7
22.5°	3658.6	3572.6	3355.9	3229.2	3173.4
25°	3561.6	3441.9	3195.6	3042.7	2986.4
27.5°	3445.9	3318.7	3046.2	2870.8	2784.8
30°	3322.7	3180.5	2881.8	2691.8	2590.7
32.5°	3203.0	3031.1	2725.4	2501.2	2407.7
35°	3068.8	2878.3	2549.9	2314.7	2232.3
37.5°	2938.1	2732.6	2385.6	2127.7	2034.7
40°	2799.9	2576.1	2213.7	1948.7	1851.7
42.5°	2658.1	2419.3	2042.1	1765.7	1672.6
45°	2508.8	2258.5	1866.7	1601.3	1511.8
47.5°	2366.9	2102.0	1698.8	1433.4	1351.4
50°	2210.1	1945.1	1534.4	1276.6	1198.5
52.5°	2056.9	1776.8	1377.6	1131.2	1060.3
55°	1907.5	1616.4	1213.1	989.4	918.5
57.5°	1754.7	1456.0	1067.9	858.7	798.9
60°	1597.7	1299.1	914.6	724.4	664.6
62.5°	1444.9	1146.3	783.8	604.8	575.1
65°	1288.0	985.5	649.5	522.8	511.4
67.5°	1138.7	836.1	522.8	459.0	447.9
70°	981.9	690.8	433.0	395.7	380.6
72.5°	832.5	556.1	362.0	332.3	324.8
75°	686.8	425.4	298.7	272.5	268.9
77.5°	541.4	302.2	235.2	220.2	212.7
80°	406.8	216.7	179.0	164.4	164.4
82.5°	283.6	145.7	123.2	115.7	115.7
85°	160.4	82.0	70.9	70.9	70.9
87.5°	59.8	29.7	29.7	26.2	26.2
90°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P930622

CATALOG NUMBER: DFN2DS-PN3F0-090DS850-RLL

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	16.70	18.22	17.07	18.54	18.85	12.66	14.18	13.03	14.50	14.81
	3H	18.47	19.83	18.84	20.16	20.52	13.93	15.29	14.30	15.62	15.98
	4H	19.13	20.41	19.53	20.76	21.14	14.43	15.71	14.83	16.06	16.44
	6H	19.62	20.80	20.03	21.17	21.56	14.81	15.99	15.22	16.36	16.75
	8H	19.79	20.91	20.21	21.30	21.70	14.93	16.06	15.36	16.45	16.85
	12H	19.89	20.97	20.32	21.35	21.78	15.01	16.09	15.45	16.48	16.90
4H	2H	16.80	18.09	17.20	18.43	18.81	13.36	14.64	13.76	14.99	15.36
	3H	18.74	19.80	19.15	20.20	20.60	14.80	15.86	15.21	16.26	16.66
	4H	19.49	20.44	19.92	20.86	21.30	15.40	16.36	15.83	16.77	17.21
	6H	20.08	20.91	20.54	21.35	21.81	15.89	16.72	16.34	17.16	17.62
	8H	20.29	21.07	20.76	21.52	21.98	16.05	16.83	16.51	17.27	17.74
	12H	20.45	21.14	20.93	21.62	22.09	16.17	16.86	16.65	17.34	17.81
8H	4H	19.51	20.29	19.97	20.73	21.20	15.75	16.53	16.22	16.97	17.44
	6H	20.15	20.79	20.65	21.28	21.76	16.34	16.98	16.84	17.47	17.95
	8H	20.40	20.98	20.91	21.49	21.97	16.56	17.14	17.07	17.65	18.14
	12H	20.60	21.11	21.11	21.61	22.17	16.74	17.25	17.25	17.74	18.31
12H	4H	19.50	20.19	19.98	20.67	21.14	15.80	16.49	16.28	16.97	17.44
	6H	20.13	20.71	20.64	21.22	21.71	16.40	16.98	16.92	17.49	17.98
	8H	20.41	20.92	20.92	21.42	21.98	16.68	17.19	17.19	17.68	18.24