

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: P930785

Luminaire Tested: DFN2DS-PN4F0-120DS927-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930785
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-PN4F0-120DS927-FLL
Description: 4 foot, Pentagon Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

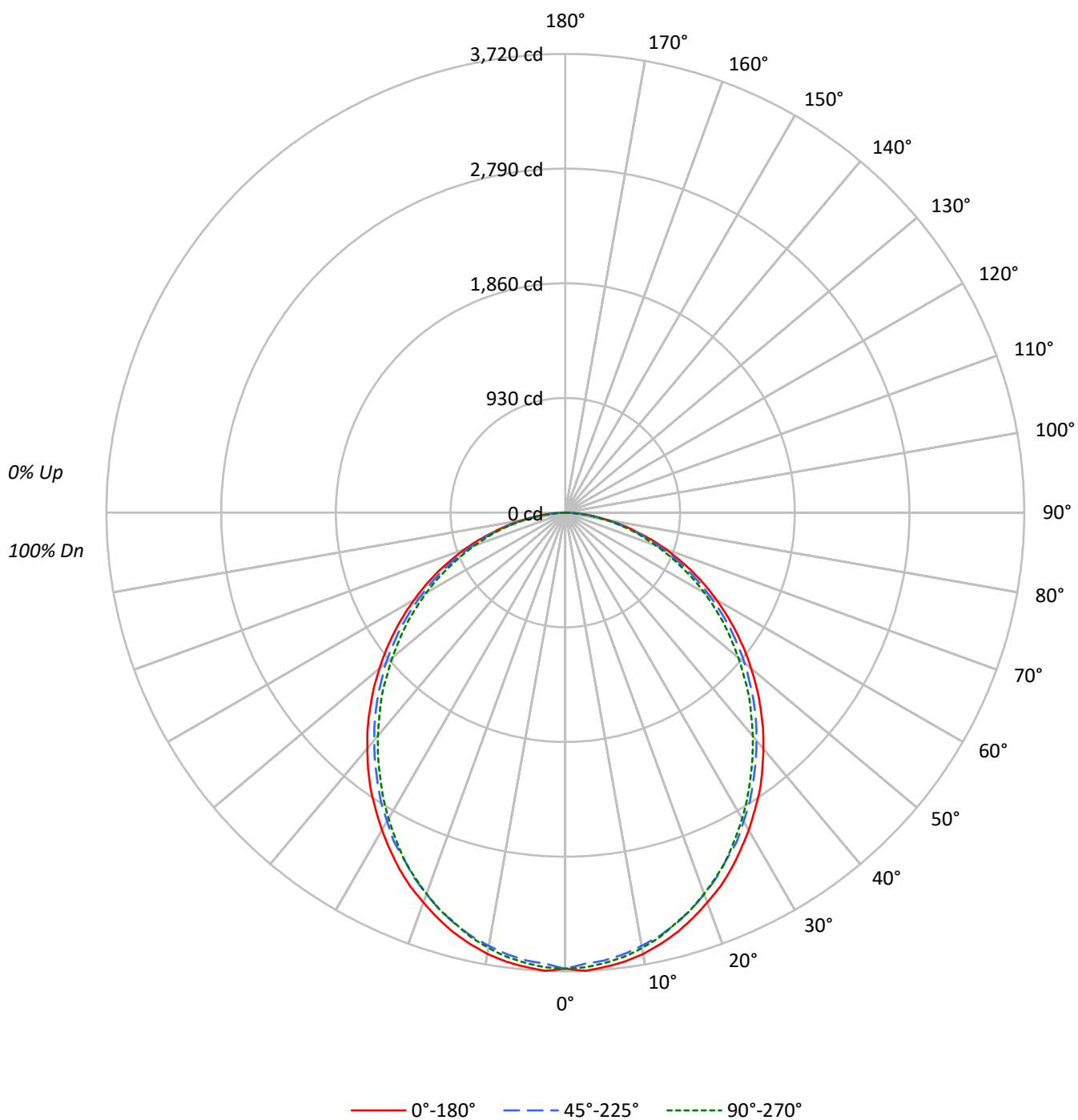
Lumens per Lamp: N/A
Luminaire Lumens: 9408.9 lumens
Efficiency: N/A
Efficacy: 71.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.94' x L: 3.74' x H: 0')
CIE Type: Direct

Input Watts (W): 131
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9781
Total Harmonic Distortion (THDi): 0.075
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 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				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°	2699	2699	2699
5°	2710	2671	2686
10°	2694	2644	2657
15°	2660	2609	2607
20°	2613	2558	2555
25°	2566	2495	2495
30°	2506	2437	2416
35°	2449	2367	2332
40°	2379	2297	2253
45°	2309	2228	2173
50°	2233	2156	2080
55°	2154	2073	1996
60°	2066	1973	1900
65°	1972	1873	1788
70°	1852	1753	1670
75°	1684	1614	1575
80°	1496	1449	1375
85°	1219	1162	1043

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2309 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	348.1	3.7
10°-20°	979.3	10.4
20°-30°	1439.2	15.3
30°-40°	1671.6	17.8
40°-50°	1669.5	17.7
50°-60°	1455.7	15.5
60°-70°	1076.1	11.4
70°-80°	608.8	6.5
80°-90°	160.7	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°	2766.6	29.4
0°-40°	4438.1	47.2
0°-60°	7563.3	80.4
0°-90°	9408.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9408.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3698	3698	3698	3698	3698	
5°	3698	3684	3645	3673	3666	351
15°	3520	3499	3453	3467	3449	991
25°	3186	3158	3097	3104	3097	1466
35°	2749	2713	2656	2635	2617	1717
45°	2237	2212	2158	2120	2105	1726
55°	1693	1671	1629	1586	1568	1513
65°	1142	1120	1085	1053	1035	1129
75°	597	590	572	551	558	638
85°	146	142	139	128	124	171
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3698.1	3698.1	3698.1	3698.1	3698.1
2.5°	3719.5	3701.8	3662.6	3698.1	3691.3
5°	3698.1	3684.1	3644.9	3673.1	3666.3
7.5°	3673.1	3652.0	3612.8	3641.5	3634.3
10°	3634.3	3609.4	3566.8	3595.0	3584.5
12.5°	3580.7	3559.6	3517.0	3534.7	3527.5
15°	3520.4	3499.2	3452.8	3467.1	3449.4
17.5°	3445.7	3424.5	3378.1	3395.9	3378.1
20°	3363.8	3342.6	3292.9	3303.4	3289.5
22.5°	3282.3	3250.2	3203.8	3203.8	3196.7
25°	3186.1	3157.8	3097.4	3104.2	3097.4
27.5°	3079.3	3054.4	3008.4	2997.8	2980.1
30°	2972.9	2944.3	2891.0	2880.5	2866.2
32.5°	2859.0	2837.9	2780.9	2759.4	2745.1
35°	2748.8	2713.4	2656.4	2634.9	2617.2
37.5°	2624.3	2592.3	2535.3	2510.4	2492.7
40°	2496.5	2467.8	2410.8	2379.1	2364.8
42.5°	2372.0	2343.3	2286.7	2250.9	2229.7
45°	2236.8	2212.0	2158.4	2119.6	2105.2
47.5°	2105.2	2080.3	2023.3	1984.1	1963.0
50°	1966.4	1948.6	1898.8	1849.0	1831.3
52.5°	1831.3	1806.4	1760.4	1721.1	1696.2
55°	1692.8	1671.4	1628.7	1586.1	1568.3
57.5°	1554.0	1536.2	1489.8	1447.2	1432.9
60°	1415.1	1401.2	1351.4	1312.2	1301.6
62.5°	1280.1	1255.2	1219.8	1184.3	1169.9
65°	1141.7	1120.1	1084.6	1052.6	1034.9
67.5°	999.4	981.3	949.6	924.7	910.4
70°	867.7	853.4	821.3	796.4	782.5
72.5°	732.7	718.3	700.6	675.7	665.1
75°	597.2	590.4	572.3	551.2	558.4
77.5°	476.5	462.1	455.0	444.4	433.9
80°	355.8	352.0	344.8	334.3	327.1
82.5°	241.8	241.8	238.5	224.1	224.1
85°	145.6	142.2	138.8	127.9	124.5
87.5°	64.2	56.9	49.8	39.2	35.5
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	14.73	16.34	15.10	16.66	16.97	14.29	15.90	14.65	16.21	16.53
	3H	16.48	17.94	16.86	18.26	18.62	15.99	17.45	16.37	17.77	18.13
	4H	17.13	18.50	17.53	18.85	19.22	16.63	18.00	17.03	18.35	18.73
	6H	17.60	18.87	18.01	19.23	19.62	17.10	18.37	17.51	18.73	19.12
	8H	17.74	18.95	18.17	19.34	19.74	17.24	18.45	17.66	18.84	19.24
	12H	17.83	18.99	18.26	19.37	19.80	17.32	18.48	17.75	18.86	19.29
4H	2H	15.29	16.66	15.69	17.01	17.39	14.94	16.31	15.34	16.66	17.03
	3H	17.27	18.41	17.68	18.81	19.21	16.86	18.01	17.27	18.41	18.81
	4H	18.04	19.08	18.48	19.49	19.93	17.62	18.66	18.05	19.07	19.51
	6H	18.64	19.55	19.10	19.99	20.44	18.21	19.11	18.66	19.55	20.01
	8H	18.83	19.68	19.29	20.12	20.58	18.39	19.24	18.85	19.68	20.15
	12H	18.96	19.72	19.44	20.20	20.67	18.51	19.27	18.99	19.75	20.22
8H	4H	18.32	19.16	18.78	19.61	20.07	17.94	18.79	18.40	19.23	19.70
	6H	19.03	19.74	19.53	20.22	20.70	18.65	19.35	19.14	19.84	20.32
	8H	19.29	19.92	19.80	20.43	20.92	18.90	19.53	19.41	20.04	20.52
	12H	19.49	20.05	20.00	20.54	21.10	19.08	19.64	19.59	20.13	20.69
12H	4H	18.34	19.10	18.82	19.58	20.05	17.98	18.74	18.46	19.22	19.68
	6H	19.08	19.71	19.59	20.22	20.70	18.71	19.34	19.22	19.85	20.33
	8H	19.39	19.95	19.90	20.44	21.00	19.01	19.57	19.52	20.06	20.62

END OF REPORT

FIELD PERFORMANCE MAY DIFFER FROM LABORATORY PERFORMANCE

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