

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: P1056190

Luminaire Tested: S124R3DR-H575D940-X4F0-XX-UDD-FLL-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2019
Report Number: P1056190
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-8)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124R3DR-H575D940-X4F0-XX-UDD-FLL-B
Description: DEFINE 4, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

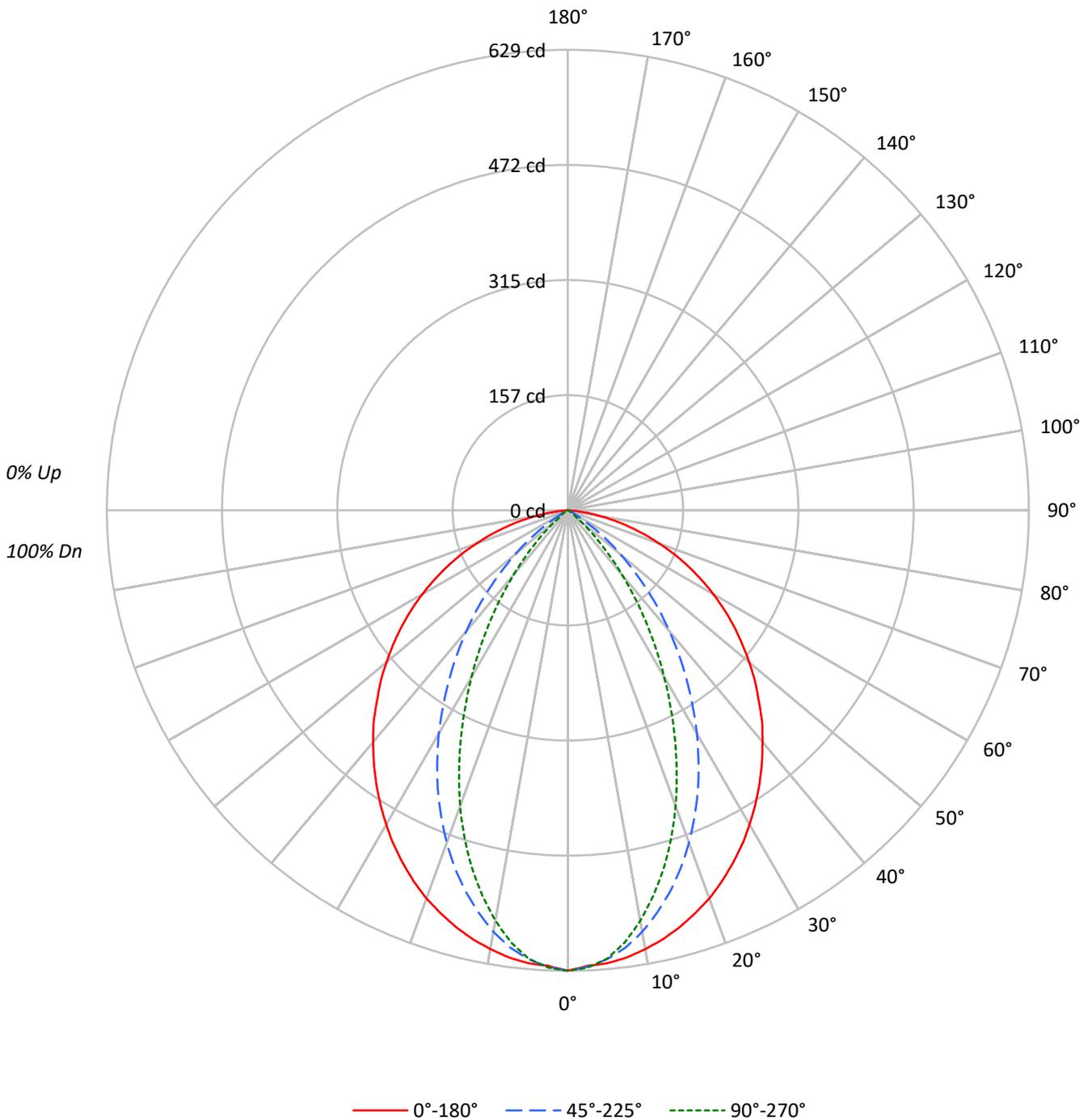
Lumens per Lamp: N/A
Luminaire Lumens: 879.0 lumens
Efficiency: N/A
Efficacy: 50.8 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 0.81 / 0.97
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 17.3
Input Voltage (V): 120
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: 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	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	112	108	105	102	109	106	103	100	102	99	97	98	96	94	95	93	92	90
2	104	98	93	88	102	96	91	87	93	89	85	90	86	83	87	84	82	80
3	97	89	82	77	95	87	81	77	84	79	75	82	78	74	79	76	73	71
4	90	81	74	68	88	80	73	68	77	72	67	75	70	66	73	69	65	64
5	84	74	66	61	83	73	66	61	71	65	60	69	64	60	67	63	59	57
6	79	68	60	55	77	67	60	55	65	59	54	64	58	54	62	57	54	52
7	74	63	55	50	73	62	55	50	60	54	50	59	53	49	58	53	49	47
8	70	58	51	46	68	57	50	46	56	50	45	55	49	45	54	49	45	43
9	66	54	47	42	64	53	47	42	52	46	42	51	46	42	50	45	41	40
10	62	50	43	39	61	50	43	39	49	43	39	48	42	39	47	42	38	37

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5560	5560	5560
5°	5511	5461	5456
10°	5464	5248	5109
15°	5395	4933	4628
20°	5308	4548	4044
25°	5191	4096	3374
30°	5061	3595	2682
35°	4917	3048	1997
40°	4768	2484	1331
45°	4603	1897	733
50°	4444	1297	204
55°	4267	703	133
60°	4056	217	76
65°	3793	142	38
70°	3428	65	16
75°	2948	20	0
80°	2230	0	0
85°	933	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4603 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	58.0	6.6
10°-20°	152.3	17.3
20°-30°	196.8	22.4
30°-40°	188.1	21.4
40°-50°	140.7	16.0
50°-60°	83.7	9.5
60°-70°	42.5	4.8
70°-80°	14.8	1.7
80°-90°	2.0	0.2
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°	407.2	46.3
0°-40°	595.3	67.7
0°-60°	819.7	93.3
0°-90°	879.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	879.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	629	629	629	629	629	
5°	621	626	615	612	615	59
15°	589	577	539	514	506	166
25°	532	495	420	364	346	245
35°	456	393	282	210	185	285
45°	368	282	152	81	59	285
55°	277	172	46	10	9	247
65°	181	70	7	2	2	179
75°	86	9	1	1	0	92
85°	9	0	0	0	0	15
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	628.9	628.9	628.9	628.9	628.9
2.5°	622.7	630.1	624.0	624.6	625.2
5°	620.9	625.8	615.3	612.3	614.7
7.5°	616.0	617.8	602.4	594.4	595.0
10°	608.6	606.7	584.5	570.9	569.1
12.5°	599.9	593.8	562.9	543.2	538.9
15°	589.4	577.1	538.9	513.6	505.6
17.5°	577.1	559.2	512.4	479.1	469.2
20°	564.2	539.5	483.4	442.1	429.8
22.5°	548.8	517.3	451.9	403.2	387.8
25°	532.1	495.1	419.9	364.4	345.9
27.5°	514.8	471.1	386.0	324.9	303.4
30°	495.7	445.8	352.1	284.9	262.7
32.5°	476.0	419.9	316.9	247.9	223.2
35°	455.6	392.8	282.4	210.3	185.0
37.5°	434.7	365.6	249.1	174.5	148.6
40°	413.1	337.9	215.2	140.6	115.3
42.5°	392.1	310.1	183.1	108.5	85.1
45°	368.1	282.4	151.7	80.8	58.6
47.5°	346.5	255.3	121.5	54.9	34.5
50°	323.1	226.3	94.3	32.1	14.8
52.5°	299.7	199.2	69.1	14.2	11.1
55°	276.8	172.0	45.6	10.5	8.6
57.5°	252.8	144.9	24.7	8.0	6.2
60°	229.4	118.4	12.3	6.2	4.3
62.5°	205.3	93.1	9.9	3.7	2.5
65°	181.3	69.7	6.8	2.5	1.8
67.5°	157.2	47.5	4.3	1.2	0.6
70°	132.6	29.0	2.5	0.6	0.6
72.5°	109.1	14.8	1.2	0.6	0.6
75°	86.3	9.2	0.6	0.6	0.0
77.5°	64.1	4.9	0.6	0.6	0.0
80°	43.8	1.8	0.0	0.0	0.0
82.5°	25.3	0.6	0.0	0.0	0.0
85°	9.2	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0
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	16.42	17.74	16.78	18.06	18.37	0.00	0.00	0.00	0.00	0.00
	3H	17.96	19.14	18.34	19.47	19.83	0.00	0.00	0.00	0.00	0.00
	4H	18.55	19.65	18.95	20.00	20.38	0.00	0.00	0.00	0.00	0.00
	6H	18.97	19.97	19.38	20.35	20.74	0.00	0.00	0.00	0.00	0.00
	8H	19.07	20.02	19.50	20.41	20.82	0.00	0.00	0.00	0.00	0.00
	12H	19.09	20.00	19.52	20.38	20.81	0.00	0.00	0.00	0.00	0.00
4H	2H	16.19	17.29	16.60	17.64	18.02	0.00	0.00	0.00	0.00	0.00
	3H	17.76	18.65	18.17	19.06	19.46	0.00	0.00	0.00	0.00	0.00
	4H	18.34	19.14	18.78	19.56	20.00	0.00	0.00	0.00	0.00	0.00
	6H	18.80	19.49	19.26	19.93	20.40	0.00	0.00	0.00	0.00	0.00
	8H	18.92	19.56	19.39	20.01	20.48	0.00	0.00	0.00	0.00	0.00
	12H	18.96	19.53	19.45	20.01	20.48	0.00	0.00	0.00	0.00	0.00
8H	4H	18.20	18.85	18.67	19.29	19.76	0.00	0.00	0.00	0.00	0.00
	6H	18.64	19.17	19.15	19.66	20.14	0.00	0.00	0.00	0.00	0.00
	8H	18.76	19.23	19.28	19.74	20.24	0.00	0.00	0.00	0.00	0.00
	12H	18.81	19.22	19.33	19.72	20.29	0.00	0.00	0.00	0.00	0.00
12H	4H	18.16	18.72	18.64	19.21	19.68	0.00	0.00	0.00	0.00	0.00
	6H	18.58	19.05	19.10	19.57	20.06	0.00	0.00	0.00	0.00	0.00
	8H	18.72	19.13	19.23	19.63	20.20	0.00	0.00	0.00	0.00	0.00