

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



Scaled data based on original data using
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1056046

Luminaire Tested: S124R3DR-S575D927-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056046
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-S575D927-X4F0-XX-UDD-F-B
Description: DEFINE 4, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

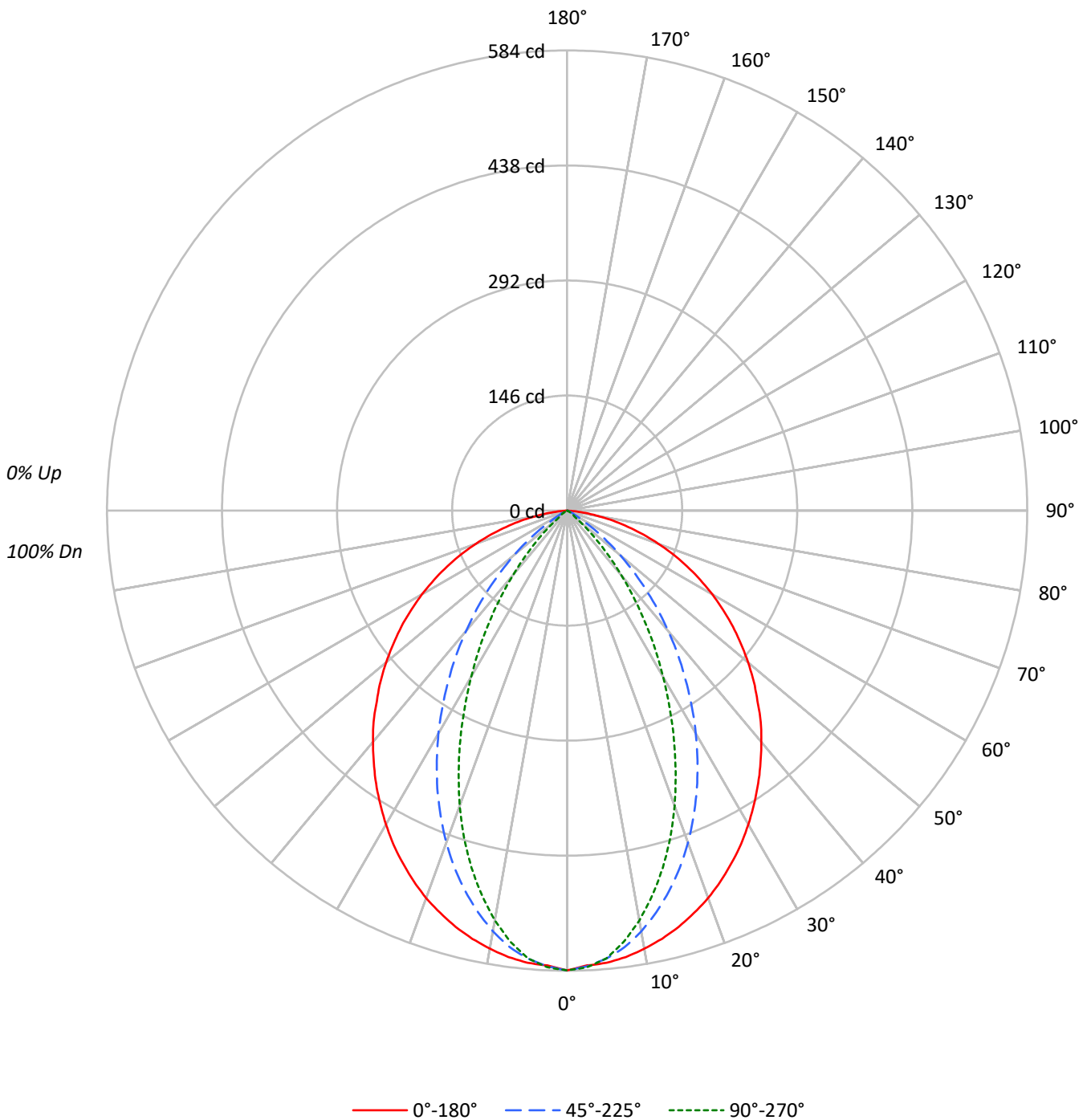
Lumens per Lamp: N/A
Luminaire Lumens: 815.5 lumens
Efficiency: N/A
Efficacy: 42.7 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 0.81 / 0.97
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 19.1
Input Voltage (V): 120
Input Current (A_{in}): 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°	5159	5159	5159
5°	5113	5067	5062
10°	5069	4869	4740
15°	5006	4577	4294
20°	4925	4220	3751
25°	4816	3801	3131
30°	4695	3335	2488
35°	4563	2828	1852
40°	4424	2305	1235
45°	4270	1759	679
50°	4124	1204	188
55°	3960	652	123
60°	3763	202	71
65°	3519	132	36
70°	3180	59	16
75°	2736	20	0
80°	2067	0	0
85°	872	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4270 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	53.8	6.6
10°-20°	141.3	17.3
20°-30°	182.6	22.4
30°-40°	174.5	21.4
40°-50°	130.5	16.0
50°-60°	77.7	9.5
60°-70°	39.4	4.8
70°-80°	13.7	1.7
80°-90°	1.9	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°	377.8	46.3
0°-40°	552.3	67.7
0°-60°	760.5	93.3
0°-90°	815.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	815.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	584	584	584	584	584	
5°	576	581	571	568	570	55
15°	547	536	500	476	469	154
25°	494	459	390	338	321	227
35°	423	364	262	195	172	264
45°	342	262	141	75	54	264
55°	257	160	42	10	8	229
65°	168	65	6	2	2	166
75°	80	9	1	1	0	85
85°	9	0	0	0	0	14
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	583.5	583.5	583.5	583.5	583.5
2.5°	577.8	584.7	578.9	579.5	580.1
5°	576.1	580.6	570.9	568.1	570.4
7.5°	571.5	573.2	558.9	551.5	552.0
10°	564.6	562.9	542.3	529.7	528.0
12.5°	556.6	550.9	522.3	504.0	500.0
15°	546.9	535.5	500.0	476.5	469.1
17.5°	535.5	518.9	475.4	444.5	435.3
20°	523.4	500.6	448.5	410.2	398.7
22.5°	509.1	480.0	419.3	374.1	359.8
25°	493.7	459.4	389.6	338.1	320.9
27.5°	477.7	437.1	358.1	301.5	281.5
30°	459.9	413.6	326.7	264.3	243.7
32.5°	441.6	389.6	294.0	230.0	207.1
35°	422.8	364.4	262.0	195.1	171.6
37.5°	403.3	339.2	231.1	161.9	137.9
40°	383.3	313.5	199.7	130.4	107.0
42.5°	363.8	287.8	169.9	100.7	78.9
45°	341.5	262.0	140.7	74.9	54.3
47.5°	321.5	236.8	112.7	50.9	32.0
50°	299.8	209.9	87.5	29.7	13.7
52.5°	278.0	184.8	64.1	13.2	10.3
55°	256.9	159.6	42.3	9.7	8.0
57.5°	234.5	134.4	22.9	7.4	5.7
60°	212.8	109.8	11.4	5.7	4.0
62.5°	190.5	86.4	9.2	3.4	2.3
65°	168.2	64.6	6.3	2.3	1.7
67.5°	145.9	44.0	4.0	1.1	0.6
70°	123.0	26.9	2.3	0.6	0.6
72.5°	101.3	13.7	1.1	0.6	0.6
75°	80.1	8.6	0.6	0.6	0.0
77.5°	59.5	4.6	0.6	0.6	0.0
80°	40.6	1.7	0.0	0.0	0.0
82.5°	23.5	0.6	0.0	0.0	0.0
85°	8.6	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	16.15	17.48	16.52	17.80	18.11	0.00	0.00	0.00	0.00	0.00
	3H	17.70	18.87	18.08	19.20	19.57	0.00	0.00	0.00	0.00	0.00
	4H	18.29	19.39	18.69	19.74	20.12	0.00	0.00	0.00	0.00	0.00
	6H	18.71	19.71	19.12	20.08	20.48	0.00	0.00	0.00	0.00	0.00
	8H	18.81	19.76	19.24	20.15	20.56	0.00	0.00	0.00	0.00	0.00
	12H	18.83	19.74	19.26	20.12	20.55	0.00	0.00	0.00	0.00	0.00
4H	2H	15.93	17.03	16.33	17.38	17.76	0.00	0.00	0.00	0.00	0.00
	3H	17.50	18.39	17.91	18.79	19.20	0.00	0.00	0.00	0.00	0.00
	4H	18.08	18.88	18.51	19.30	19.74	0.00	0.00	0.00	0.00	0.00
	6H	18.54	19.23	19.00	19.67	20.14	0.00	0.00	0.00	0.00	0.00
	8H	18.66	19.30	19.13	19.75	20.22	0.00	0.00	0.00	0.00	0.00
	12H	18.70	19.27	19.19	19.75	20.22	0.00	0.00	0.00	0.00	0.00
8H	4H	17.94	18.58	18.41	19.03	19.50	0.00	0.00	0.00	0.00	0.00
	6H	18.38	18.91	18.89	19.40	19.88	0.00	0.00	0.00	0.00	0.00
	8H	18.50	18.97	19.02	19.49	19.98	0.00	0.00	0.00	0.00	0.00
	12H	18.55	18.96	19.07	19.46	20.03	0.00	0.00	0.00	0.00	0.00
12H	4H	17.90	18.46	18.38	18.95	19.42	0.00	0.00	0.00	0.00	0.00
	6H	18.32	18.79	18.84	19.31	19.80	0.00	0.00	0.00	0.00	0.00
	8H	18.46	18.87	18.97	19.37	19.94	0.00	0.00	0.00	0.00	0.00