

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: P1056183

Luminaire Tested: S124R3DR-H575D927-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056183
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-7)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124R3DR-H575D927-X4F0-XX-UDD-F-W
Description: DEFINE 4, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

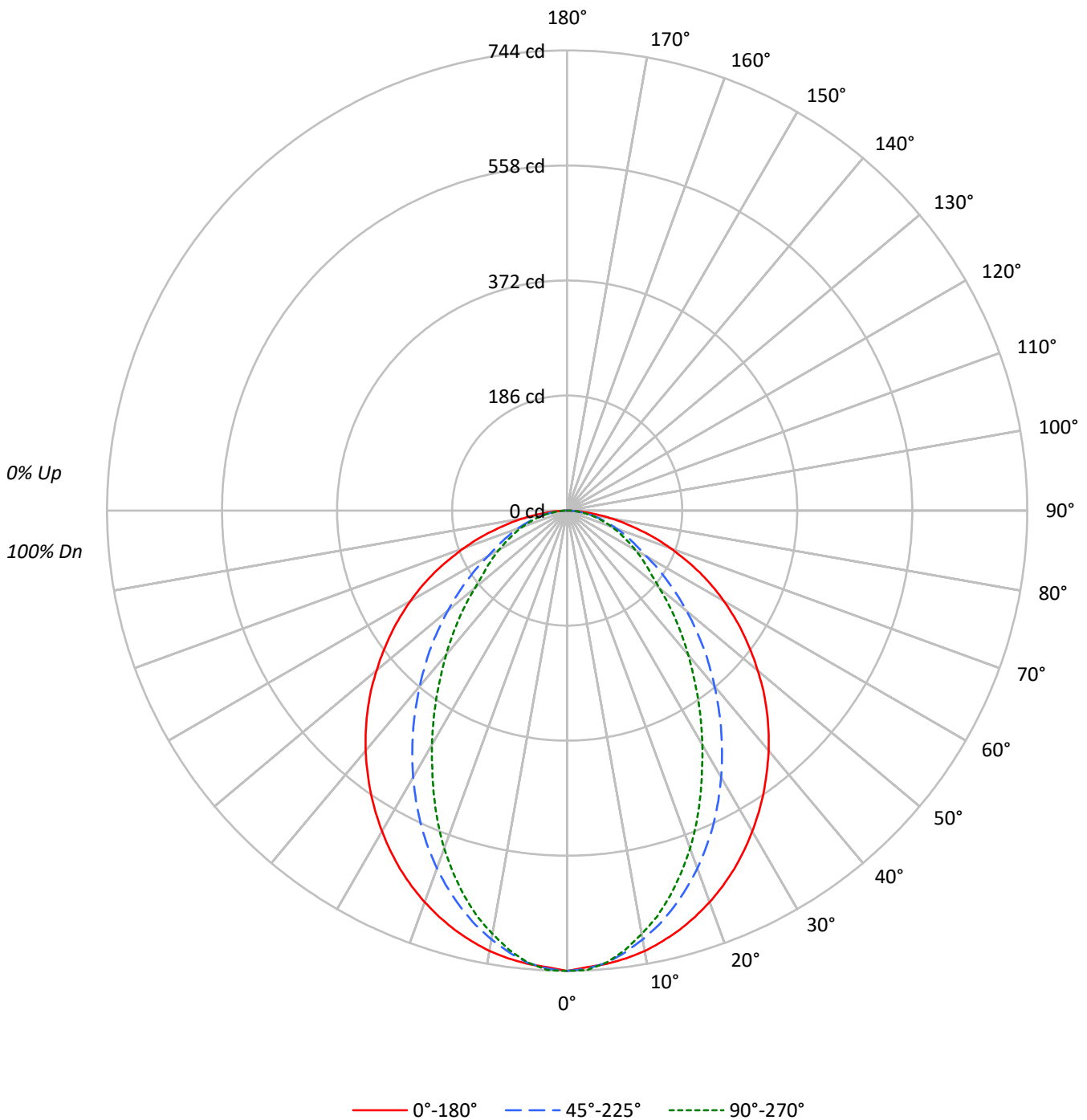
Lumens per Lamp: N/A
Luminaire Lumens: 1482.7 lumens
Efficiency: N/A
Efficacy: 85.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.95 / 1.12
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

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	110	105	102	98	107	103	100	97	99	96	93	95	93	91	92	90	88	86
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	76	73
3	93	83	75	69	90	81	74	69	79	73	68	76	71	67	73	69	65	63
4	85	74	66	60	83	73	65	60	71	64	59	68	63	58	66	61	57	55
5	79	67	59	53	77	66	58	52	64	57	52	62	56	51	60	55	51	49
6	73	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	38	49	42	37	48	42	37	47	41	37	35
9	60	47	39	34	59	47	39	34	46	39	34	45	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°	6582	6582	6582
5°	6529	6514	6509
10°	6491	6319	6240
15°	6423	6081	5897
20°	6339	5793	5468
25°	6236	5461	4969
30°	6112	5083	4462
35°	5983	4689	3973
40°	5848	4280	3516
45°	5705	3884	3088
50°	5531	3466	2667
55°	5361	3047	2423
60°	5172	2615	2247
65°	4939	2372	2096
70°	4588	2195	1983
75°	4154	2022	1872
80°	3625	1869	1757
85°	2780	1725	1613

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5705 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	69.3	4.7
10°-20°	188.0	12.7
20°-30°	260.3	17.6
30°-40°	279.4	18.8
40°-50°	254.1	17.1
50°-60°	200.1	13.5
60°-70°	136.9	9.2
70°-80°	73.7	5.0
80°-90°	20.9	1.4
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°	517.6	34.9
0°-40°	797.0	53.8
0°-60°	1251.1	84.4
0°-90°	1482.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1482.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	744	744	744	744	744	
5°	736	744	734	730	733	70
15°	702	694	664	646	644	198
25°	639	613	560	519	509	294
35°	554	511	434	382	368	347
45°	456	398	311	257	247	352
55°	348	282	198	159	157	311
65°	236	169	113	101	100	233
75°	122	74	59	54	55	130
85°	27	19	17	16	16	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	744.4	744.4	744.4	744.4	744.4
2.5°	738.9	747.7	741.1	742.2	743.3
5°	735.6	743.9	734.0	730.2	733.4
7.5°	730.2	735.6	720.3	713.2	716.5
10°	723.0	724.1	703.9	693.5	695.1
12.5°	713.2	710.4	685.8	671.0	672.1
15°	701.7	694.0	664.4	646.4	644.2
17.5°	688.5	675.9	640.9	617.9	613.5
20°	673.7	656.8	615.7	586.1	581.2
22.5°	657.3	635.4	588.3	553.2	546.1
25°	639.2	612.9	559.8	519.3	509.4
27.5°	619.5	588.8	529.1	484.8	472.2
30°	598.7	563.6	497.9	450.3	437.1
32.5°	577.3	537.9	466.1	415.7	402.1
35°	554.3	511.1	434.4	381.8	368.1
37.5°	530.8	483.1	402.1	348.9	334.7
40°	506.7	455.2	370.8	316.1	304.6
42.5°	482.0	426.7	340.2	285.4	275.0
45°	456.3	398.2	310.6	256.9	247.0
47.5°	430.0	369.2	280.5	230.1	220.7
50°	402.1	340.2	252.0	203.8	193.9
52.5°	375.2	310.6	224.6	178.0	173.1
55°	347.8	281.5	197.7	159.4	157.2
57.5°	320.4	252.5	173.1	144.6	142.4
60°	292.5	224.0	147.9	129.3	127.1
62.5°	264.6	196.1	129.3	114.5	113.4
65°	236.1	168.7	113.4	100.8	100.2
67.5°	206.0	142.4	99.1	88.7	88.2
70°	177.5	116.1	84.9	76.7	76.7
72.5°	150.6	92.0	71.8	65.2	65.2
75°	121.6	73.9	59.2	54.2	54.8
77.5°	95.9	58.1	47.7	44.4	44.4
80°	71.2	43.3	36.7	34.0	34.5
82.5°	48.2	30.1	26.3	24.6	24.6
85°	27.4	18.6	17.0	15.9	15.9
87.5°	9.9	8.8	8.2	7.1	7.7
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	17.69	19.21	18.05	19.53	19.84	13.47	14.99	13.83	15.30	15.62
	3H	19.46	20.83	19.84	21.16	21.52	15.08	16.45	15.45	16.77	17.14
	4H	20.13	21.42	20.53	21.77	22.15	15.71	16.99	16.11	17.34	17.72
	6H	20.64	21.83	21.06	22.20	22.59	16.21	17.40	16.62	17.76	18.15
	8H	20.81	21.94	21.23	22.33	22.73	16.38	17.51	16.80	17.90	18.30
	12H	20.91	21.99	21.34	22.37	22.80	16.50	17.58	16.93	17.97	18.40
4H	2H	17.78	19.07	18.18	19.42	19.80	14.18	15.47	14.58	15.82	16.20
	3H	19.73	20.80	20.14	21.20	21.60	15.99	17.06	16.40	17.46	17.86
	4H	20.48	21.45	20.92	21.86	22.30	16.73	17.69	17.16	18.11	18.55
	6H	21.12	21.96	21.58	22.40	22.86	17.35	18.18	17.80	18.63	19.09
	8H	21.34	22.12	21.80	22.57	23.03	17.56	18.35	18.02	18.79	19.26
	12H	21.49	22.19	21.97	22.67	23.14	17.73	18.43	18.21	18.91	19.38
8H	4H	20.54	21.33	21.00	21.77	22.24	17.12	17.90	17.58	18.35	18.81
	6H	21.24	21.89	21.74	22.38	22.86	17.85	18.50	18.35	18.99	19.47
	8H	21.51	22.09	22.02	22.60	23.09	18.14	18.72	18.65	19.23	19.72
	12H	21.73	22.24	22.24	22.73	23.30	18.38	18.90	18.89	19.39	19.95
12H	4H	20.53	21.23	21.01	21.71	22.18	17.17	17.87	17.66	18.35	18.82
	6H	21.23	21.82	21.75	22.33	22.81	17.93	18.52	18.45	19.03	19.51
	8H	21.54	22.06	22.05	22.55	23.11	18.28	18.80	18.79	19.29	19.85