

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: P1056214

Luminaire Tested: S124R3DR-H795D935-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056214
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-H795D935-X4F0-XX-UDD-F-B
Description: DEFINE 4, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

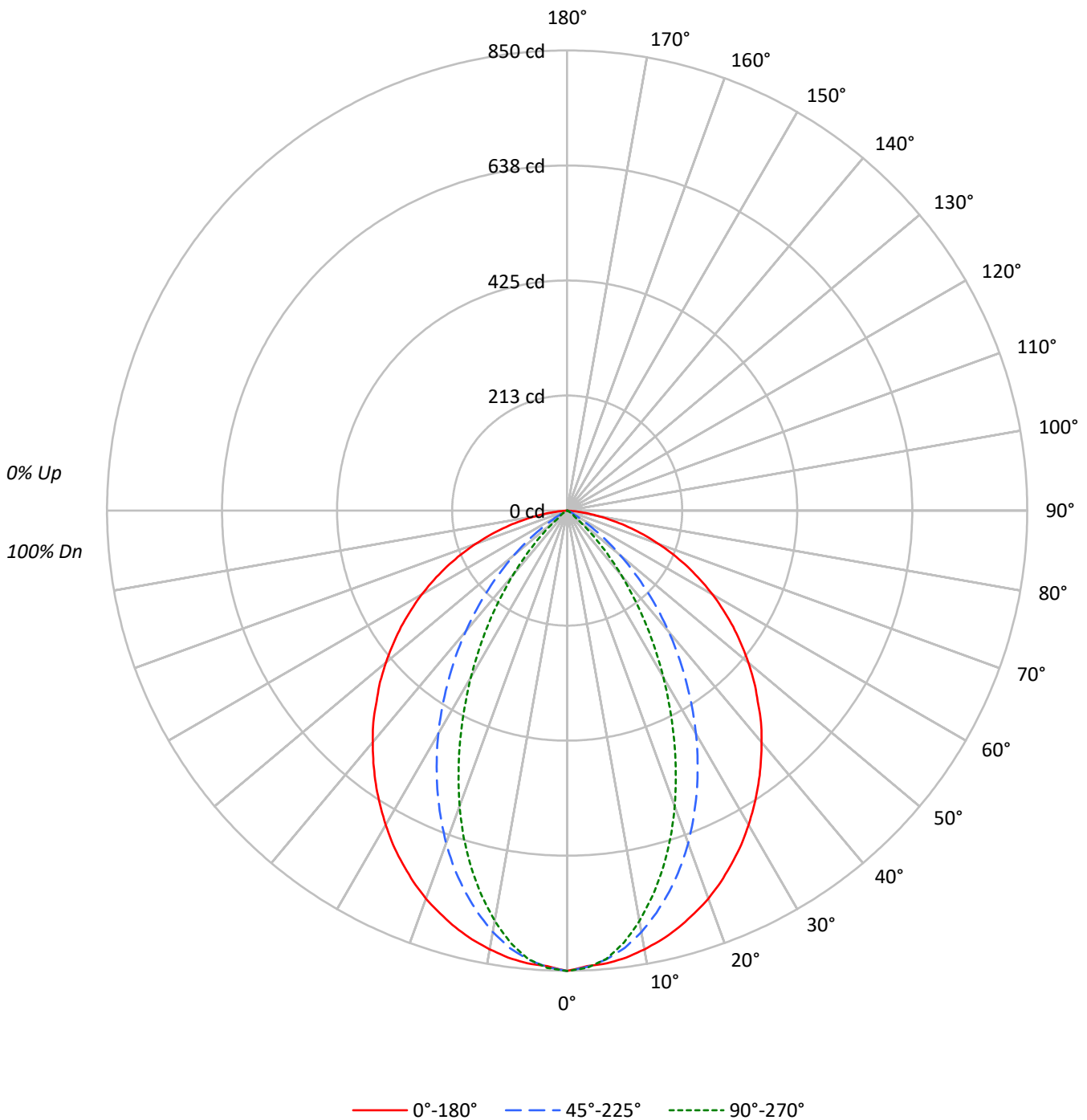
Lumens per Lamp: N/A
Luminaire Lumens: 1188.6 lumens
Efficiency: N/A
Efficacy: 49.9 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 0.81 / 0.97
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 23.8
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	50	30	10	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				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°	7519	7519	7519
5°	7452	7385	7378
10°	7388	7096	6909
15°	7296	6670	6258
20°	7178	6151	5467
25°	7019	5539	4563
30°	6843	4861	3626
35°	6651	4122	2699
40°	6447	3359	1799
45°	6224	2564	990
50°	6009	1755	275
55°	5771	951	180
60°	5485	295	103
65°	5128	192	52
70°	4635	85	21
75°	3987	27	0
80°	3014	0	0
85°	1268	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6224 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	78.5	6.6
10°-20°	206.0	17.3
20°-30°	266.2	22.4
30°-40°	254.4	21.4
40°-50°	190.3	16.0
50°-60°	113.2	9.5
60°-70°	57.5	4.8
70°-80°	20.0	1.7
80°-90°	2.7	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°	550.6	46.3
0°-40°	805.0	67.7
0°-60°	1108.4	93.3
0°-90°	1188.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1188.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	850	850	850	850	850	
5°	840	846	832	828	831	80
15°	797	780	729	694	684	225
25°	720	670	568	493	468	331
35°	616	531	382	284	250	385
45°	498	382	205	109	79	385
55°	374	233	62	14	12	334
65°	245	94	9	3	2	242
75°	117	12	1	1	0	124
85°	12	0	0	0	0	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	850.4	850.4	850.4	850.4	850.4
2.5°	842.1	852.1	843.8	844.6	845.4
5°	839.6	846.3	832.1	827.9	831.3
7.5°	832.9	835.4	814.6	803.7	804.6
10°	822.9	820.4	790.4	772.1	769.6
12.5°	811.3	802.9	761.2	734.5	728.7
15°	797.1	780.4	728.7	694.5	683.7
17.5°	780.4	756.2	692.9	647.8	634.5
20°	762.9	729.5	653.7	597.8	581.1
22.5°	742.1	699.5	611.1	545.3	524.4
25°	719.5	669.5	567.8	492.8	467.7
27.5°	696.2	637.0	521.9	439.4	410.2
30°	670.3	602.8	476.1	385.2	355.2
32.5°	643.7	567.8	428.6	335.2	301.8
35°	616.2	531.1	381.9	284.3	250.1
37.5°	587.8	494.4	336.8	236.0	200.9
40°	558.6	456.9	291.0	190.1	155.9
42.5°	530.3	419.4	247.6	146.7	115.1
45°	497.8	381.9	205.1	109.2	79.2
47.5°	468.6	345.2	164.3	74.2	46.7
50°	436.9	306.0	127.6	43.4	20.0
52.5°	405.2	269.3	93.4	19.2	15.0
55°	374.4	232.6	61.7	14.2	11.7
57.5°	341.8	195.9	33.4	10.8	8.3
60°	310.2	160.1	16.7	8.3	5.8
62.5°	277.6	125.9	13.3	5.0	3.3
65°	245.1	94.2	9.2	3.3	2.5
67.5°	212.6	64.2	5.8	1.7	0.8
70°	179.3	39.2	3.3	0.8	0.8
72.5°	147.6	20.0	1.7	0.8	0.8
75°	116.7	12.5	0.8	0.8	0.0
77.5°	86.7	6.7	0.8	0.8	0.0
80°	59.2	2.5	0.0	0.0	0.0
82.5°	34.2	0.8	0.0	0.0	0.0
85°	12.5	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	17.46	18.79	17.83	19.10	19.42	0.00	0.00	0.00	0.00	0.00
	3H	19.01	20.18	19.39	20.51	20.88	0.00	0.00	0.00	0.00	0.00
	4H	19.60	20.70	20.00	21.05	21.43	0.00	0.00	0.00	0.00	0.00
	6H	20.02	21.02	20.43	21.39	21.79	0.00	0.00	0.00	0.00	0.00
	8H	20.12	21.07	20.55	21.46	21.86	0.00	0.00	0.00	0.00	0.00
	12H	20.14	21.05	20.57	21.43	21.86	0.00	0.00	0.00	0.00	0.00
4H	2H	17.24	18.34	17.64	18.69	19.07	0.00	0.00	0.00	0.00	0.00
	3H	18.80	19.70	19.22	20.10	20.51	0.00	0.00	0.00	0.00	0.00
	4H	19.39	20.19	19.82	20.61	21.05	0.00	0.00	0.00	0.00	0.00
	6H	19.85	20.54	20.31	20.98	21.45	0.00	0.00	0.00	0.00	0.00
	8H	19.97	20.61	20.44	21.06	21.53	0.00	0.00	0.00	0.00	0.00
	12H	20.01	20.57	20.50	21.06	21.53	0.00	0.00	0.00	0.00	0.00
8H	4H	19.25	19.89	19.72	20.34	20.81	0.00	0.00	0.00	0.00	0.31
	6H	19.69	20.22	20.20	20.71	21.19	0.00	0.00	0.00	0.00	0.16
	8H	19.81	20.28	20.33	20.79	21.29	0.00	0.00	0.00	0.00	0.07
	12H	19.86	20.27	20.37	20.77	21.34	0.00	0.00	0.00	0.00	0.03
12H	4H	19.21	19.77	19.69	20.26	20.73	0.00	0.00	0.00	0.21	0.68
	6H	19.63	20.10	20.15	20.61	21.11	0.00	0.00	0.00	0.04	0.53
	8H	19.77	20.18	20.28	20.67	21.25	0.00	0.00	0.00	0.00	0.49