

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: P1056008

Luminaire Tested: S124R3DR-S350D830-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056008
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-9)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124R3DR-S350D830-X4F0-XX-UDD-F-S
Description: DEFINE 4, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

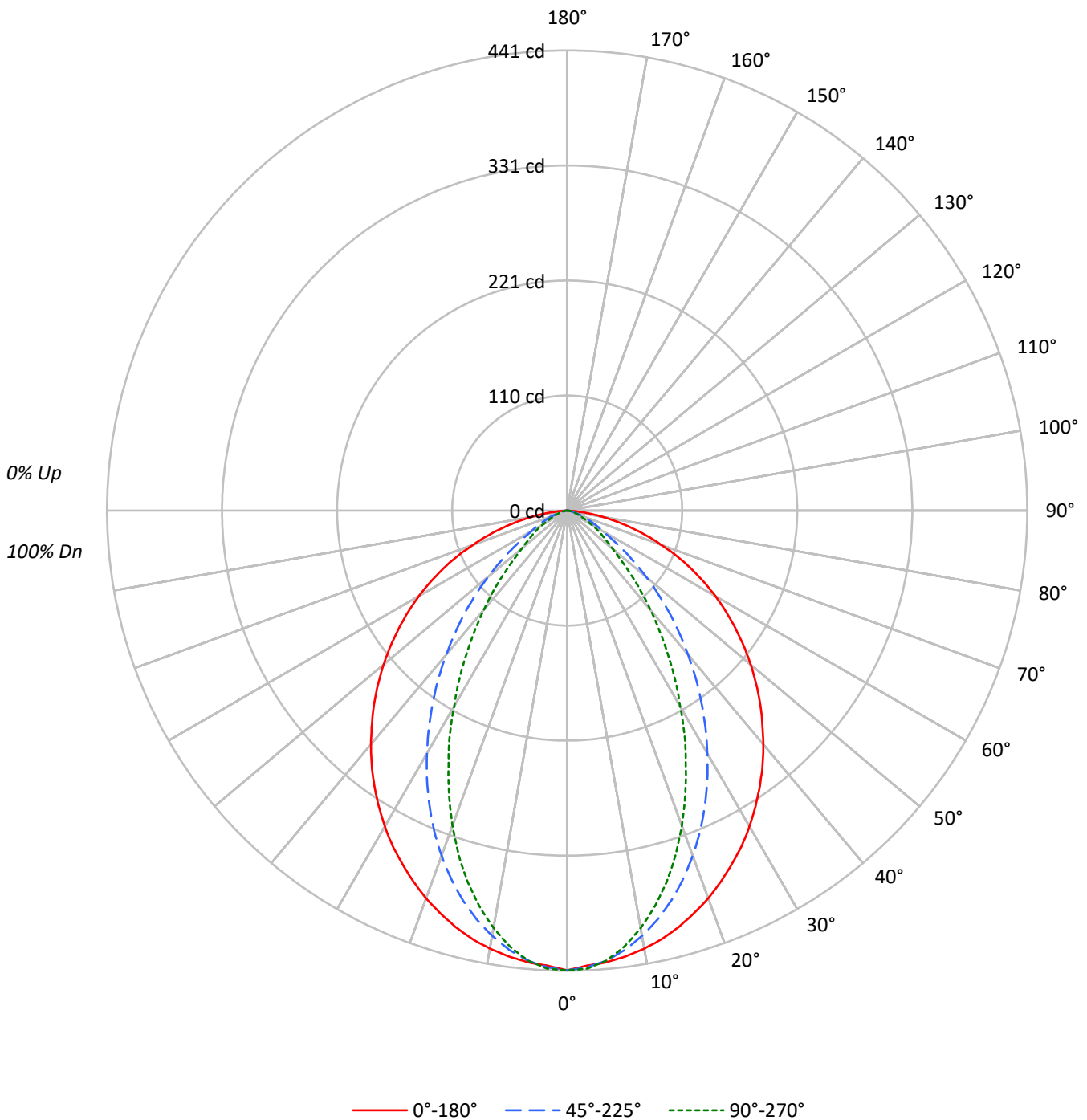
Lumens per Lamp: N/A
Luminaire Lumens: 712.4 lumens
Efficiency: N/A
Efficacy: 56.5 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.87 / 1.03
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 12.6
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	111	107	104	101	108	105	102	99	101	98	96	97	95	93	94	92	90	89
2	103	96	91	86	101	94	89	85	91	87	83	88	84	81	85	82	79	78
3	95	87	80	74	93	85	79	74	82	77	73	80	75	71	77	73	70	68
4	89	78	71	65	86	77	70	65	75	69	64	73	67	63	71	66	62	60
5	82	71	64	58	80	70	63	58	68	62	57	66	61	56	65	60	56	54
6	77	65	57	52	75	64	57	52	63	56	51	61	55	51	60	54	50	48
7	72	60	52	47	70	59	52	47	58	51	46	56	50	46	55	50	46	44
8	67	55	48	42	66	55	47	42	53	47	42	52	46	42	51	46	42	40
9	63	51	44	39	62	51	44	39	50	43	39	49	43	38	48	42	38	37
10	60	48	41	36	59	47	40	36	46	40	36	45	40	35	45	39	35	34

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3896	3896	3896
5°	3856	3841	3841
10°	3826	3716	3646
15°	3781	3538	3372
20°	3721	3312	3022
25°	3646	3046	2625
30°	3568	2743	2211
35°	3475	2422	1820
40°	3376	2079	1435
45°	3272	1729	1072
50°	3159	1360	784
55°	3035	1005	626
60°	2902	697	479
65°	2730	540	351
70°	2471	383	277
75°	2159	266	212
80°	1736	209	188
85°	954	162	162

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3272 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	40.9	5.7
10°-20°	109.2	15.3
20°-30°	145.7	20.4
30°-40°	146.6	20.6
40°-50°	120.3	16.9
50°-60°	82.2	11.5
60°-70°	45.9	6.4
70°-80°	18.2	2.6
80°-90°	3.4	0.5
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°	295.7	41.5
0°-40°	442.4	62.1
0°-60°	644.8	90.5
0°-90°	712.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	712.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	441	441	441	441	441	
5°	434	439	433	431	433	41
15°	413	409	386	373	368	116
25°	374	355	312	281	269	172
35°	322	288	224	182	169	201
45°	262	214	138	97	86	202
55°	197	138	65	44	41	176
65°	130	66	26	18	17	129
75°	63	17	8	7	6	68
85°	9	2	2	2	2	13
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	440.6	440.6	440.6	440.6	440.6
2.5°	436.5	441.8	438.1	438.6	439.4
5°	434.5	439.4	432.8	430.8	432.8
7.5°	430.8	434.5	424.6	420.5	421.3
10°	426.2	427.5	413.9	407.0	406.1
12.5°	420.5	418.9	401.2	391.0	388.5
15°	413.1	408.6	386.5	372.9	368.4
17.5°	404.5	396.7	370.0	352.4	345.8
20°	395.5	384.0	352.0	329.4	321.2
22.5°	384.8	370.5	332.7	305.2	295.8
25°	373.7	355.3	312.2	280.6	269.1
27.5°	362.3	339.7	290.9	255.6	244.1
30°	349.5	322.9	268.7	230.6	216.6
32.5°	336.0	305.6	246.6	205.9	192.8
35°	322.0	288.0	224.4	181.7	168.6
37.5°	307.7	269.9	202.3	158.8	145.6
40°	292.5	251.5	180.1	137.0	124.3
42.5°	276.9	232.6	158.8	116.5	104.6
45°	261.7	213.7	138.3	97.2	85.7
47.5°	245.7	194.9	118.2	79.2	69.3
50°	229.7	176.0	98.9	63.6	57.0
52.5°	213.3	157.1	81.2	52.1	47.6
55°	196.9	138.3	65.2	43.5	40.6
57.5°	180.5	119.4	50.5	36.9	33.6
60°	164.1	100.9	39.4	29.9	27.1
62.5°	147.3	82.5	32.4	23.8	21.3
65°	130.5	65.6	25.8	18.5	16.8
67.5°	113.6	50.1	19.7	14.4	13.1
70°	95.6	35.7	14.8	11.1	10.7
72.5°	80.0	24.2	10.7	8.6	8.2
75°	63.2	17.2	7.8	6.6	6.2
77.5°	48.8	11.1	5.7	5.3	4.9
80°	34.1	6.2	4.1	3.7	3.7
82.5°	20.9	3.3	2.9	2.5	2.5
85°	9.4	1.6	1.6	1.6	1.6
87.5°	1.6	0.8	0.8	0.8	0.8
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	15.45	16.86	15.81	17.17	17.48	6.53	7.94	6.90	8.25	8.57
	3H	17.04	18.29	17.41	18.62	18.98	7.13	8.38	7.51	8.71	9.07
	4H	17.63	18.80	18.03	19.15	19.53	7.29	8.46	7.69	8.81	9.19
	6H	18.06	19.14	18.48	19.51	19.90	7.39	8.47	7.81	8.84	9.23
	8H	18.18	19.20	18.60	19.59	19.99	7.41	8.44	7.84	8.83	9.23
	12H	18.22	19.19	18.65	19.58	20.01	7.42	8.40	7.85	8.78	9.21
4H	2H	15.30	16.47	15.70	16.82	17.20	7.12	8.28	7.52	8.63	9.02
	3H	16.95	17.91	17.36	18.31	18.71	7.83	8.79	8.24	9.19	9.60
	4H	17.56	18.41	17.99	18.83	19.27	8.04	8.90	8.47	9.31	9.75
	6H	18.05	18.79	18.51	19.24	19.70	8.20	8.94	8.66	9.39	9.85
	8H	18.19	18.88	18.66	19.33	19.80	8.24	8.93	8.70	9.38	9.85
	12H	18.26	18.88	18.75	19.36	19.83	8.26	8.88	8.75	9.36	9.83
8H	4H	17.45	18.14	17.92	18.59	19.06	8.31	9.00	8.78	9.45	9.92
	6H	17.93	18.50	18.43	18.99	19.47	8.51	9.08	9.01	9.57	10.05
	8H	18.08	18.58	18.60	19.10	19.59	8.57	9.08	9.09	9.59	10.08
	12H	18.17	18.61	18.68	19.11	19.68	8.63	9.08	9.14	9.57	10.14
12H	4H	17.41	18.02	17.90	18.51	18.98	8.34	8.95	8.82	9.43	9.90
	6H	17.88	18.39	18.40	18.90	19.39	8.54	9.05	9.06	9.56	10.05
	8H	18.04	18.49	18.55	18.98	19.55	8.64	9.08	9.15	9.58	10.15