

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: P1056146

Luminaire Tested: S124R3DR-H350D835-X4F0-XX-UDD-FLL-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2019
Report Number: P1056146
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-H350D835-X4F0-XX-UDD-FLL-S
Description: DEFINE 4, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

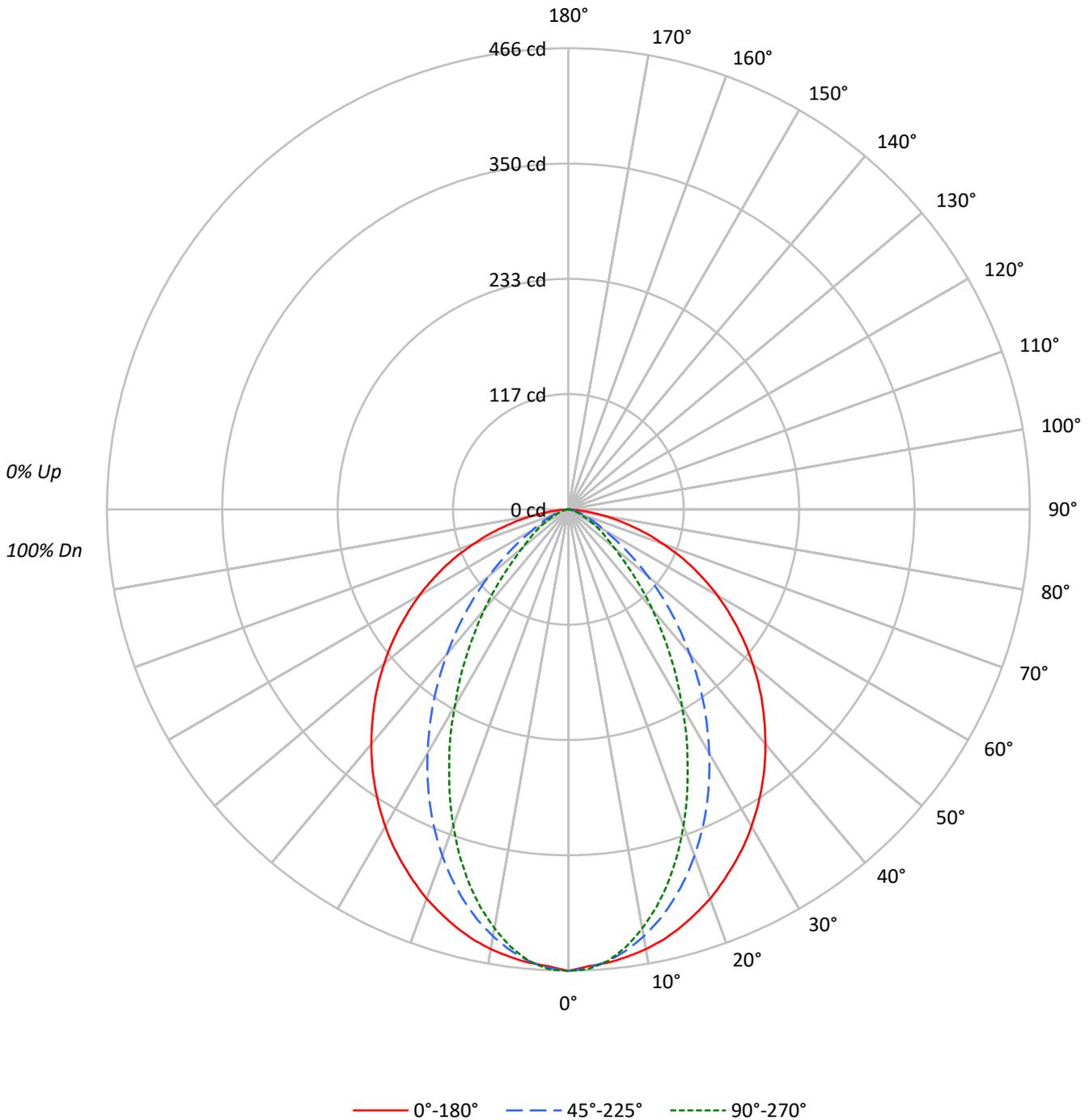
Lumens per Lamp: N/A
Luminaire Lumens: 754.0 lumens
Efficiency: N/A
Efficacy: 64.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.87 / 1.03
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 11.7
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	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°	4123	4123	4123
5°	4081	4066	4066
10°	4050	3933	3860
15°	4002	3744	3569
20°	3939	3505	3199
25°	3858	3223	2778
30°	3776	2903	2341
35°	3678	2563	1927
40°	3573	2200	1519
45°	3463	1829	1134
50°	3344	1439	831
55°	3212	1064	663
60°	3071	737	507
65°	2889	573	372
70°	2616	403	292
75°	2285	280	222
80°	1833	219	199
85°	1014	172	172

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3463 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	43.3	5.7
10°-20°	115.6	15.3
20°-30°	154.1	20.4
30°-40°	155.2	20.6
40°-50°	127.3	16.9
50°-60°	87.0	11.5
60°-70°	48.6	6.4
70°-80°	19.3	2.6
80°-90°	3.7	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°	313.0	41.5
0°-40°	468.2	62.1
0°-60°	682.5	90.5
0°-90°	754.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	754.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	466	466	466	466	466	
5°	460	465	458	456	458	44
15°	437	432	409	395	390	123
25°	396	376	330	297	285	182
35°	341	305	238	192	178	213
45°	277	226	146	103	91	214
55°	208	146	69	46	43	186
65°	138	70	27	20	18	136
75°	67	18	8	7	6	72
85°	10	2	2	2	2	14
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	466.3	466.3	466.3	466.3	466.3
2.5°	462.0	467.6	463.7	464.2	465.0
5°	459.8	465.0	458.1	455.9	458.1
7.5°	455.9	459.8	449.4	445.0	445.9
10°	451.1	452.4	438.1	430.7	429.9
12.5°	445.0	443.3	424.6	413.8	411.2
15°	437.2	432.5	409.0	394.7	389.9
17.5°	428.1	419.9	391.6	373.0	366.0
20°	418.6	406.4	372.5	348.7	340.0
22.5°	407.3	392.1	352.1	323.0	313.1
25°	395.5	376.0	330.4	297.0	284.8
27.5°	383.4	359.5	307.8	270.5	258.3
30°	369.9	341.7	284.4	244.0	229.3
32.5°	355.6	323.5	260.9	218.0	204.1
35°	340.8	304.8	237.5	192.3	178.5
37.5°	325.6	285.7	214.1	168.0	154.1
40°	309.6	266.2	190.6	145.0	131.6
42.5°	293.1	246.2	168.0	123.3	110.7
45°	277.0	226.2	146.3	102.9	90.7
47.5°	260.1	206.2	125.0	83.8	73.4
50°	243.1	186.3	104.6	67.3	60.4
52.5°	225.8	166.3	86.0	55.1	50.4
55°	208.4	146.3	69.0	46.0	43.0
57.5°	191.0	126.3	53.4	39.1	35.6
60°	173.7	106.8	41.7	31.7	28.7
62.5°	155.9	87.3	34.3	25.2	22.6
65°	138.1	69.5	27.4	19.5	17.8
67.5°	120.3	53.0	20.8	15.2	13.9
70°	101.2	37.8	15.6	11.7	11.3
72.5°	84.7	25.6	11.3	9.1	8.7
75°	66.9	18.2	8.2	6.9	6.5
77.5°	51.7	11.7	6.1	5.6	5.2
80°	36.0	6.5	4.3	3.9	3.9
82.5°	22.1	3.5	3.0	2.6	2.6
85°	10.0	1.7	1.7	1.7	1.7
87.5°	1.7	0.9	0.9	0.9	0.9
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	15.64	17.05	16.01	17.36	17.68	6.74	8.15	7.10	8.46	8.77
	3H	17.23	18.48	17.61	18.81	19.18	7.33	8.58	7.71	8.91	9.27
	4H	17.83	19.00	18.23	19.35	19.73	7.49	8.65	7.89	9.00	9.39
	6H	18.26	19.33	18.67	19.70	20.10	7.59	8.67	8.01	9.04	9.43
	8H	18.37	19.39	18.80	19.78	20.19	7.61	8.63	8.04	9.02	9.43
	12H	18.41	19.39	18.85	19.77	20.20	7.62	8.59	8.05	8.98	9.41
4H	2H	15.50	16.67	15.90	17.02	17.40	7.32	8.49	7.72	8.84	9.22
	3H	17.15	18.11	17.56	18.51	18.91	8.03	8.99	8.45	9.40	9.80
	4H	17.75	18.61	18.19	19.03	19.47	8.24	9.09	8.67	9.51	9.95
	6H	18.25	18.99	18.71	19.43	19.90	8.40	9.14	8.86	9.59	10.05
	8H	18.39	19.08	18.85	19.53	19.99	8.43	9.12	8.90	9.57	10.04
	12H	18.46	19.07	18.95	19.56	20.03	8.46	9.07	8.94	9.55	10.02
8H	4H	17.65	18.34	18.11	18.78	19.25	8.51	9.20	8.97	9.64	10.11
	6H	18.13	18.69	18.63	19.19	19.67	8.71	9.27	9.21	9.77	10.25
	8H	18.27	18.78	18.79	19.29	19.78	8.76	9.27	9.28	9.79	10.28
	12H	18.36	18.81	18.87	19.30	19.87	8.82	9.27	9.33	9.76	10.33
12H	4H	17.61	18.22	18.09	18.70	19.17	8.53	9.15	9.02	9.63	10.10
	6H	18.07	18.58	18.59	19.09	19.58	8.74	9.24	9.25	9.76	10.25
	8H	18.24	18.68	18.75	19.18	19.75	8.83	9.28	9.34	9.77	10.34