

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: P1056191

Luminaire Tested: S124R3DR-H575D940-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056191
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-H575D940-X4F0-XX-UDD-F-S
Description: DEFINE 4, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

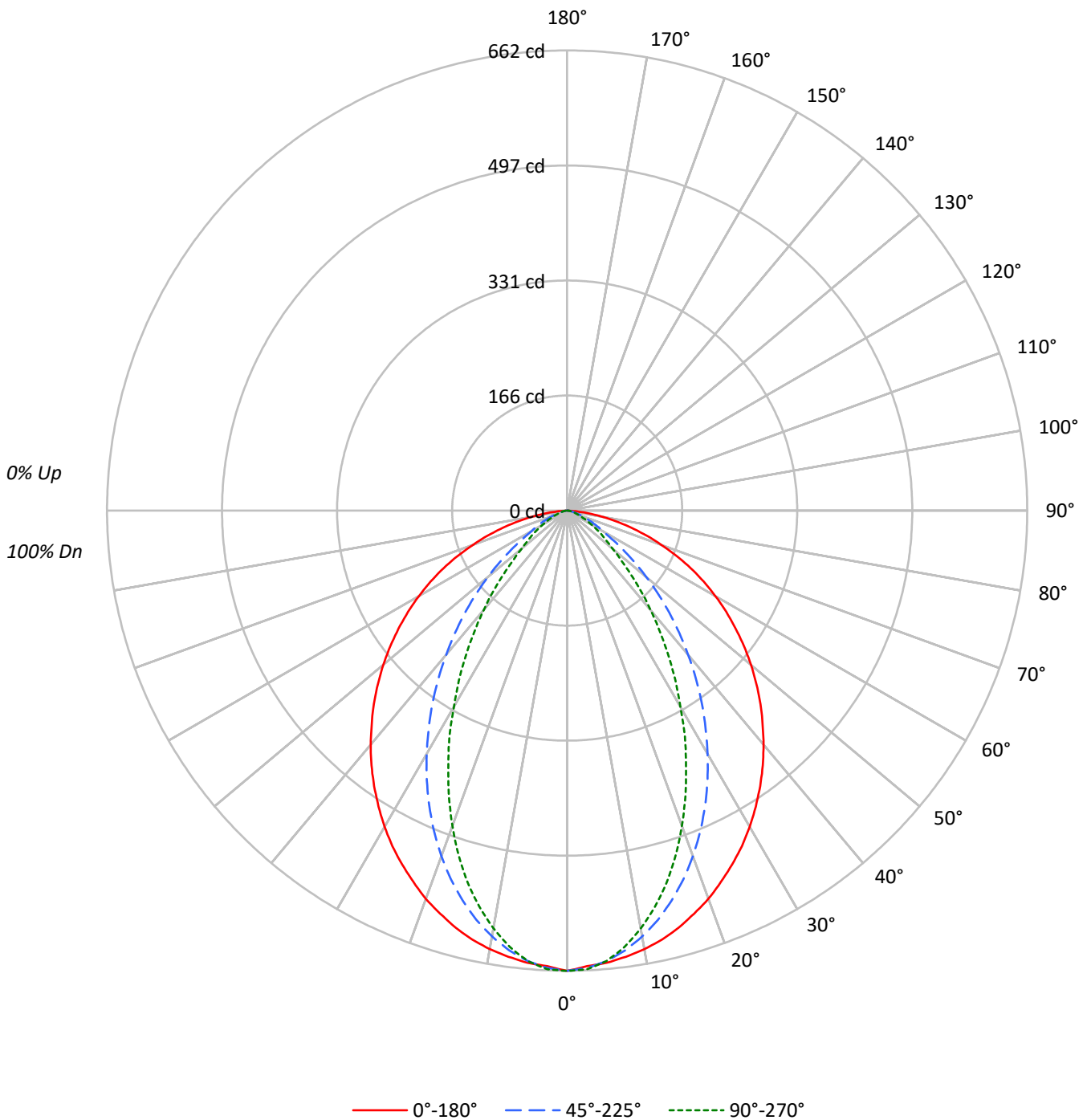
Lumens per Lamp: N/A
Luminaire Lumens: 1070.7 lumens
Efficiency: N/A
Efficacy: 61.9 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.87 / 1.03
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 17.3
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	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°	5855	5855	5855
5°	5795	5773	5773
10°	5751	5585	5480
15°	5683	5316	5068
20°	5593	4977	4543
25°	5480	4577	3946
30°	5363	4123	3324
35°	5224	3641	2735
40°	5074	3124	2156
45°	4919	2598	1612
50°	4750	2044	1179
55°	4563	1511	940
60°	4361	1047	720
65°	4103	812	529
70°	3715	574	414
75°	3245	400	314
80°	2607	316	280
85°	1440	254	254

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4919 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	61.4	5.7
10°-20°	164.1	15.3
20°-30°	218.9	20.4
30°-40°	220.4	20.6
40°-50°	180.7	16.9
50°-60°	123.6	11.5
60°-70°	69.0	6.4
70°-80°	27.4	2.6
80°-90°	5.2	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°	444.4	41.5
0°-40°	664.8	62.1
0°-60°	969.1	90.5
0°-90°	1070.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1070.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	662	662	662	662	662	
5°	653	660	650	647	650	62
15°	621	614	581	560	554	175
25°	562	534	469	422	404	259
35°	484	433	337	273	253	303
45°	393	321	208	146	129	303
55°	296	208	98	65	61	265
65°	196	99	39	28	25	194
75°	95	26	12	10	9	102
85°	14	2	2	2	2	20
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	662.2	662.2	662.2	662.2	662.2
2.5°	656.0	664.0	658.5	659.1	660.4
5°	653.0	660.4	650.5	647.4	650.5
7.5°	647.4	653.0	638.2	632.0	633.2
10°	640.6	642.5	622.1	611.6	610.4
12.5°	632.0	629.5	603.0	587.6	583.9
15°	620.9	614.1	580.8	560.5	553.7
17.5°	607.9	596.2	556.1	529.6	519.8
20°	594.4	577.1	529.0	495.1	482.8
22.5°	578.3	556.8	500.0	458.7	444.5
25°	561.7	534.0	469.2	421.7	404.5
27.5°	544.4	510.5	437.2	384.1	366.9
30°	525.3	485.2	403.9	346.5	325.6
32.5°	505.0	459.3	370.6	309.5	289.8
35°	484.0	432.8	337.3	273.1	253.4
37.5°	462.4	405.7	304.0	238.6	218.9
40°	439.6	378.0	270.7	205.9	186.8
42.5°	416.2	349.6	238.6	175.1	157.2
45°	393.4	321.2	207.8	146.1	128.9
47.5°	369.3	292.9	177.6	119.0	104.2
50°	345.3	264.5	148.6	95.6	85.7
52.5°	320.6	236.1	122.1	78.3	71.5
55°	296.0	207.8	98.0	65.4	61.0
57.5°	271.3	179.4	75.8	55.5	50.6
60°	246.6	151.7	59.2	45.0	40.7
62.5°	221.3	123.9	48.7	35.8	32.1
65°	196.1	98.7	38.8	27.7	25.3
67.5°	170.8	75.2	29.6	21.6	19.7
70°	143.7	53.6	22.2	16.6	16.0
72.5°	120.2	36.4	16.0	12.9	12.3
75°	95.0	25.9	11.7	9.9	9.2
77.5°	73.4	16.6	8.6	8.0	7.4
80°	51.2	9.2	6.2	5.5	5.5
82.5°	31.4	4.9	4.3	3.7	3.7
85°	14.2	2.5	2.5	2.5	2.5
87.5°	2.5	1.2	1.2	1.2	1.2
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	16.86	18.27	17.23	18.58	18.90	7.96	9.36	8.32	9.68	9.99
	3H	18.45	19.70	18.83	20.03	20.39	8.55	9.80	8.92	10.13	10.49
	4H	19.05	20.21	19.45	20.56	20.94	8.70	9.87	9.10	10.22	10.60
	6H	19.48	20.55	19.89	20.92	21.31	8.81	9.88	9.22	10.25	10.65
	8H	19.59	20.61	20.02	21.00	21.40	8.83	9.85	9.26	10.24	10.64
	12H	19.63	20.61	20.06	20.99	21.42	8.84	9.81	9.27	10.19	10.62
4H	2H	16.72	17.89	17.12	18.24	18.62	8.54	9.71	8.94	10.06	10.44
	3H	18.37	19.32	18.78	19.73	20.13	9.25	10.21	9.66	10.61	11.01
	4H	18.97	19.83	19.41	20.25	20.69	9.45	10.31	9.89	10.73	11.17
	6H	19.46	20.21	19.92	20.65	21.11	9.62	10.36	10.08	10.80	11.27
	8H	19.61	20.30	20.07	20.74	21.21	9.65	10.34	10.12	10.79	11.26
	12H	19.68	20.29	20.16	20.77	21.25	9.68	10.29	10.16	10.77	11.24
8H	4H	18.86	19.56	19.33	20.00	20.47	9.72	10.41	10.19	10.86	11.33
	6H	19.35	19.91	19.85	20.41	20.89	9.92	10.49	10.42	10.99	11.47
	8H	19.49	20.00	20.01	20.51	21.00	9.98	10.49	10.50	11.00	11.49
	12H	19.58	20.03	20.09	20.52	21.09	10.04	10.49	10.56	10.98	11.55
12H	4H	18.83	19.44	19.31	19.92	20.39	9.75	10.36	10.23	10.84	11.32
	6H	19.29	19.80	19.81	20.31	20.80	9.95	10.46	10.47	10.98	11.47
	8H	19.45	19.90	19.97	20.40	20.97	10.05	10.49	10.56	10.99	11.56