

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: P1060687

Luminaire Tested: S124RDR-H1020D940-X4F0-XX-UDD-BVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1060687
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-39)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124RDR-H1020D940-X4F0-XX-UDD-BVL-B
Description: DEFINE 4 BLACK REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

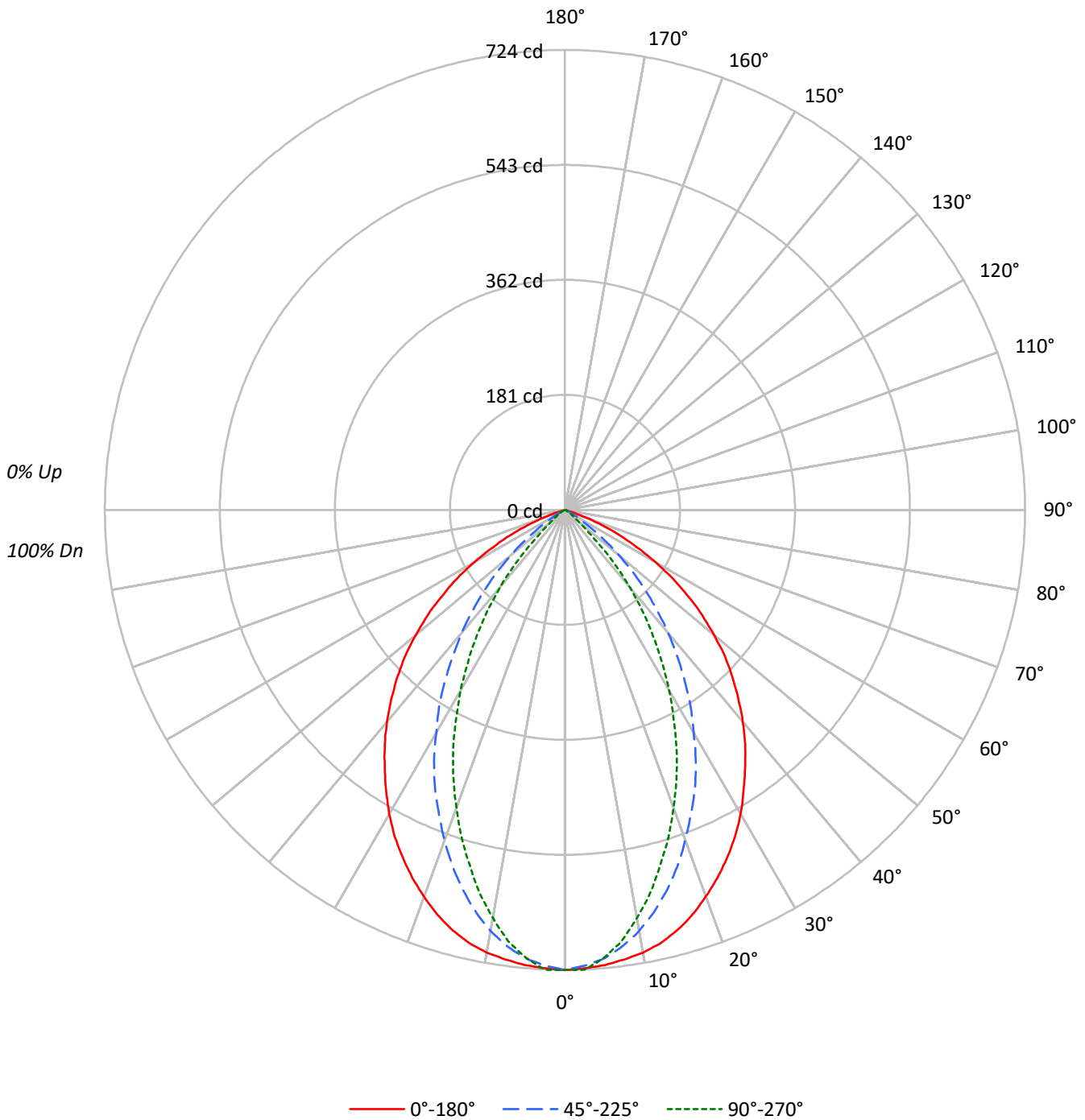
Lumens per Lamp: N/A
Luminaire Lumens: 946.0 lumens
Efficiency: N/A
Efficacy: 30.3 lumens/watt
Spacing Criteria (0/90/45): 1.15 / 0.83 / 0.98
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 31.2
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	112	109	106	103	110	107	104	102	103	101	99	99	97	96	96	94	93	91
2	105	99	95	90	103	98	93	89	94	91	87	91	88	86	88	86	84	82
3	98	91	85	80	96	89	84	79	86	82	78	84	80	77	82	78	75	74
4	92	83	76	71	90	82	76	71	79	74	70	77	73	69	75	71	68	66
5	86	76	69	64	84	75	69	64	73	67	63	71	66	62	70	65	62	60
6	81	70	63	58	79	69	63	58	68	62	57	66	61	57	65	60	56	55
7	76	65	58	53	74	64	57	53	63	57	52	61	56	52	60	55	52	50
8	71	60	53	48	70	60	53	48	58	52	48	57	52	48	56	51	47	46
9	67	56	49	44	66	56	49	44	54	48	44	54	48	44	53	48	44	42
10	64	52	46	41	63	52	45	41	51	45	41	50	45	41	49	44	41	39

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6239	6239	6239
5°	6218	6127	6117
10°	6188	5886	5704
15°	6104	5525	5162
20°	5939	5075	4576
25°	5740	4596	3949
30°	5497	4029	3268
35°	5195	3455	2542
40°	4895	2836	1777
45°	4539	2180	879
50°	4095	1472	295
55°	3537	755	204
60°	2831	270	145
65°	1942	149	63
70°	869	78	53
75°	0	33	33
80°	0	0	0
85°	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4539 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.9	7.1
10°-20°	175.4	18.5
20°-30°	227.0	24.0
30°-40°	215.7	22.8
40°-50°	152.8	16.1
50°-60°	78.4	8.3
60°-70°	27.4	2.9
70°-80°	2.4	0.2
80°-90°	0.0	0.0
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°	469.3	49.6
0°-40°	685.0	72.4
0°-60°	916.2	96.9
0°-90°	946.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	946.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	724	724	724	724	724	
5°	719	720	709	709	708	68
15°	685	664	620	590	579	193
25°	604	557	484	432	416	278
35°	494	422	329	265	242	309
45°	373	287	179	103	72	287
55°	236	155	50	15	14	210
65°	95	46	7	4	3	95
75°	0	1	1	1	1	8
85°	0	0	0	0	0	0
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	724.5	724.5	724.5	724.5	724.5
2.5°	722.4	724.5	718.2	723.5	724.5
5°	719.3	720.3	708.8	708.8	707.7
7.5°	714.0	711.9	693.1	685.8	684.7
10°	707.7	700.4	673.2	657.5	652.3
12.5°	698.3	684.7	648.1	625.0	618.8
15°	684.7	663.8	619.8	590.5	579.0
17.5°	668.0	640.7	588.4	552.8	541.3
20°	648.1	613.5	553.8	514.1	499.4
22.5°	627.1	587.3	518.2	473.2	458.6
25°	604.1	557.0	483.7	432.4	415.6
27.5°	580.0	524.5	446.0	392.6	370.6
30°	552.8	492.1	405.2	349.7	328.7
32.5°	523.5	456.5	368.5	308.9	283.7
35°	494.2	421.9	328.7	264.9	241.8
37.5°	465.9	389.5	289.0	222.0	200.0
40°	435.5	353.9	252.3	183.2	158.1
42.5°	404.1	319.3	214.6	143.4	116.2
45°	372.7	286.9	179.0	102.6	72.2
47.5°	341.3	252.3	144.5	64.9	38.7
50°	305.7	218.8	109.9	34.5	22.0
52.5°	272.2	187.4	78.5	19.9	16.8
55°	235.6	155.0	50.3	14.7	13.6
57.5°	201.0	123.5	28.3	11.5	10.5
60°	164.4	95.3	15.7	9.4	8.4
62.5°	127.7	69.1	10.5	6.3	5.2
65°	95.3	46.1	7.3	4.2	3.1
67.5°	62.8	26.2	5.2	2.1	2.1
70°	34.5	12.6	3.1	2.1	2.1
72.5°	12.6	4.2	2.1	1.0	1.0
75°	0.0	1.0	1.0	1.0	1.0
77.5°	0.0	0.0	0.0	0.0	1.0
80°	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0
85°	0.0	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	14.89	16.14	15.25	16.46	16.77	0.00	0.00	0.00	0.00	0.00
	3H	15.17	16.27	15.55	16.60	16.97	0.00	0.00	0.00	0.00	0.00
	4H	15.09	16.11	15.49	16.47	16.85	0.00	0.00	0.00	0.00	0.00
	6H	15.00	15.94	15.42	16.31	16.71	0.00	0.00	0.00	0.00	0.00
	8H	14.96	15.84	15.39	16.23	16.64	0.00	0.00	0.00	0.00	0.00
	12H	14.91	15.76	15.34	16.14	16.57	0.00	0.00	0.00	0.00	0.00
4H	2H	14.66	15.69	15.06	16.04	16.42	0.00	0.00	0.00	0.00	0.00
	3H	14.94	15.77	15.36	16.18	16.58	0.00	0.00	0.00	0.00	0.00
	4H	14.85	15.59	15.29	16.01	16.45	0.00	0.00	0.00	0.00	0.00
	6H	14.76	15.39	15.23	15.84	16.31	0.00	0.00	0.00	0.00	0.00
	8H	14.70	15.29	15.17	15.74	16.21	0.00	0.00	0.00	0.00	0.00
	12H	14.65	15.17	15.14	15.65	16.13	0.00	0.00	0.00	0.00	0.00
8H	4H	14.70	15.29	15.18	15.74	16.21	0.00	0.00	0.00	0.00	0.00
	6H	14.60	15.07	15.10	15.57	16.05	0.00	0.00	0.00	0.00	0.00
	8H	14.53	14.96	15.05	15.47	15.97	0.00	0.00	0.00	0.00	0.00
	12H	14.48	14.86	14.99	15.35	15.93	0.00	0.00	0.00	0.00	0.00
12H	4H	14.65	15.17	15.14	15.65	16.13	0.00	0.00	0.00	0.00	0.00
	6H	14.53	14.96	15.05	15.47	15.97	0.00	0.00	0.00	0.00	0.00
	8H	14.48	14.86	14.99	15.35	15.93	0.00	0.00	0.00	0.00	0.00