

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: P1059544

Luminaire Tested: S123RDR-H1165D935-X4F0-XX-UDD-BVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059544
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-30)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDR-H1165D935-X4F0-XX-UDD-BVL-B
Description: DEFINE 3 BLACK REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE
LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

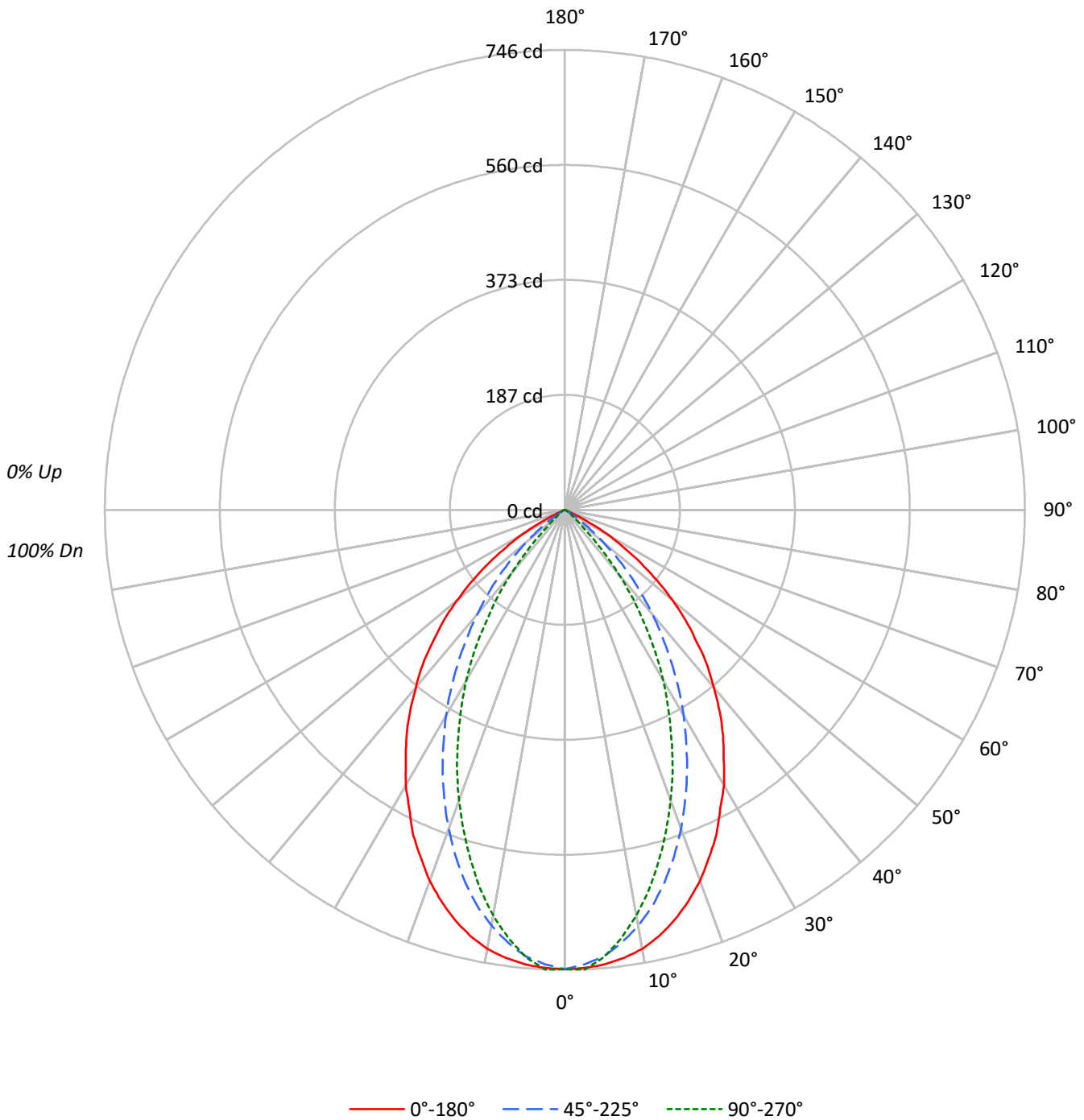
Lumens per Lamp: N/A
Luminaire Lumens: 850.1 lumens
Efficiency: N/A
Efficacy: 23.3 lumens/watt
Spacing Criteria (0/90/45): 1.06 / 0.81 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 36.5
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	113	110	107	104	110	107	105	103	103	101	100	100	98	97	96	95	94	92
2	106	101	96	92	104	99	95	91	96	92	89	93	90	87	90	87	85	84
3	100	92	87	82	98	91	86	82	88	84	80	86	82	79	83	80	78	76
4	94	85	79	74	92	84	78	74	82	77	73	80	75	72	78	74	71	69
5	88	79	72	67	86	78	71	67	76	70	66	74	69	65	72	68	65	63
6	83	73	66	61	81	72	66	61	70	65	60	69	64	60	67	63	60	58
7	78	68	61	56	77	67	60	56	66	60	56	64	59	55	63	58	55	53
8	74	63	56	52	72	62	56	51	61	55	51	60	55	51	59	54	51	49
9	70	59	52	48	68	58	52	48	57	52	47	56	51	47	55	51	47	46
10	66	55	49	44	65	55	48	44	54	48	44	53	48	44	52	47	44	42

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8747	8747	8747
5°	8724	8568	8582
10°	8624	8168	7967
15°	8371	7598	7160
20°	8005	6880	6266
25°	7538	6077	5300
30°	6994	5222	4327
35°	6413	4316	3215
40°	5756	3383	2060
45°	5020	2469	857
50°	4163	1469	329
55°	3069	614	246
60°	1860	225	141
65°	500	133	67
70°	0	41	41
75°	0	0	54
80°	0	0	0
85°	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5020 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	68.6	8.1
10°-20°	177.0	20.8
20°-30°	220.6	25.9
30°-40°	197.2	23.2
40°-50°	124.5	14.6
50°-60°	52.1	6.1
60°-70°	9.8	1.2
70°-80°	0.3	0.0
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°	466.1	54.8
0°-40°	663.4	78.0
0°-60°	839.9	98.8
0°-90°	850.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	850.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	745	745	745	745	745	
5°	740	739	727	729	728	70
15°	689	672	625	599	589	193
25°	582	535	469	428	409	266
35°	447	383	301	247	224	279
45°	302	235	149	79	52	233
55°	150	103	30	12	12	134
65°	18	13	5	2	2	25
75°	0	0	0	0	1	0
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°	744.9	744.9	744.9	744.9	744.9
2.5°	743.7	744.9	737.7	744.9	746.1
5°	740.1	738.9	726.9	729.3	728.1
7.5°	732.9	729.3	707.8	703.0	700.6
10°	723.3	713.7	685.0	673.0	668.2
12.5°	707.8	694.6	657.4	638.2	631.0
15°	688.6	671.8	625.0	598.6	589.0
17.5°	665.8	641.8	589.0	560.2	545.8
20°	640.6	607.0	550.6	515.8	501.4
22.5°	610.6	573.4	509.8	472.6	457.0
25°	581.8	535.0	469.0	428.2	409.1
27.5°	545.8	496.6	425.8	383.9	363.5
30°	515.8	459.4	385.1	338.3	319.1
32.5°	479.8	421.1	343.1	291.5	273.5
35°	447.4	382.7	301.1	247.1	224.3
37.5°	412.7	345.5	259.1	202.7	181.1
40°	375.5	308.3	220.7	158.3	134.4
42.5°	341.9	271.1	182.3	117.6	93.6
45°	302.3	235.1	148.7	79.2	51.6
47.5°	266.3	201.5	112.8	44.4	27.6
50°	227.9	166.7	80.4	22.8	18.0
52.5°	188.3	133.2	52.8	15.6	14.4
55°	149.9	103.2	30.0	12.0	12.0
57.5°	112.8	74.4	15.6	9.6	8.4
60°	79.2	49.2	9.6	7.2	6.0
62.5°	45.6	28.8	7.2	4.8	4.8
65°	18.0	13.2	4.8	2.4	2.4
67.5°	1.2	3.6	2.4	1.2	1.2
70°	0.0	0.0	1.2	1.2	1.2
72.5°	0.0	0.0	1.2	1.2	1.2
75°	0.0	0.0	0.0	0.0	1.2
77.5°	0.0	0.0	0.0	0.0	0.0
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	12.73	13.90	13.09	14.22	14.53	0.00	0.00	0.00	0.00	0.00
	3H	12.57	13.60	12.95	13.93	14.30	0.00	0.00	0.00	0.00	0.00
	4H	12.48	13.44	12.89	13.79	14.18	0.00	0.00	0.00	0.00	0.00
	6H	12.39	13.26	12.81	13.63	14.03	0.00	0.00	0.00	0.00	0.00
	8H	12.34	13.16	12.77	13.55	13.96	0.00	0.00	0.00	0.00	0.00
	12H	12.29	13.07	12.72	13.46	13.89	0.00	0.00	0.00	0.00	0.00
4H	2H	12.49	13.44	12.89	13.79	14.18	0.00	0.00	0.00	0.00	0.00
	3H	12.32	13.09	12.74	13.50	13.90	0.00	0.00	0.00	0.00	0.00
	4H	12.22	12.90	12.65	13.32	13.77	0.00	0.00	0.00	0.00	0.00
	6H	12.12	12.71	12.59	13.15	13.63	0.00	0.00	0.00	0.00	0.00
	8H	12.06	12.60	12.53	13.05	13.52	0.00	0.00	0.00	0.00	0.00
	12H	12.00	12.48	12.49	12.96	13.44	0.00	0.00	0.00	0.00	0.00
8H	4H	12.06	12.60	12.53	13.05	13.52	0.00	0.00	0.00	0.00	0.00
	6H	11.94	12.38	12.45	12.88	13.36	0.00	0.00	0.00	0.00	0.00
	8H	11.87	12.26	12.40	12.78	13.28	0.00	0.00	0.00	0.00	0.00
	12H	11.81	12.16	12.33	12.66	13.24	0.00	0.00	0.00	0.00	0.00
12H	4H	12.00	12.48	12.49	12.96	13.44	0.00	0.00	0.00	0.00	0.00
	6H	11.87	12.26	12.40	12.78	13.28	0.00	0.00	0.00	0.00	0.00
	8H	11.81	12.16	12.33	12.66	13.24	0.00	0.00	0.00	0.00	0.00