

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: P1059556

Luminaire Tested: S123RDR-H1165D940-X4F0-XX-UDD-SVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059556
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-29)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDR-H1165D940-X4F0-XX-UDD-SVL-B
Description: DEFINE 3 BLACK REGRESSED DIRECT RECESSED HOUSING WITH SILVER STRAIGHT BLADE
LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

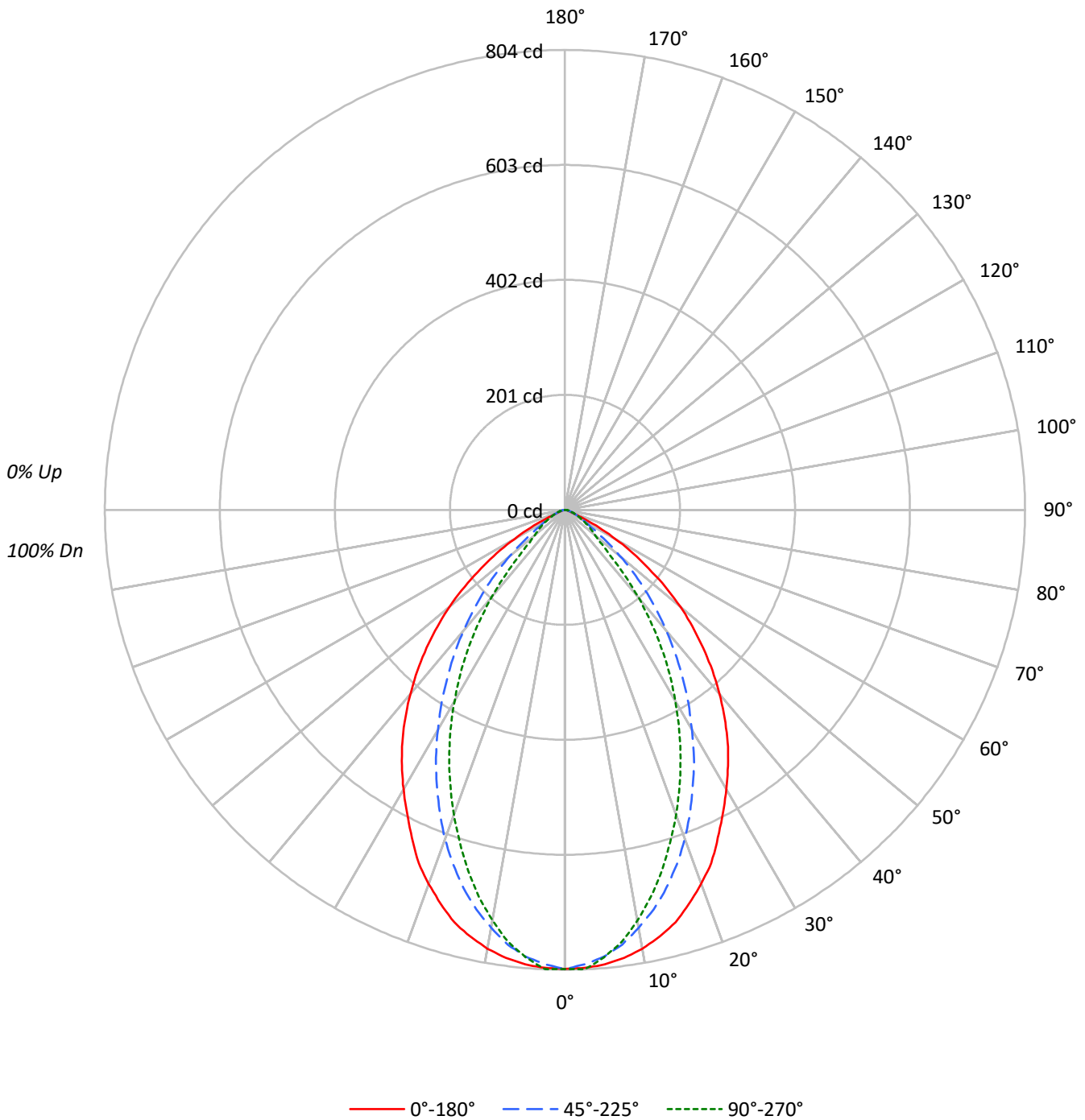
Lumens per Lamp: N/A
Luminaire Lumens: 1036.2 lumens
Efficiency: N/A
Efficacy: 28.4 lumens/watt
Spacing Criteria (0/90/45): 1.08 / 0.85 / 0.98
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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	50	30	10	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100			100	
1	112	109	106	103	110	107	104	102	103	100	98	99	97	95	95	94	93	91			91	
2	105	99	94	90	103	97	93	89	94	90	87	91	88	85	88	86	83	82			82	
3	98	90	84	80	96	89	83	79	86	82	78	84	80	76	81	78	75	73			73	
4	92	83	76	71	90	82	75	70	79	74	70	77	73	69	75	71	68	66			66	
5	86	76	69	64	84	75	68	63	73	67	63	71	66	62	70	65	62	60			60	
6	81	70	63	58	79	69	62	58	68	62	57	66	61	57	65	60	56	55			55	
7	76	65	58	53	74	64	57	53	63	57	52	61	56	52	60	55	52	50			50	
8	71	60	53	48	70	60	53	48	58	52	48	57	52	48	56	51	48	46			46	
9	67	56	49	45	66	56	49	44	55	48	44	54	48	44	53	48	44	42			42	
10	64	52	46	41	63	52	46	41	51	45	41	50	45	41	49	44	41	39			39	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9424	9424	9424
5°	9403	9241	9255
10°	9288	8844	8696
15°	9077	8322	7944
20°	8695	7654	7095
25°	8194	6858	6197
30°	7649	6015	5223
35°	7106	5129	4203
40°	6438	4228	3047
45°	5674	3281	1837
50°	4812	2293	1248
55°	3662	1374	1042
60°	2393	876	817
65°	1000	656	656
70°	340	470	512
75°	281	340	395
80°	169	250	338
85°	162	162	337

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5674 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	74.1	7.2
10°-20°	194.0	18.7
20°-30°	248.8	24.0
30°-40°	233.4	22.5
40°-50°	162.9	15.7
50°-60°	84.2	8.1
60°-70°	28.8	2.8
70°-80°	8.2	0.8
80°-90°	1.7	0.2
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°	516.9	49.9
0°-40°	750.4	72.4
0°-60°	997.4	96.3
0°-90°	1036.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1036.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	803	803	803	803	803	
5°	798	796	784	788	785	76
15°	747	728	685	662	654	209
25°	632	593	529	493	478	291
35°	496	435	358	312	293	309
45°	342	280	198	137	111	263
55°	179	134	67	52	51	161
65°	36	31	24	22	24	43
75°	6	6	8	9	9	6
85°	1	1	1	1	2	1
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	802.6	802.6	802.6	802.6	802.6
2.5°	801.4	802.6	795.2	802.6	803.9
5°	797.7	796.4	784.0	787.7	785.2
7.5°	790.2	786.5	766.6	761.6	761.6
10°	779.0	771.6	741.7	733.1	729.3
12.5°	764.1	754.2	715.7	699.5	693.3
15°	746.7	728.1	684.6	662.2	653.5
17.5°	721.9	697.0	649.8	623.7	610.0
20°	695.8	664.7	612.5	581.5	567.8
22.5°	668.4	631.2	571.5	538.0	523.1
25°	632.4	592.7	529.3	493.3	478.3
27.5°	597.6	555.4	488.3	447.3	432.4
30°	564.1	514.4	443.6	403.8	385.2
32.5°	530.5	474.6	401.3	357.8	340.4
35°	495.7	434.9	357.8	311.9	293.2
37.5°	458.5	396.3	316.8	267.1	244.8
40°	420.0	355.3	275.8	219.9	198.8
42.5°	381.4	318.1	234.8	177.7	152.8
45°	341.7	279.6	197.6	136.7	110.6
47.5°	301.9	241.0	161.5	99.4	83.2
50°	263.4	205.0	125.5	73.3	68.3
52.5°	221.2	170.2	94.4	60.9	59.6
55°	178.9	134.2	67.1	52.2	50.9
57.5°	141.6	104.4	48.5	43.5	42.2
60°	101.9	74.5	37.3	36.0	34.8
62.5°	67.1	50.9	29.8	28.6	28.6
65°	36.0	31.1	23.6	22.4	23.6
67.5°	14.9	17.4	17.4	18.6	18.6
70°	9.9	11.2	13.7	14.9	14.9
72.5°	7.5	8.7	9.9	11.2	11.2
75°	6.2	6.2	7.5	8.7	8.7
77.5°	3.7	5.0	5.0	6.2	7.5
80°	2.5	3.7	3.7	5.0	5.0
82.5°	1.2	2.5	2.5	3.7	3.7
85°	1.2	1.2	1.2	1.2	2.5
87.5°	0.0	0.0	0.0	0.0	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	14.13	15.39	14.49	15.70	16.01	7.63	8.89	8.00	9.20	9.52
	3H	14.08	15.19	14.46	15.52	15.89	8.40	9.51	8.79	9.84	10.21
	4H	14.03	15.06	14.43	15.41	15.79	8.61	9.64	9.01	9.99	10.37
	6H	13.96	14.90	14.37	15.27	15.67	8.75	9.70	9.17	10.07	10.46
	8H	13.91	14.81	14.35	15.20	15.60	8.79	9.68	9.22	10.07	10.48
	12H	13.87	14.72	14.30	15.11	15.54	8.81	9.66	9.24	10.04	10.47
4H	2H	13.97	15.00	14.38	15.36	15.74	7.89	8.92	8.29	9.27	9.65
	3H	13.96	14.79	14.37	15.20	15.60	8.79	9.63	9.21	10.03	10.44
	4H	13.91	14.65	14.34	15.07	15.52	9.07	9.81	9.50	10.23	10.68
	6H	13.85	14.49	14.32	14.94	15.40	9.29	9.92	9.75	10.37	10.84
	8H	13.80	14.39	14.27	14.84	15.31	9.35	9.94	9.82	10.39	10.86
	12H	13.75	14.28	14.24	14.76	15.24	9.38	9.91	9.87	10.39	10.87
8H	4H	13.79	14.39	14.27	14.84	15.31	9.05	9.65	9.52	10.10	10.57
	6H	13.73	14.22	14.24	14.71	15.20	9.32	9.81	9.83	10.31	10.79
	8H	13.68	14.12	14.21	14.63	15.13	9.43	9.86	9.95	10.38	10.88
	12H	13.64	14.03	14.16	14.52	15.10	9.50	9.89	10.02	10.38	10.96
12H	4H	13.75	14.27	14.24	14.76	15.23	9.01	9.54	9.50	10.02	10.50
	6H	13.67	14.11	14.20	14.63	15.12	9.28	9.72	9.81	10.24	10.73
	8H	13.64	14.03	14.16	14.52	15.10	9.42	9.81	9.94	10.30	10.88