

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: P1059685

Luminaire Tested: S123RDR-H560D850-X4F0-XX-UDD-WVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059685
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-28)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDR-H560D850-X4F0-XX-UDD-WVL-B
Description: DEFINE 3 BLACK REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE
LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

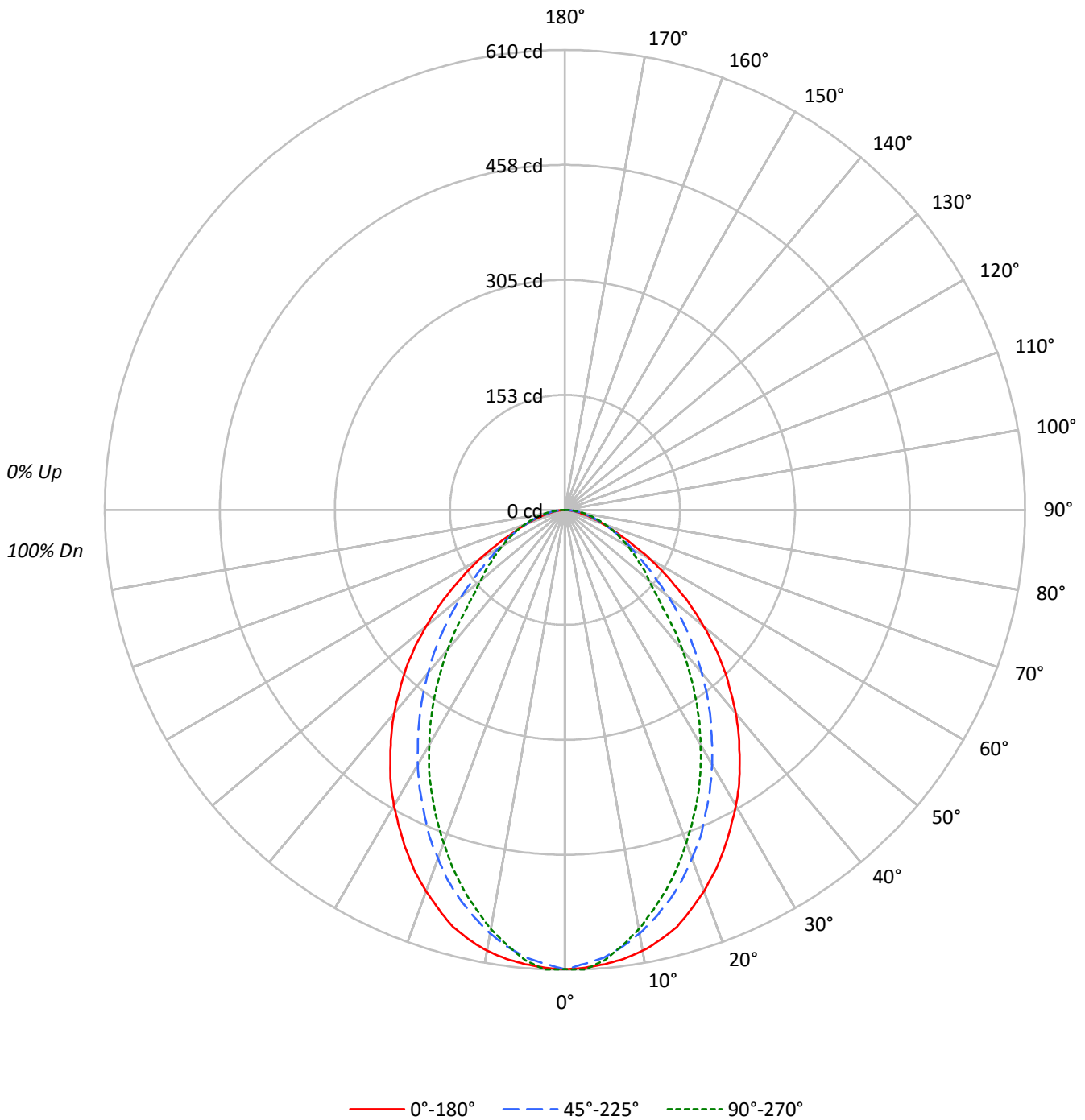
Lumens per Lamp: N/A
Luminaire Lumens: 1065.7 lumens
Efficiency: N/A
Efficacy: 61.2 lumens/watt
Spacing Criteria (0/90/45): 1.12 / 0.95 / 1.09
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 17.4
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	111	107	103	100	108	104	101	98	100	98	95	96	94	92	93	91	89	88
2	102	95	89	84	100	93	88	83	90	85	81	87	83	80	84	81	78	76
3	94	85	78	73	92	84	77	72	81	75	71	78	73	69	76	72	68	66
4	87	77	69	63	85	76	68	63	73	67	62	71	66	61	69	64	60	58
5	81	70	62	56	79	69	61	56	67	60	55	65	59	54	63	58	54	52
6	76	64	56	50	74	63	55	50	61	54	49	59	53	49	58	53	48	47
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	53	48	44	42
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38
9	62	50	42	37	61	49	42	37	48	41	37	47	41	37	46	41	37	35
10	58	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7155	7155	7155
5°	7130	7026	7070
10°	7081	6802	6732
15°	6962	6509	6330
20°	6727	6149	5876
25°	6452	5731	5408
30°	6146	5292	4876
35°	5784	4819	4315
40°	5400	4323	3716
45°	4950	3819	3052
50°	4388	3277	2649
55°	3734	2743	2428
60°	3044	2391	2252
65°	2320	2117	2095
70°	1809	1885	1960
75°	1461	1697	1828
80°	1089	1386	1684
85°	593	889	1482

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4950 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	56.6	5.3
10°-20°	152.2	14.3
20°-30°	206.9	19.4
30°-40°	214.5	20.1
40°-50°	180.9	17.0
50°-60°	128.4	12.0
60°-70°	78.5	7.4
70°-80°	39.0	3.7
80°-90°	8.9	0.8
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°	415.6	39.0
0°-40°	630.1	59.1
0°-60°	939.3	88.1
0°-90°	1065.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1065.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	609	609	609	609	609	
5°	605	605	596	600	600	57
15°	573	562	535	526	521	161
25°	498	476	442	426	417	229
35°	404	373	336	313	301	252
45°	298	267	230	198	184	229
55°	182	163	134	122	119	164
65°	84	81	76	76	75	85
75°	32	34	37	39	40	35
85°	4	5	7	10	11	6
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	609.3	609.3	609.3	609.3	609.3
2.5°	607.9	608.6	602.7	609.3	610.1
5°	604.9	604.9	596.1	599.8	599.8
7.5°	600.5	599.1	584.4	584.4	583.0
10°	593.9	589.5	570.5	566.8	564.6
12.5°	584.4	577.1	553.7	547.1	542.7
15°	572.7	561.7	535.4	525.8	520.7
17.5°	555.9	544.9	515.6	502.4	496.5
20°	538.3	522.2	492.1	479.0	470.2
22.5°	519.2	498.7	469.4	453.3	443.8
25°	498.0	476.0	442.3	426.2	417.4
27.5°	475.3	451.1	416.7	398.4	389.6
30°	453.3	425.5	390.3	369.8	359.6
32.5°	429.9	398.4	362.5	341.3	331.0
35°	403.5	372.8	336.2	312.7	301.0
37.5°	378.6	347.1	309.1	284.2	271.0
40°	352.3	320.8	282.0	256.3	242.4
42.5°	324.4	294.4	256.3	226.3	213.1
45°	298.1	266.6	230.0	198.5	183.8
47.5°	269.5	240.2	204.3	172.1	161.9
50°	240.2	213.1	179.4	150.1	145.0
52.5°	211.7	188.9	154.5	135.5	133.3
55°	182.4	163.3	134.0	122.3	118.6
57.5°	155.3	141.3	115.0	109.1	107.7
60°	129.6	117.9	101.8	98.1	95.9
62.5°	104.7	98.1	88.6	87.2	85.7
65°	83.5	80.6	76.2	76.2	75.4
67.5°	65.9	65.9	65.2	66.6	65.9
70°	52.7	53.5	54.9	56.4	57.1
72.5°	41.7	43.9	45.4	47.6	48.3
75°	32.2	34.4	37.4	38.8	40.3
77.5°	23.4	25.6	28.6	30.8	32.2
80°	16.1	17.6	20.5	23.4	24.9
82.5°	10.3	11.0	13.2	16.1	17.6
85°	4.4	5.1	6.6	9.5	11.0
87.5°	0.0	0.0	0.7	2.9	5.1
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	17.10	16.01	17.41	17.72	13.74	15.19	14.11	15.51	15.82
	3H	16.54	17.84	16.92	18.17	18.53	15.31	16.61	15.69	16.94	17.30
	4H	16.82	18.04	17.22	18.39	18.77	15.91	17.12	16.31	17.47	17.85
	6H	16.97	18.09	17.39	18.46	18.85	16.36	17.48	16.77	17.85	18.24
	8H	17.00	18.06	17.42	18.45	18.85	16.51	17.57	16.94	17.96	18.37
	12H	16.99	18.01	17.42	18.39	18.82	16.61	17.63	17.04	18.01	18.44
4H	2H	15.89	17.10	16.29	17.45	17.83	14.28	15.50	14.68	15.85	16.23
	3H	17.00	18.00	17.41	18.40	18.81	16.06	17.06	16.47	17.46	17.86
	4H	17.39	18.29	17.83	18.71	19.15	16.77	17.67	17.20	18.08	18.52
	6H	17.63	18.41	18.09	18.86	19.32	17.34	18.12	17.80	18.56	19.03
	8H	17.68	18.40	18.14	18.85	19.32	17.53	18.26	18.00	18.70	19.17
	12H	17.69	18.33	18.17	18.81	19.28	17.67	18.32	18.15	18.80	19.27
8H	4H	17.55	18.28	18.02	18.72	19.19	16.98	17.71	17.44	18.15	18.62
	6H	17.86	18.46	18.36	18.95	19.43	17.65	18.25	18.15	18.75	19.22
	8H	17.94	18.48	18.46	18.99	19.48	17.91	18.45	18.43	18.96	19.45
	12H	17.97	18.45	18.49	18.94	19.51	18.12	18.59	18.63	19.09	19.65
12H	4H	17.55	18.20	18.04	18.68	19.15	16.98	17.62	17.46	18.10	18.58
	6H	17.88	18.41	18.39	18.93	19.42	17.66	18.20	18.18	18.71	19.20
	8H	17.99	18.47	18.50	18.96	19.53	17.97	18.44	18.48	18.93	19.50