

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: P1059796

Luminaire Tested: S123RDR-H775D940-X4F0-XX-UDD-BVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059796
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-H775D940-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: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

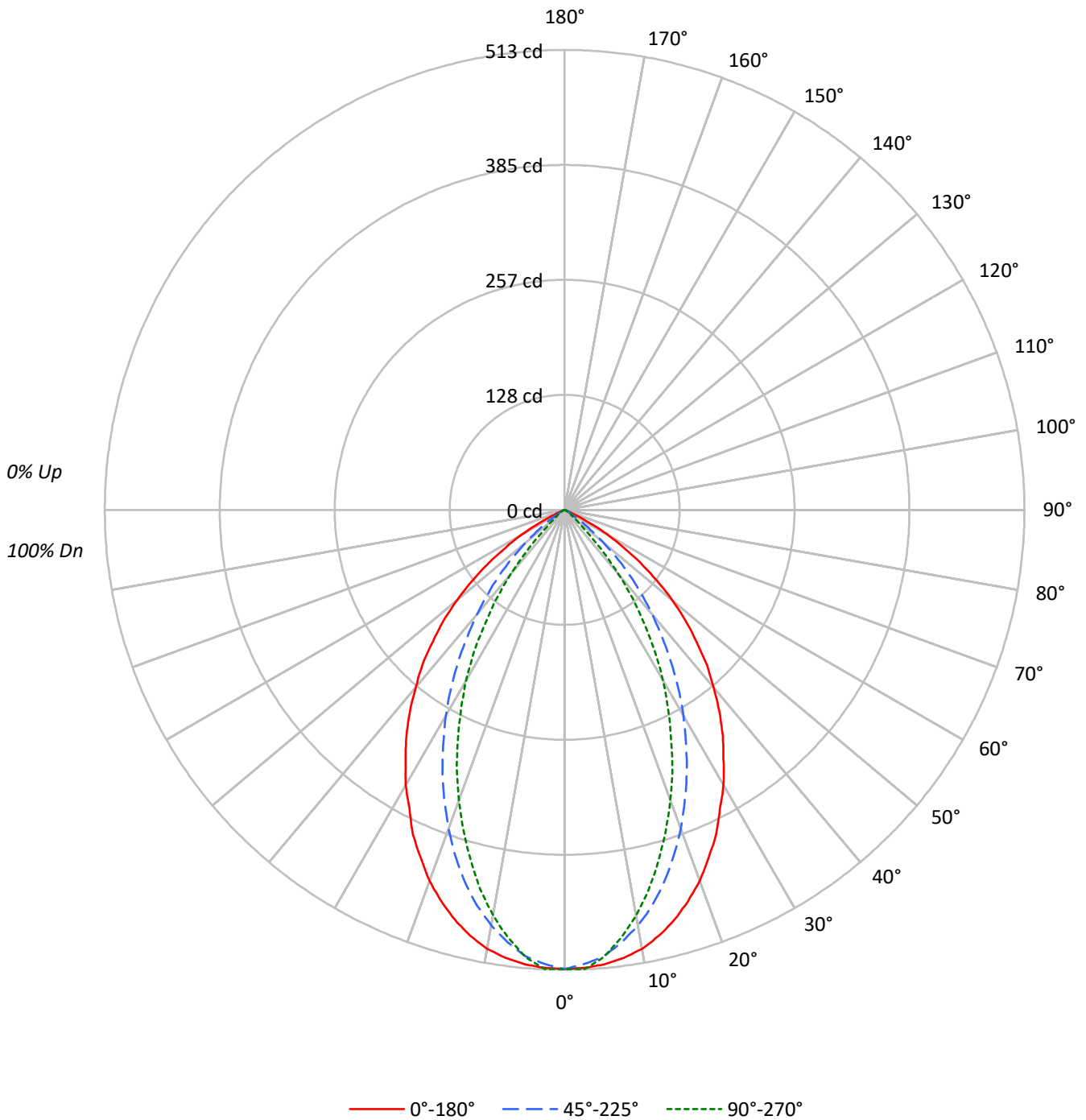
Lumens per Lamp: N/A
Luminaire Lumens: 584.3 lumens
Efficiency: N/A
Efficacy: 24.9 lumens/watt
Spacing Criteria (0/90/45): 1.06 / 0.81 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 23.5
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°	6013	6013	6013
5°	5997	5890	5901
10°	5930	5615	5477
15°	5755	5223	4922
20°	5503	4730	4307
25°	5183	4177	3643
30°	4808	3589	2975
35°	4409	2967	2210
40°	3956	2325	1416
45°	3451	1699	590
50°	2863	1010	227
55°	2111	422	168
60°	1278	155	96
65°	345	92	44
70°	0	27	27
75°	0	0	36
80°	0	0	0
85°	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3451 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	47.1	8.1
10°-20°	121.7	20.8
20°-30°	151.6	25.9
30°-40°	135.6	23.2
40°-50°	85.6	14.6
50°-60°	35.8	6.1
60°-70°	6.7	1.2
70°-80°	0.2	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°	320.4	54.8
0°-40°	456.0	78.0
0°-60°	577.4	98.8
0°-90°	584.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	584.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	512	512	512	512	512	
5°	509	508	500	501	501	48
15°	473	462	430	412	405	133
25°	400	368	322	294	281	183
35°	308	263	207	170	154	192
45°	208	162	102	54	36	160
55°	103	71	21	8	8	92
65°	12	9	3	2	2	17
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°	512.1	512.1	512.1	512.1	512.1
2.5°	511.3	512.1	507.2	512.1	512.9
5°	508.8	508.0	499.7	501.4	500.6
7.5°	503.9	501.4	486.5	483.2	481.6
10°	497.3	490.7	470.9	462.6	459.3
12.5°	486.5	477.5	451.9	438.7	433.8
15°	473.4	461.8	429.6	411.5	404.9
17.5°	457.7	441.2	404.9	385.1	375.2
20°	440.4	417.3	378.5	354.6	344.7
22.5°	419.7	394.2	350.5	324.9	314.2
25°	400.0	367.8	322.4	294.4	281.2
27.5°	375.2	341.4	292.8	263.9	249.9
30°	354.6	315.8	264.7	232.6	219.4
32.5°	329.9	289.5	235.9	200.4	188.0
35°	307.6	263.1	207.0	169.9	154.2
37.5°	283.7	237.5	178.1	139.4	124.5
40°	258.1	211.9	151.7	108.9	92.4
42.5°	235.0	186.4	125.3	80.8	64.3
45°	207.8	161.6	102.3	54.4	35.5
47.5°	183.1	138.5	77.5	30.5	19.0
50°	156.7	114.6	55.3	15.7	12.4
52.5°	129.5	91.5	36.3	10.7	9.9
55°	103.1	70.9	20.6	8.2	8.2
57.5°	77.5	51.1	10.7	6.6	5.8
60°	54.4	33.8	6.6	4.9	4.1
62.5°	31.3	19.8	4.9	3.3	3.3
65°	12.4	9.1	3.3	1.6	1.6
67.5°	0.8	2.5	1.6	0.8	0.8
70°	0.0	0.0	0.8	0.8	0.8
72.5°	0.0	0.0	0.8	0.8	0.8
75°	0.0	0.0	0.0	0.0	0.8
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	11.42	12.60	11.79	12.91	13.22	0.00	0.00	0.00	0.00	0.00
	3H	11.26	12.29	11.64	12.62	12.99	0.00	0.00	0.00	0.00	0.00
	4H	11.17	12.13	11.58	12.48	12.87	0.00	0.00	0.00	0.00	0.00
	6H	11.08	11.95	11.50	12.33	12.72	0.00	0.00	0.00	0.00	0.00
	8H	11.03	11.85	11.47	12.25	12.65	0.00	0.00	0.00	0.00	0.00
	12H	10.98	11.77	11.42	12.15	12.58	0.00	0.00	0.00	0.00	0.00
4H	2H	11.18	12.13	11.58	12.49	12.87	0.00	0.00	0.00	0.00	0.00
	3H	11.01	11.78	11.43	12.19	12.59	0.00	0.00	0.00	0.00	0.00
	4H	10.91	11.59	11.35	12.01	12.46	0.00	0.00	0.00	0.00	0.00
	6H	10.81	11.40	11.28	11.85	12.32	0.00	0.00	0.00	0.00	0.00
	8H	10.75	11.29	11.22	11.74	12.22	0.00	0.00	0.00	0.00	0.00
	12H	10.69	11.17	11.18	11.65	12.13	0.00	0.00	0.00	0.00	0.00
8H	4H	10.75	11.29	11.22	11.74	12.22	0.00	0.00	0.00	0.00	0.00
	6H	10.63	11.07	11.14	11.57	12.06	0.00	0.00	0.00	0.00	0.00
	8H	10.56	10.96	11.09	11.48	11.97	0.00	0.00	0.00	0.00	0.00
	12H	10.51	10.86	11.02	11.35	11.93	0.00	0.00	0.00	0.00	0.00
12H	4H	10.69	11.17	11.18	11.65	12.13	0.00	0.00	0.00	0.00	0.00
	6H	10.56	10.96	11.09	11.48	11.97	0.00	0.00	0.00	0.00	0.00
	8H	10.51	10.86	11.02	11.35	11.93	0.00	0.00	0.00	0.00	0.00