

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: P1059592

Luminaire Tested: S123RDR-H340D840-X4F0-XX-UDD-SVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059592
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-H340D840-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, 80 CRI LEDS
Ballast/Driver: -

Summary

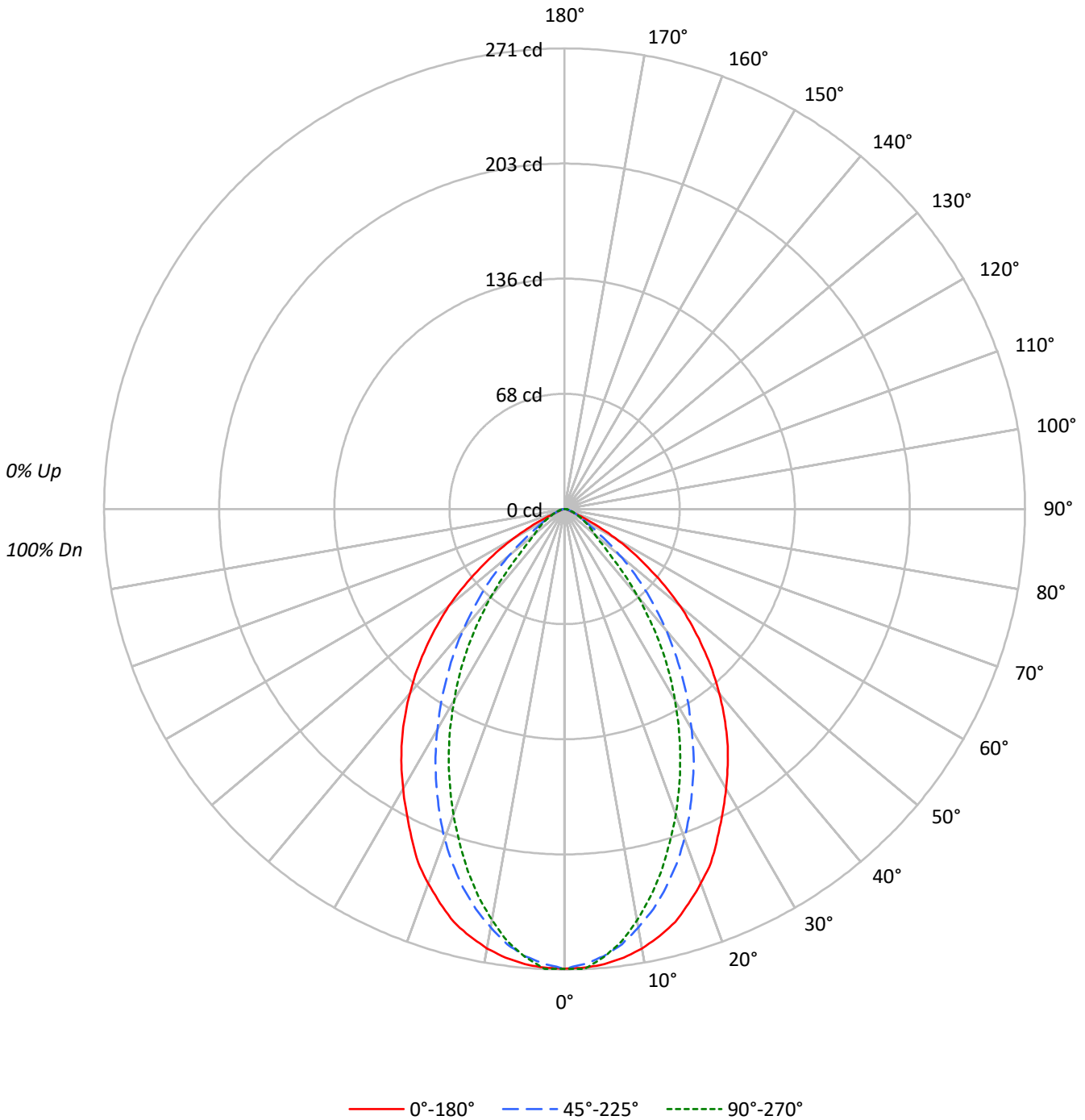
Lumens per Lamp: N/A
Luminaire Lumens: 349.3 lumens
Efficiency: N/A
Efficacy: 29.9 lumens/watt
Spacing Criteria (0/90/45): 1.08 / 0.85 / 0.98
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 11.7
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

TEST NUMBER: P1059592

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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	100	98	99	97	95	95	94	93	91
2	105	99	94	90	103	97	93	89	94	90	87	91	88	85	88	86	83	82
3	98	90	84	80	96	89	83	79	86	82	78	84	80	76	81	78	75	73
4	92	83	76	71	90	82	75	70	79	74	70	77	73	69	75	71	68	66
5	86	76	69	64	84	75	68	63	73	67	63	71	66	62	70	65	62	60
6	81	70	63	58	79	69	62	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	48	46
9	67	56	49	45	66	56	49	44	55	48	44	54	48	44	53	48	44	42
10	64	52	46	41	63	52	46	41	51	45	41	50	45	41	49	44	41	39

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3176	3176	3176
5°	3170	3114	3120
10°	3131	2981	2931
15°	3060	2805	2678
20°	2930	2580	2392
25°	2762	2311	2089
30°	2578	2027	1760
35°	2395	1729	1416
40°	2169	1426	1027
45°	1913	1106	619
50°	1622	773	420
55°	1234	463	352
60°	806	296	275
65°	336	222	222
70°	117	158	172
75°	95	113	132
80°	54	88	115
85°	54	54	108

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1913 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	25.0	7.2
10°-20°	65.4	18.7
20°-30°	83.9	24.0
30°-40°	78.7	22.5
40°-50°	54.9	15.7
50°-60°	28.4	8.1
60°-70°	9.7	2.8
70°-80°	2.8	0.8
80°-90°	0.6	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°	174.2	49.9
0°-40°	252.9	72.4
0°-60°	336.2	96.3
0°-90°	349.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	349.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	270	270	270	270	270	
5°	269	268	264	266	265	25
15°	252	245	231	223	220	71
25°	213	200	178	166	161	98
35°	167	147	121	105	99	104
45°	115	94	67	46	37	89
55°	60	45	23	18	17	54
65°	12	10	8	8	8	14
75°	2	2	2	3	3	2
85°	0	0	0	0	1	0
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	270.5	270.5	270.5	270.5	270.5
2.5°	270.1	270.5	268.0	270.5	270.9
5°	268.9	268.4	264.2	265.5	264.7
7.5°	266.3	265.1	258.4	256.7	256.7
10°	262.6	260.1	250.0	247.1	245.8
12.5°	257.5	254.2	241.2	235.8	233.7
15°	251.7	245.4	230.7	223.2	220.3
17.5°	243.3	234.9	219.0	210.2	205.6
20°	234.5	224.0	206.5	196.0	191.4
22.5°	225.3	212.7	192.6	181.3	176.3
25°	213.2	199.8	178.4	166.3	161.2
27.5°	201.4	187.2	164.6	150.8	145.7
30°	190.1	173.4	149.5	136.1	129.8
32.5°	178.8	160.0	135.3	120.6	114.7
35°	167.1	146.6	120.6	105.1	98.8
37.5°	154.5	133.6	106.8	90.0	82.5
40°	141.5	119.8	93.0	74.1	67.0
42.5°	128.6	107.2	79.1	59.9	51.5
45°	115.2	94.2	66.6	46.1	37.3
47.5°	101.8	81.2	54.4	33.5	28.1
50°	88.8	69.1	42.3	24.7	23.0
52.5°	74.5	57.4	31.8	20.5	20.1
55°	60.3	45.2	22.6	17.6	17.2
57.5°	47.7	35.2	16.3	14.7	14.2
60°	34.3	25.1	12.6	12.1	11.7
62.5°	22.6	17.2	10.1	9.6	9.6
65°	12.1	10.5	8.0	7.5	8.0
67.5°	5.0	5.9	5.9	6.3	6.3
70°	3.4	3.8	4.6	5.0	5.0
72.5°	2.5	2.9	3.4	3.8	3.8
75°	2.1	2.1	2.5	2.9	2.9
77.5°	1.3	1.7	1.7	2.1	2.5
80°	0.8	1.3	1.3	1.7	1.7
82.5°	0.4	0.8	0.8	1.3	1.3
85°	0.4	0.4	0.4	0.4	0.8
87.5°	0.0	0.0	0.0	0.0	0.4
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	10.35	11.61	10.72	11.92	12.24	3.87	5.12	4.23	5.44	5.75
	3H	10.30	11.41	10.68	11.74	12.11	4.64	5.75	5.02	6.08	6.44
	4H	10.25	11.28	10.65	11.63	12.02	4.84	5.87	5.24	6.22	6.60
	6H	10.18	11.12	10.60	11.50	11.89	4.98	5.92	5.40	6.30	6.69
	8H	10.14	11.03	10.57	11.42	11.83	5.02	5.91	5.45	6.30	6.71
	12H	10.09	10.95	10.53	11.33	11.76	5.04	5.89	5.47	6.27	6.70
4H	2H	10.20	11.23	10.60	11.58	11.96	4.13	5.15	4.53	5.51	5.89
	3H	10.18	11.02	10.60	11.42	11.83	5.03	5.86	5.44	6.27	6.67
	4H	10.13	10.87	10.57	11.29	11.74	5.30	6.04	5.73	6.46	6.90
	6H	10.08	10.71	10.54	11.16	11.63	5.52	6.15	5.98	6.60	7.07
	8H	10.02	10.62	10.49	11.07	11.54	5.58	6.18	6.05	6.63	7.10
	12H	9.98	10.50	10.46	10.98	11.46	5.62	6.14	6.11	6.63	7.10
8H	4H	10.02	10.61	10.49	11.06	11.53	5.28	5.88	5.75	6.32	6.80
	6H	9.96	10.44	10.46	10.94	11.42	5.56	6.04	6.06	6.54	7.02
	8H	9.91	10.34	10.43	10.86	11.35	5.67	6.11	6.20	6.62	7.12
	12H	9.87	10.25	10.38	10.75	11.32	5.74	6.13	6.26	6.62	7.20
12H	4H	9.97	10.50	10.46	10.98	11.46	5.24	5.77	5.73	6.25	6.73
	6H	9.90	10.34	10.42	10.85	11.35	5.52	5.95	6.04	6.47	6.96
	8H	9.87	10.25	10.39	10.75	11.32	5.66	6.05	6.18	6.54	7.12