

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: P1059757

Luminaire Tested: S123RDR-H775D840-X4F0-XX-UDD-WVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059757
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-H775D840-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: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

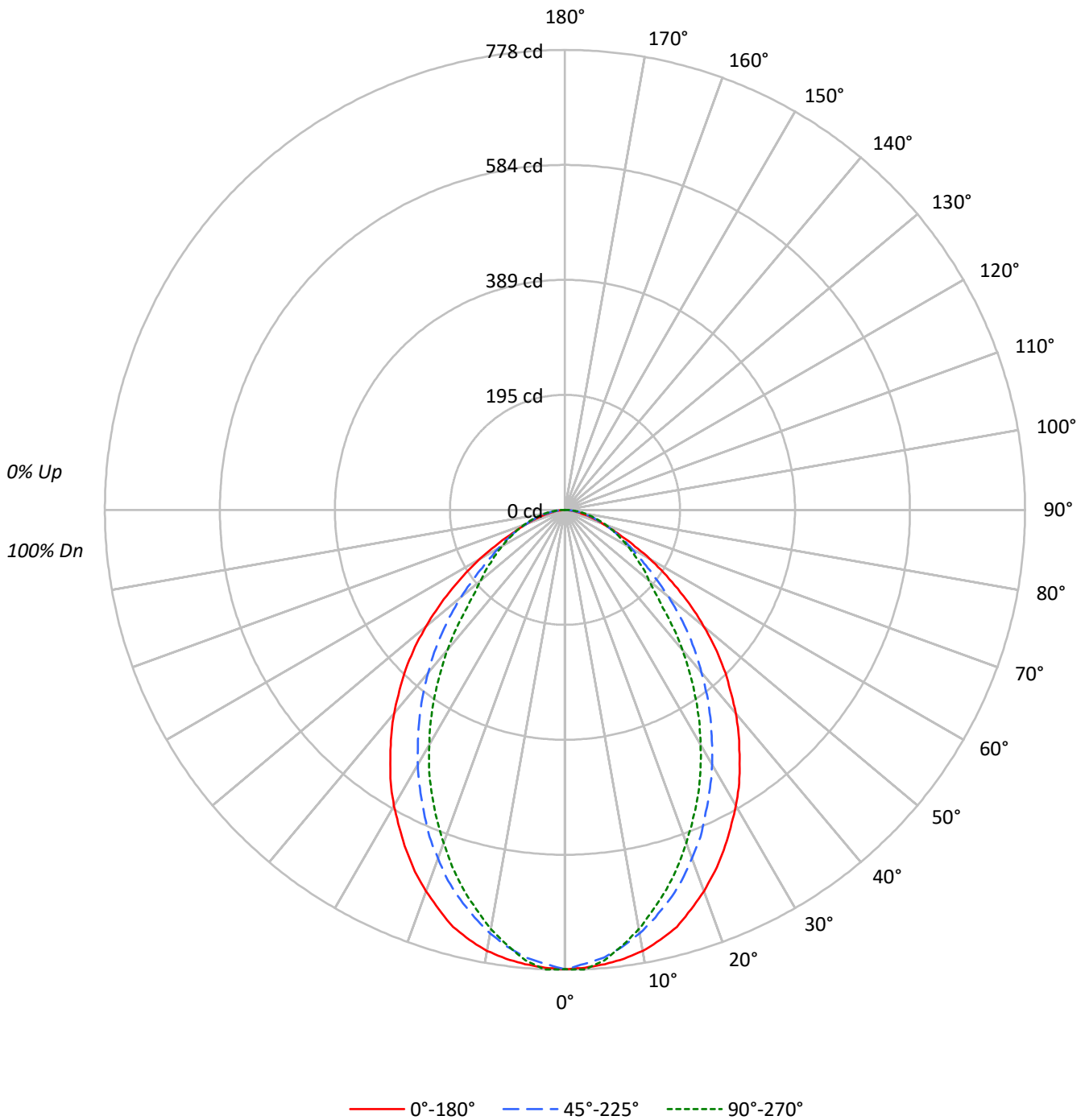
Lumens per Lamp: N/A
Luminaire Lumens: 1359.1 lumens
Efficiency: N/A
Efficacy: 57.8 lumens/watt
Spacing Criteria (0/90/45): 1.12 / 0.95 / 1.09
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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	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°	9125	9125	9125
5°	9094	8962	9016
10°	9032	8676	8586
15°	8879	8299	8073
20°	8579	7843	7493
25°	8229	7309	6898
30°	7838	6750	6218
35°	7377	6145	5503
40°	6886	5512	4738
45°	6312	4871	3893
50°	5595	4180	3378
55°	4762	3499	3097
60°	3882	3048	2875
65°	2959	2698	2673
70°	2307	2403	2503
75°	1865	2160	2332
80°	1386	1772	2150
85°	754	1132	1886

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6312 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.1	5.3
10°-20°	194.1	14.3
20°-30°	263.8	19.4
30°-40°	273.5	20.1
40°-50°	230.7	17.0
50°-60°	163.7	12.0
60°-70°	100.1	7.4
70°-80°	49.8	3.7
80°-90°	11.3	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°	530.0	39.0
0°-40°	803.5	59.1
0°-60°	1197.9	88.1
0°-90°	1359.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1359.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	777	777	777	777	777	
5°	772	772	760	765	765	73
15°	730	716	683	671	664	205
25°	635	607	564	544	532	292
35°	515	475	429	399	384	322
45°	380	340	293	253	234	292
55°	233	208	171	156	151	209
65°	106	103	97	97	96	109
75°	41	44	48	50	51	44
85°	6	6	8	12	14	8
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	777.1	777.1	777.1	777.1	777.1
2.5°	775.2	776.1	768.7	777.1	778.0
5°	771.5	771.5	760.3	764.9	764.9
7.5°	765.9	764.0	745.3	745.3	743.4
10°	757.5	751.9	727.6	722.9	720.1
12.5°	745.3	736.0	706.1	697.7	692.1
15°	730.4	716.4	682.7	670.6	664.1
17.5°	708.9	694.9	657.5	640.7	633.2
20°	686.5	665.9	627.6	610.8	599.6
22.5°	662.2	636.0	598.7	578.1	566.0
25°	635.1	607.1	564.1	543.6	532.4
27.5°	606.2	575.3	531.4	508.1	496.9
30°	578.1	542.6	497.8	471.7	458.6
32.5°	548.2	508.1	462.3	435.2	422.2
35°	514.6	475.4	428.7	398.8	383.9
37.5°	482.9	442.7	394.1	362.4	345.6
40°	449.2	409.1	359.6	326.9	309.1
42.5°	413.8	375.5	326.9	288.6	271.8
45°	380.1	340.0	293.3	253.1	234.4
47.5°	343.7	306.3	260.6	219.5	206.4
50°	306.3	271.8	228.8	191.5	184.9
52.5°	269.9	241.0	197.1	172.8	170.0
55°	232.6	208.3	170.9	156.0	151.3
57.5°	198.0	180.3	146.6	139.2	137.3
60°	165.3	150.4	129.8	125.2	122.4
62.5°	133.6	125.2	113.0	111.1	109.3
65°	106.5	102.7	97.1	97.1	96.2
67.5°	84.1	84.1	83.1	85.0	84.1
70°	67.2	68.2	70.0	71.9	72.9
72.5°	53.2	56.0	57.9	60.7	61.6
75°	41.1	43.9	47.6	49.5	51.4
77.5°	29.9	32.7	36.4	39.2	41.1
80°	20.5	22.4	26.2	29.9	31.8
82.5°	13.1	14.0	16.8	20.5	22.4
85°	5.6	6.5	8.4	12.1	14.0
87.5°	0.0	0.0	0.9	3.7	6.5
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	16.49	17.94	16.86	18.26	18.57	14.59	16.04	14.95	16.35	16.67
	3H	17.39	18.68	17.77	19.01	19.38	16.16	17.46	16.54	17.79	18.15
	4H	17.67	18.88	18.07	19.23	19.61	16.76	17.97	17.16	18.32	18.70
	6H	17.82	18.94	18.23	19.31	19.70	17.21	18.33	17.62	18.69	19.09
	8H	17.84	18.91	18.27	19.30	19.70	17.36	18.42	17.79	18.81	19.21
	12H	17.84	18.85	18.27	19.24	19.67	17.46	18.47	17.89	18.85	19.28
4H	2H	16.74	17.95	17.14	18.30	18.68	15.13	16.34	15.53	16.69	17.07
	3H	17.85	18.85	18.26	19.25	19.65	16.90	17.90	17.31	18.31	18.71
	4H	18.24	19.14	18.67	19.55	19.99	17.62	18.51	18.05	18.93	19.37
	6H	18.48	19.26	18.94	19.70	20.16	18.19	18.97	18.65	19.41	19.87
	8H	18.52	19.25	18.99	19.70	20.16	18.38	19.11	18.84	19.55	20.02
	12H	18.53	19.18	19.02	19.66	20.13	18.52	19.16	19.00	19.64	20.12
8H	4H	18.40	19.12	18.86	19.57	20.04	17.82	18.55	18.29	19.00	19.47
	6H	18.71	19.31	19.21	19.80	20.28	18.50	19.10	19.00	19.59	20.07
	8H	18.78	19.32	19.30	19.83	20.32	18.76	19.29	19.27	19.81	20.30
	12H	18.82	19.29	19.33	19.79	20.35	18.96	19.44	19.48	19.93	20.50
12H	4H	18.40	19.05	18.88	19.53	20.00	17.82	18.47	18.31	18.95	19.42
	6H	18.72	19.26	19.24	19.77	20.26	18.51	19.05	19.03	19.56	20.05
	8H	18.84	19.31	19.35	19.81	20.37	18.81	19.29	19.32	19.78	20.35