

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: P1059758

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

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059758
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-67)
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-S
Description: DEFINE 3 SILVER 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

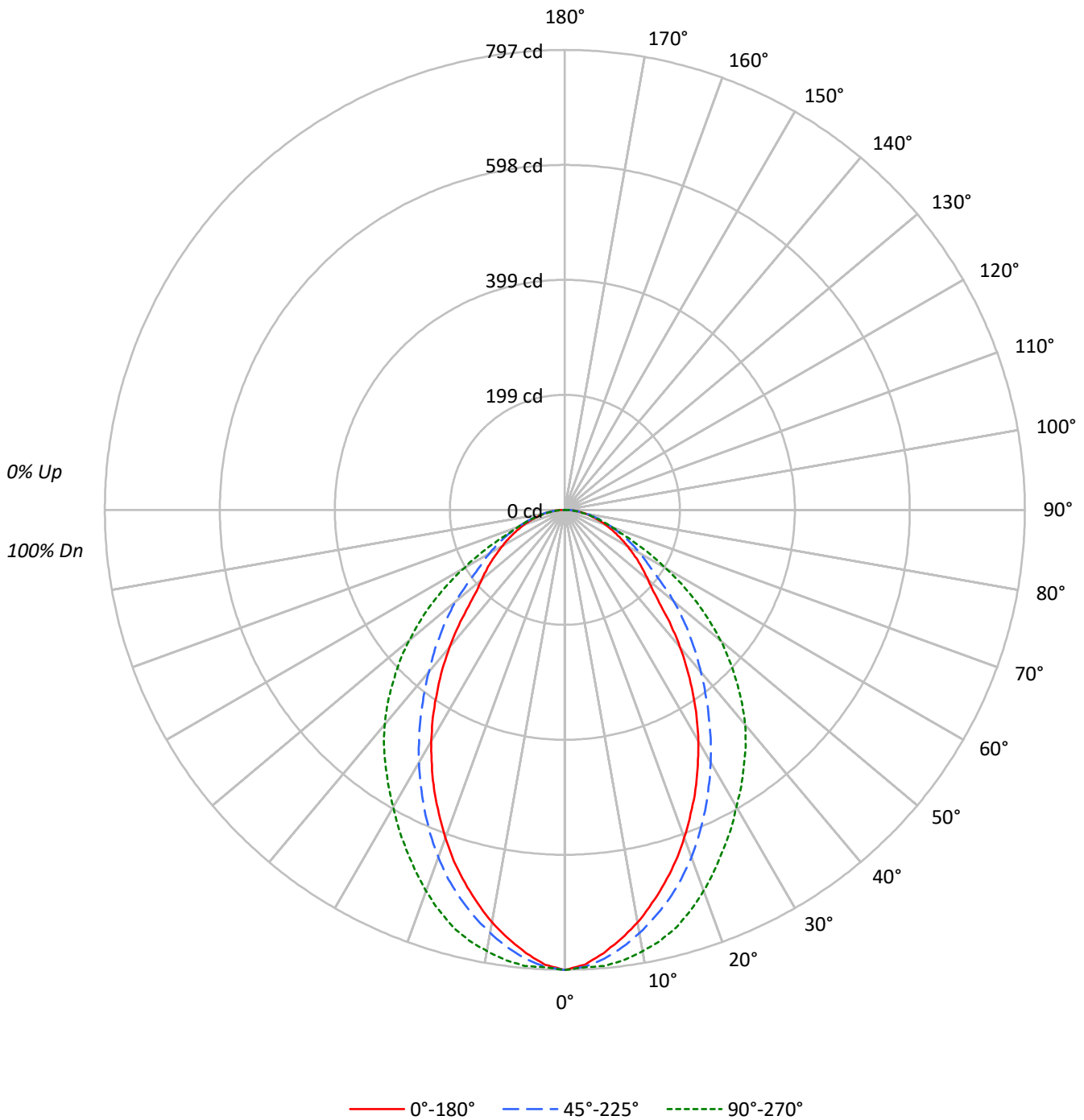
Lumens per Lamp: N/A
Luminaire Lumens: 1440.0 lumens
Efficiency: N/A
Efficacy: 61.3 lumens/watt
Spacing Criteria (0/90/45): 0.93 / 1.12 / 1.1
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P1059758

CATALOG NUMBER: S123RDR-H775D840-X4F0-XX-UDD-WVL-S

Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	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	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	100	100	100	100	100														
1	110	106	102	99	108	104	100	97	100	97	94	96	93	91	92	90	89	87	87	87	87	87	87	87														
2	102	94	88	83	99	92	87	82	89	84	80	86	82	78	83	80	77	75	75	75	75	75	75	75														
3	94	84	77	71	91	83	76	71	80	74	69	77	72	68	75	71	67	65	65	65	65	65	65	65														
4	87	76	68	62	84	74	67	61	72	66	61	70	64	60	68	63	59	57	57	57	57	57	57	57														
5	80	69	60	54	78	68	60	54	66	59	54	64	58	53	62	57	53	51	51	51	51	51	51	51														
6	75	63	54	48	73	62	54	48	60	53	48	58	52	47	57	51	47	45	45	45	45	45	45	45														
7	70	57	49	44	68	56	49	43	55	48	43	54	47	43	52	47	43	41	41	41	41	41	41	41														
8	65	53	45	39	64	52	45	39	51	44	39	50	43	39	48	43	39	37	37	37	37	37	37	37														
9	61	49	41	36	60	48	41	36	47	40	36	46	40	36	45	39	35	34	34	34	34	34	34	34														
10	58	45	38	33	56	45	38	33	44	37	33	43	37	33	42	37	33	31	31	31	31	31	31	31														

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9361	9361	9361
5°	9088	9209	9352
10°	8658	8881	9260
15°	8134	8487	9100
20°	7556	8011	8782
25°	6938	7446	8415
30°	6272	6855	8059
35°	5533	6230	7757
40°	4756	5615	7450
45°	3911	5060	6983
50°	3431	4507	6436
55°	3175	3845	5702
60°	2919	3534	4718
65°	2726	3245	3712
70°	2568	2953	2953
75°	2418	2713	2545
80°	2272	2461	2150
85°	2142	2398	1630

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 6983 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	73.7	5.1
10°-20°	197.6	13.7
20°-30°	267.9	18.6
30°-40°	280.1	19.5
40°-50°	243.0	16.9
50°-60°	180.7	12.6
60°-70°	116.0	8.1
70°-80°	62.2	4.3
80°-90°	18.8	1.3
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°	539.2	37.4
0°-40°	819.4	56.9
0°-60°	1243.0	86.3
0°-90°	1440.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1440.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	797	797	797	797	797	
5°	771	784	781	787	793	72
15°	669	685	698	726	749	188
25°	536	552	575	613	650	246
35°	386	405	435	490	541	241
45°	236	253	305	370	420	185
55°	155	159	188	241	278	139
65°	98	106	117	124	134	98
75°	53	62	60	57	56	56
85°	16	20	18	15	12	18
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	797.2	797.2	797.2	797.2	797.2
2.5°	788.8	800.0	792.5	792.5	793.4
5°	771.0	784.1	781.3	786.9	793.4
7.5°	749.5	763.5	764.5	777.5	786.9
10°	726.1	740.2	744.8	763.5	776.6
12.5°	698.1	714.0	722.4	745.8	764.5
15°	669.1	685.0	698.1	726.1	748.6
17.5°	638.3	654.2	671.0	702.8	727.1
20°	604.7	621.5	641.1	672.9	702.8
22.5°	570.1	587.8	608.4	643.0	676.6
25°	535.5	552.3	574.7	613.1	649.5
27.5°	499.0	516.8	540.2	582.2	623.3
30°	462.6	480.4	505.6	550.4	594.4
32.5°	425.2	443.0	470.1	520.5	568.2
35°	386.0	404.7	434.6	489.7	541.1
37.5°	348.6	366.3	400.0	460.7	514.9
40°	310.3	329.0	366.3	431.8	486.0
42.5°	272.9	291.6	335.5	400.9	454.2
45°	235.5	253.3	304.7	370.1	420.5
47.5°	206.5	219.6	275.7	337.4	387.8
50°	187.8	192.5	246.7	305.6	352.3
52.5°	171.0	174.8	214.9	273.8	315.9
55°	155.1	158.9	187.8	241.1	278.5
57.5°	139.2	143.9	167.3	207.5	241.1
60°	124.3	129.9	150.5	177.6	200.9
62.5°	111.2	117.8	133.6	150.5	166.3
65°	98.1	106.5	116.8	124.3	133.6
67.5°	86.0	95.3	100.9	102.8	103.7
70°	74.8	84.1	86.0	86.0	86.0
72.5°	63.5	73.8	72.0	71.0	70.1
75°	53.3	61.7	59.8	57.0	56.1
77.5°	43.0	50.5	47.7	45.8	43.0
80°	33.6	39.3	36.4	34.6	31.8
82.5°	25.2	29.0	26.2	24.3	21.5
85°	15.9	19.6	17.8	15.0	12.1
87.5°	8.4	11.2	9.3	8.4	4.7
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	14.56	16.04	14.92	16.35	16.67	17.31	18.80	17.68	19.11	19.42
	3H	16.27	17.59	16.64	17.92	18.29	18.33	19.66	18.71	19.99	20.35
	4H	16.93	18.17	17.33	18.52	18.90	18.70	19.94	19.10	20.29	20.67
	6H	17.43	18.58	17.84	18.94	19.34	18.95	20.10	19.37	20.47	20.86
	8H	17.61	18.70	18.03	19.09	19.49	19.02	20.12	19.45	20.51	20.91
	12H	17.73	18.78	18.16	19.16	19.59	19.06	20.11	19.49	20.49	20.92
4H	2H	15.33	16.58	15.73	16.93	17.30	17.58	18.83	17.98	19.18	19.56
	3H	17.26	18.29	17.67	18.69	19.09	18.84	19.87	19.25	20.27	20.67
	4H	18.07	19.00	18.50	19.41	19.85	19.33	20.25	19.76	20.67	21.11
	6H	18.71	19.52	19.17	19.96	20.42	19.71	20.51	20.16	20.96	21.42
	8H	18.94	19.69	19.40	20.14	20.60	19.82	20.57	20.28	21.02	21.49
	12H	19.11	19.78	19.59	20.26	20.73	19.89	20.56	20.37	21.04	21.51
8H	4H	18.39	19.14	18.85	19.59	20.05	19.52	20.27	19.98	20.72	21.18
	6H	19.18	19.80	19.68	20.30	20.77	20.01	20.63	20.50	21.12	21.60
	8H	19.51	20.07	20.02	20.58	21.07	20.18	20.74	20.70	21.25	21.74
	12H	19.79	20.28	20.30	20.77	21.34	20.31	20.81	20.82	21.30	21.87
12H	4H	18.41	19.09	18.89	19.56	20.04	19.53	20.21	20.01	20.68	21.16
	6H	19.23	19.80	19.75	20.31	20.80	20.04	20.60	20.56	21.11	21.60
	8H	19.63	20.12	20.14	20.62	21.18	20.27	20.77	20.78	21.26	21.83