

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1056037

Luminaire Tested: S124R3DR-S575D835-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056037
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-8)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124R3DR-S575D835-X4F0-XX-UDD-F-B
Description: DEFINE 4, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

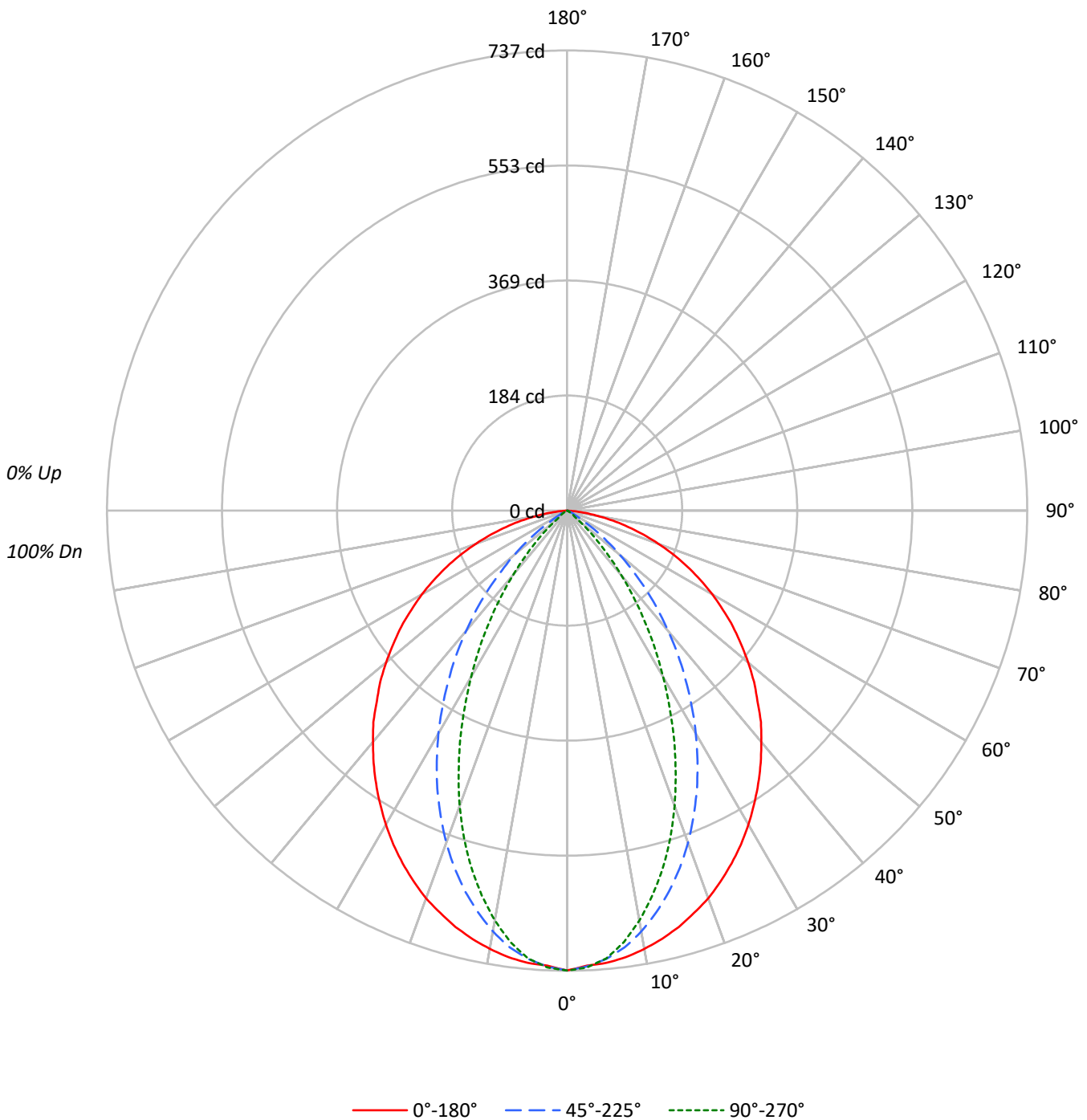
Lumens per Lamp: N/A
Luminaire Lumens: 1029.5 lumens
Efficiency: N/A
Efficacy: 53.9 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 0.81 / 0.97
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 19.1
Input Voltage (V): 120
Input Current (A_{in}): 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	112	108	105	102	109	106	103	100	102	99	97	98	96	94	95	93	92	90
2	104	98	93	88	102	96	91	87	93	89	85	90	86	83	87	84	82	80
3	97	89	82	77	95	87	81	77	84	79	75	82	78	74	79	76	73	71
4	90	81	74	68	88	80	73	68	77	72	67	75	70	66	73	69	65	64
5	84	74	66	61	83	73	66	61	71	65	60	69	64	60	67	63	59	57
6	79	68	60	55	77	67	60	55	65	59	54	64	58	54	62	57	54	52
7	74	63	55	50	73	62	55	50	60	54	50	59	53	49	58	53	49	47
8	70	58	51	46	68	57	50	46	56	50	45	55	49	45	54	49	45	43
9	66	54	47	42	64	53	47	42	52	46	42	51	46	42	50	45	41	40
10	62	50	43	39	61	50	43	39	49	43	39	48	42	39	47	42	38	37

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6513	6513	6513
5°	6454	6396	6390
10°	6399	6146	5984
15°	6319	5778	5421
20°	6217	5327	4735
25°	6080	4798	3952
30°	5927	4209	3140
35°	5760	3569	2338
40°	5584	2908	1558
45°	5390	2221	858
50°	5205	1520	238
55°	4997	823	156
60°	4750	255	90
65°	4441	165	46
70°	4015	75	18
75°	3454	24	0
80°	2612	0	0
85°	1096	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5390 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	67.9	6.6
10°-20°	178.4	17.3
20°-30°	230.5	22.4
30°-40°	220.3	21.4
40°-50°	164.8	16.0
50°-60°	98.1	9.5
60°-70°	49.8	4.8
70°-80°	17.3	1.7
80°-90°	2.4	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°	476.9	46.3
0°-40°	697.2	67.7
0°-60°	960.0	93.3
0°-90°	1029.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1029.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	737	737	737	737	737	
5°	727	733	721	717	720	69
15°	690	676	631	602	592	195
25°	623	580	492	427	405	287
35°	534	460	331	246	217	334
45°	431	331	178	95	69	333
55°	324	202	53	12	10	289
65°	212	82	8	3	2	210
75°	101	11	1	1	0	107
85°	11	0	0	0	0	18
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	736.6	736.6	736.6	736.6	736.6
2.5°	729.4	738.0	730.8	731.5	732.3
5°	727.2	733.0	720.7	717.1	720.0
7.5°	721.4	723.6	705.5	696.1	696.9
10°	712.8	710.6	684.6	668.7	666.5
12.5°	702.6	695.4	659.3	636.2	631.2
15°	690.4	675.9	631.2	601.5	592.2
17.5°	675.9	655.0	600.1	561.1	549.6
20°	660.8	631.9	566.2	517.8	503.3
22.5°	642.7	605.9	529.3	472.3	454.2
25°	623.2	579.9	491.8	426.8	405.1
27.5°	603.0	551.7	452.1	380.6	355.3
30°	580.6	522.1	412.3	333.6	307.6
32.5°	557.5	491.8	371.2	290.3	261.4
35°	533.7	460.0	330.7	246.3	216.6
37.5°	509.1	428.2	291.7	204.4	174.0
40°	483.8	395.7	252.0	164.6	135.0
42.5°	459.3	363.2	214.5	127.1	99.7
45°	431.1	330.7	177.6	94.6	68.6
47.5°	405.8	299.0	142.3	64.3	40.4
50°	378.4	265.0	110.5	37.6	17.3
52.5°	351.0	233.3	80.9	16.6	13.0
55°	324.2	201.5	53.4	12.3	10.1
57.5°	296.1	169.7	28.9	9.4	7.2
60°	268.6	138.7	14.4	7.2	5.1
62.5°	240.5	109.0	11.6	4.3	2.9
65°	212.3	81.6	7.9	2.9	2.2
67.5°	184.1	55.6	5.1	1.4	0.7
70°	155.3	33.9	2.9	0.7	0.7
72.5°	127.8	17.3	1.4	0.7	0.7
75°	101.1	10.8	0.7	0.7	0.0
77.5°	75.1	5.8	0.7	0.7	0.0
80°	51.3	2.2	0.0	0.0	0.0
82.5°	29.6	0.7	0.0	0.0	0.0
85°	10.8	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	16.97	18.29	17.33	18.61	18.92	0.00	0.00	0.00	0.00	0.00
	3H	18.51	19.68	18.89	20.01	20.38	0.00	0.00	0.00	0.00	0.00
	4H	19.10	20.20	19.50	20.55	20.93	0.00	0.00	0.00	0.00	0.00
	6H	19.52	20.52	19.93	20.89	21.29	0.00	0.00	0.00	0.00	0.00
	8H	19.62	20.57	20.05	20.96	21.37	0.00	0.00	0.00	0.00	0.00
	12H	19.64	20.55	20.07	20.93	21.36	0.00	0.00	0.00	0.00	0.00
4H	2H	16.74	17.84	17.15	18.19	18.57	0.00	0.00	0.00	0.00	0.00
	3H	18.31	19.20	18.72	19.60	20.01	0.00	0.00	0.00	0.00	0.00
	4H	18.89	19.69	19.32	20.11	20.55	0.00	0.00	0.00	0.00	0.00
	6H	19.35	20.04	19.81	20.48	20.95	0.00	0.00	0.00	0.00	0.00
	8H	19.47	20.11	19.94	20.56	21.03	0.00	0.00	0.00	0.00	0.00
	12H	19.51	20.07	20.00	20.56	21.03	0.00	0.00	0.00	0.00	0.00
8H	4H	18.75	19.39	19.22	19.84	20.31	0.00	0.00	0.00	0.00	0.00
	6H	19.19	19.72	19.70	20.21	20.69	0.00	0.00	0.00	0.00	0.00
	8H	19.31	19.78	19.83	20.29	20.79	0.00	0.00	0.00	0.00	0.00
	12H	19.36	19.77	19.87	20.27	20.84	0.00	0.00	0.00	0.00	0.00
12H	4H	18.71	19.27	19.19	19.76	20.23	0.00	0.00	0.00	0.00	0.19
	6H	19.13	19.60	19.65	20.12	20.61	0.00	0.00	0.00	0.00	0.03
	8H	19.27	19.68	19.78	20.17	20.75	0.00	0.00	0.00	0.00	0.00