

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: P1056623

Luminaire Tested: S125R3DR-H850D940-X4F0-XX-UDD-FLL-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2019
Report Number: P1056623
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-12)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S125R3DR-H850D940-X4F0-XX-UDD-FLL-S
Description: DEFINE 5, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

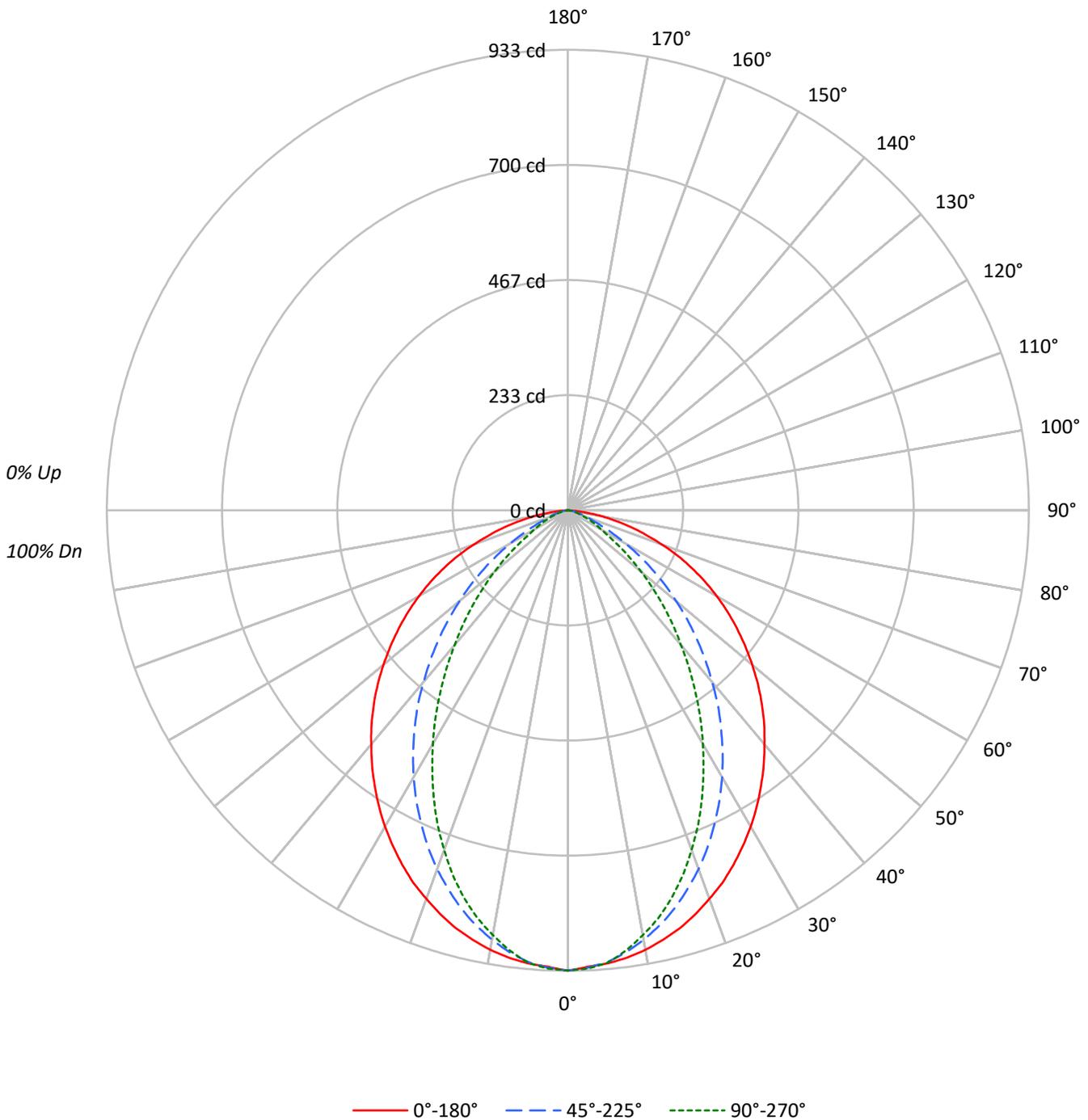
Lumens per Lamp: N/A
Luminaire Lumens: 1685.6 lumens
Efficiency: N/A
Efficacy: 70.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.95 / 1.11
Luminous Opening: Rectangular (W 0.39' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 23.8
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	111	107	103	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88
2	102	96	90	85	100	94	89	84	90	86	82	87	84	80	84	81	79	77
3	95	86	79	73	92	84	78	73	81	76	71	79	74	70	76	72	69	67
4	88	77	70	64	86	76	69	63	74	67	62	71	66	62	69	65	61	59
5	81	70	62	56	79	69	61	56	67	60	55	65	59	55	63	58	54	52
6	76	64	56	50	74	63	55	50	61	54	49	60	54	49	58	53	49	47
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	54	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	36	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°	6593	6593	6593
5°	6539	6520	6532
10°	6490	6341	6273
15°	6415	6111	5947
20°	6301	5821	5509
25°	6183	5476	5011
30°	6041	5096	4462
35°	5880	4665	3883
40°	5713	4192	3283
45°	5551	3695	2719
50°	5356	3143	2137
55°	5151	2554	1554
60°	4920	1904	1111
65°	4622	1256	866
70°	4177	874	608
75°	3633	565	473
80°	2846	423	387
85°	1468	349	284

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5551 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.9	5.2
10°-20°	236.2	14.0
20°-30°	326.5	19.4
30°-40°	346.0	20.5
40°-50°	302.0	17.9
50°-60°	214.8	12.7
60°-70°	119.4	7.1
70°-80°	45.9	2.7
80°-90°	7.9	0.5
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°	649.6	38.5
0°-40°	995.5	59.1
0°-60°	1512.3	89.7
0°-90°	1685.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1685.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	933	933	933	933	933	
5°	921	928	919	916	920	87
15°	876	869	835	817	813	247
25°	793	766	702	659	642	365
35°	681	635	541	475	450	426
45°	555	489	370	295	272	428
55°	418	335	207	143	126	374
65°	276	181	75	55	52	273
75°	133	52	21	17	17	141
85°	18	5	4	4	4	27
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	932.6	932.6	932.6	932.6	932.6
2.5°	925.7	935.2	927.4	928.3	929.1
5°	921.4	928.3	918.8	916.2	920.5
7.5°	914.5	919.6	903.2	897.2	899.8
10°	904.1	905.8	883.4	874.7	873.9
12.5°	891.1	888.5	860.9	847.1	846.2
15°	876.5	868.7	835.0	816.9	812.6
17.5°	858.3	846.2	804.8	781.5	774.6
20°	837.6	821.2	773.7	743.5	732.3
22.5°	816.9	794.4	739.2	701.2	689.1
25°	792.7	765.9	702.0	658.9	642.4
27.5°	766.8	734.8	664.0	614.0	594.1
30°	740.0	702.9	624.3	568.2	546.6
32.5°	711.5	669.2	582.9	521.6	499.1
35°	681.3	634.7	540.6	474.9	449.9
37.5°	651.1	599.3	499.1	429.2	403.3
40°	619.1	563.0	454.2	382.5	355.8
42.5°	588.0	525.9	411.9	338.5	314.3
45°	555.2	488.7	369.6	295.3	272.0
47.5°	521.6	449.9	327.3	254.7	231.4
50°	487.0	411.9	285.8	215.0	194.3
52.5°	452.5	373.9	247.0	177.0	158.9
55°	417.9	335.0	207.2	143.3	126.1
57.5°	383.4	297.0	170.1	112.3	96.7
60°	348.0	258.2	134.7	82.9	78.6
62.5°	312.6	220.2	104.5	68.2	64.8
65°	276.3	181.3	75.1	55.3	51.8
67.5°	240.1	145.9	54.4	42.3	39.7
70°	202.1	111.4	42.3	31.9	29.4
72.5°	165.8	80.3	30.2	23.3	22.5
75°	133.0	51.8	20.7	17.3	17.3
77.5°	100.2	31.1	14.7	13.0	13.0
80°	69.9	18.1	10.4	9.5	9.5
82.5°	42.3	9.5	6.9	6.0	6.0
85°	18.1	5.2	4.3	3.5	3.5
87.5°	3.5	1.7	1.7	1.7	1.7
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	17.71	19.16	18.08	19.47	19.79	10.35	11.80	10.72	12.11	12.43
	3H	19.27	20.56	19.65	20.89	21.25	10.92	12.20	11.30	12.53	12.90
	4H	19.79	21.00	20.20	21.35	21.73	11.04	12.24	11.44	12.59	12.97
	6H	20.13	21.24	20.55	21.61	22.00	11.11	12.21	11.52	12.58	12.98
	8H	20.21	21.27	20.64	21.66	22.06	11.11	12.16	11.54	12.55	12.96
	12H	20.24	21.24	20.67	21.63	22.06	11.10	12.11	11.53	12.49	12.92
4H	2H	17.61	18.81	18.01	19.16	19.54	10.92	12.12	11.32	12.47	12.85
	3H	19.28	20.26	19.69	20.67	21.07	11.59	12.58	12.00	12.98	13.38
	4H	19.83	20.71	20.26	21.13	21.57	11.75	12.63	12.18	13.05	13.49
	6H	20.22	20.98	20.68	21.43	21.89	11.86	12.62	12.32	13.07	13.53
	8H	20.32	21.04	20.79	21.48	21.95	11.87	12.58	12.34	13.03	13.50
	12H	20.37	21.00	20.85	21.48	21.96	11.87	12.51	12.36	12.99	13.46
8H	4H	19.73	20.44	20.20	20.89	21.36	12.02	12.73	12.48	13.18	13.64
	6H	20.12	20.70	20.62	21.19	21.67	12.15	12.74	12.65	13.23	13.71
	8H	20.22	20.75	20.74	21.26	21.75	12.18	12.70	12.70	13.22	13.71
	12H	20.29	20.75	20.80	21.24	21.81	12.20	12.66	12.71	13.16	13.73
12H	4H	19.69	20.33	20.18	20.81	21.28	12.03	12.67	12.52	13.15	13.62
	6H	20.06	20.59	20.58	21.10	21.59	12.16	12.69	12.68	13.20	13.69
	8H	20.19	20.65	20.70	21.15	21.72	12.22	12.68	12.73	13.18	13.75