

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: P929943

Luminaire Tested: DFN2DS-4P4F0-030DS935-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P929943
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P333812)
Test Lab: INNOVATION CENTER
Issue Date: 11/20/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DS-4P4F0-030DS935-FLL
Description: 4 foot, 90deg - 4way Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

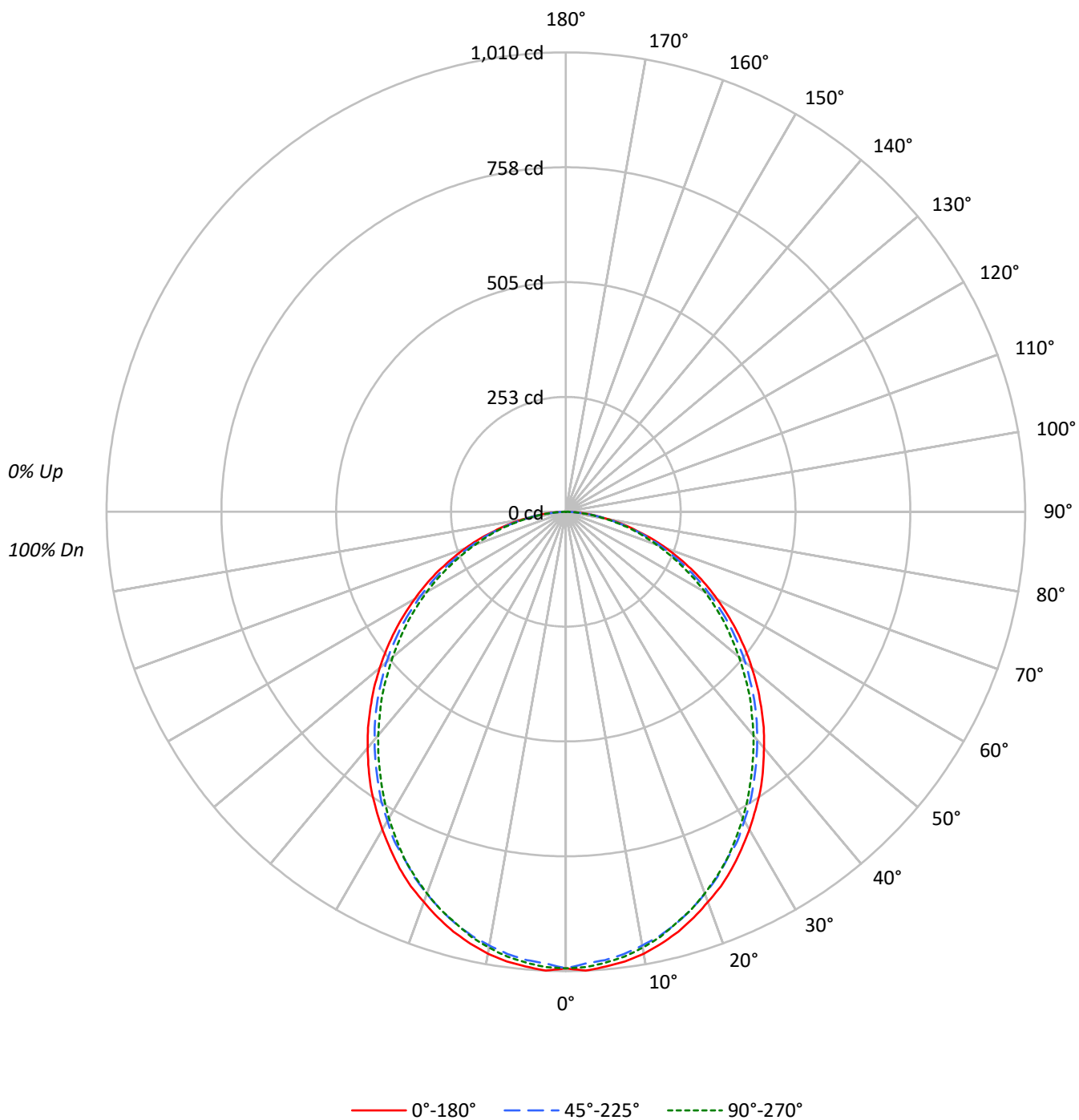
Lumens per Lamp: N/A
Luminaire Lumens: 2554.2 lumens
Efficiency: N/A
Efficacy: 90.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 4.07' x L: 4.07' x H: 0')
CIE Type: Direct

Input Watts (W): 28.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.983
Total Harmonic Distortion (THDi): 0.073
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

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CATALOG NUMBER: DFN2DS-4P4F0-030DS935-FLL

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
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102
1	109	104	100	96	106	102	98	95	98	95	92		94	91	89		90
2	99	91	85	79	97	89	83	78	86	81	76		83	78	74		80
3	91	80	72	66	88	79	71	65	76	69	64		73	68	63		71
4	83	71	63	56	81	70	62	56	68	61	55		65	59	54		63
5	77	64	55	49	75	63	55	48	61	53	48		59	52	47		57
6	71	58	49	43	69	57	48	42	55	48	42		53	47	42		52
7	66	52	44	38	64	52	43	38	50	43	37		49	42	37		47
8	61	48	40	34	60	47	39	34	46	39	33		45	38	33		44
9	57	44	36	30	56	43	36	30	42	35	30		41	35	30		40
10	54	41	33	28	53	40	33	28	39	32	27		38	32	27		37

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	651	651	651
5°	654	644	648
10°	650	638	641
15°	642	630	629
20°	630	617	616
25°	619	602	602
30°	605	588	583
35°	591	571	563
40°	574	554	544
45°	557	538	524
50°	539	520	502
55°	520	500	482
60°	498	476	459
65°	476	452	431
70°	447	423	403
75°	406	390	380
80°	361	350	332
85°	295	281	252

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 557 cd/sqm

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CATALOG NUMBER: DFN2DS-4P4F0-030DS935-FLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	94.5	3.7
10°-20°	265.8	10.4
20°-30°	390.7	15.3
30°-40°	453.8	17.8
40°-50°	453.2	17.7
50°-60°	395.2	15.5
60°-70°	292.1	11.4
70°-80°	165.3	6.5
80°-90°	43.6	1.7
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°	751.0	29.4
0°-40°	1204.8	47.2
0°-60°	2053.2	80.4
0°-90°	2554.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2554.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1004	1004	1004	1004	1004	
5°	1004	1000	989	997	995	95
15°	956	950	937	941	936	269
25°	865	857	841	843	841	398
35°	746	737	721	715	710	466
45°	607	600	586	575	572	469
55°	460	454	442	431	426	411
65°	310	304	294	286	281	306
75°	162	160	155	150	152	173
85°	40	39	38	35	34	46
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1003.9	1003.9	1003.9	1003.9	1003.9
2.5°	1009.7	1004.9	994.2	1003.9	1002.1
5°	1003.9	1000.1	989.4	997.2	995.3
7.5°	997.2	991.4	980.7	988.6	986.6
10°	986.6	979.8	968.3	975.9	973.1
12.5°	972.1	966.3	954.8	959.5	957.6
15°	955.6	950.0	937.3	941.2	936.4
17.5°	935.3	929.7	917.0	921.8	917.0
20°	913.1	907.4	893.9	896.7	892.9
22.5°	891.0	882.4	869.7	869.7	867.7
25°	864.9	857.2	840.8	842.7	840.8
27.5°	835.9	829.1	816.7	813.8	809.0
30°	807.0	799.3	784.8	781.9	778.0
32.5°	776.2	770.4	754.9	749.1	745.2
35°	746.2	736.6	721.1	715.3	710.4
37.5°	712.4	703.7	688.3	681.5	676.6
40°	677.7	669.9	654.5	645.9	642.0
42.5°	643.9	636.1	620.7	611.0	605.3
45°	607.2	600.5	585.9	575.3	571.5
47.5°	571.5	564.8	549.3	538.6	532.9
50°	533.8	529.0	515.5	502.0	497.2
52.5°	497.2	490.4	477.9	467.2	460.4
55°	459.6	453.7	442.1	430.6	425.8
57.5°	421.8	417.0	404.5	392.8	389.0
60°	384.2	380.4	366.9	356.2	353.4
62.5°	347.5	340.7	331.1	321.5	317.6
65°	309.9	304.1	294.5	285.8	281.0
67.5°	271.3	266.4	257.7	251.0	247.2
70°	235.6	231.7	223.0	216.2	212.4
72.5°	198.9	195.0	190.1	183.4	180.6
75°	162.1	160.3	155.4	149.6	151.6
77.5°	129.3	125.5	123.5	120.7	117.8
80°	96.6	95.5	93.6	90.7	88.8
82.5°	65.6	65.6	64.8	60.8	60.8
85°	39.6	38.6	37.7	34.7	33.8
87.5°	17.4	15.5	13.5	10.7	9.6
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	9.79	11.40	10.16	11.72	12.03	9.35	10.96	9.71	11.27	11.59
	3H	11.54	13.00	11.92	13.32	13.68	11.05	12.51	11.43	12.83	13.19
	4H	12.19	13.56	12.59	13.91	14.28	11.69	13.06	12.09	13.41	13.79
	6H	12.66	13.93	13.07	14.29	14.68	12.16	13.43	12.57	13.79	14.18
	8H	12.80	14.01	13.23	14.40	14.80	12.30	13.51	12.72	13.90	14.30
	12H	12.89	14.05	13.32	14.43	14.86	12.38	13.54	12.81	13.92	14.35
4H	2H	10.35	11.72	10.75	12.07	12.45	10.00	11.37	10.40	11.72	12.09
	3H	12.33	13.47	12.74	13.87	14.27	11.92	13.07	12.33	13.47	13.87
	4H	13.10	14.14	13.54	14.55	14.99	12.68	13.72	13.11	14.13	14.57
	6H	13.70	14.61	14.16	15.05	15.50	13.27	14.17	13.72	14.61	15.07
	8H	13.89	14.74	14.35	15.18	15.64	13.45	14.30	13.91	14.74	15.21
	12H	14.02	14.78	14.50	15.26	15.73	13.57	14.33	14.05	14.81	15.28
8H	4H	13.38	14.22	13.84	14.67	15.13	13.00	13.85	13.46	14.29	14.76
	6H	14.09	14.80	14.59	15.28	15.76	13.71	14.41	14.20	14.90	15.38
	8H	14.35	14.98	14.86	15.49	15.97	13.96	14.59	14.47	15.10	15.58
	12H	14.55	15.11	15.06	15.60	16.16	14.14	14.70	14.64	15.19	15.75
12H	4H	13.40	14.16	13.88	14.64	15.11	13.04	13.80	13.52	14.27	14.74
	6H	14.14	14.77	14.65	15.28	15.76	13.77	14.40	14.28	14.91	15.39
	8H	14.45	15.01	14.96	15.50	16.06	14.07	14.63	14.58	15.12	15.68

END OF REPORT

FIELD PERFORMANCE MAY DIFFER FROM LABORATORY PERFORMANCE

7 of 7