

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: P929817

Luminaire Tested: DFN2DS-4P2F0-030DS935-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P929817
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-4P2F0-030DS935-FLL
Description: 2 foot, 90deg - 4way Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

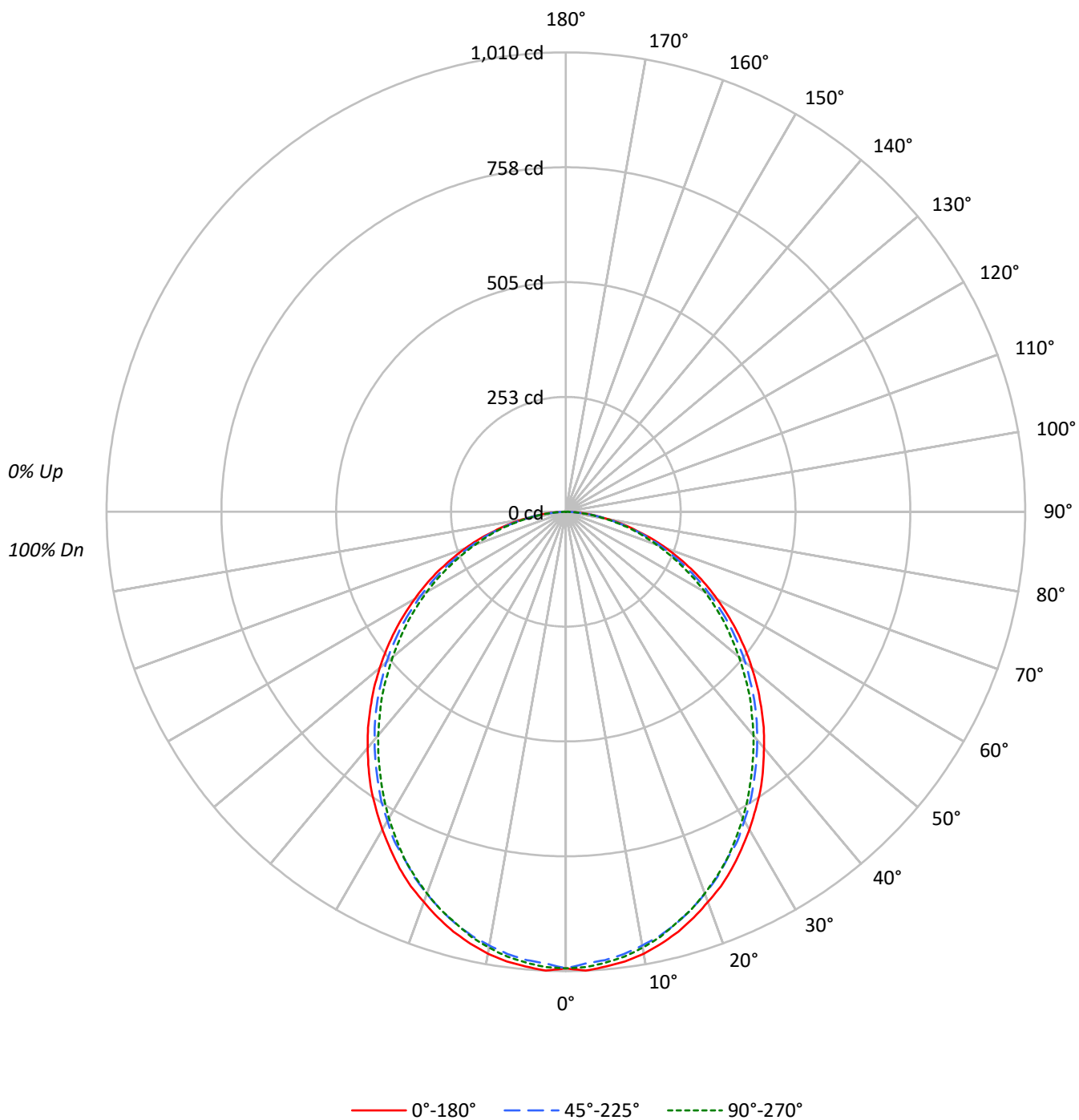
Lumens per Lamp: N/A
Luminaire Lumens: 2554.2 lumens
Efficiency: N/A
Efficacy: 84.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 2.07' x L: 2.07' x H: 0')
CIE Type: Direct

Input Watts (W): 30.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9954
Total Harmonic Distortion (THDi): 0.076
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
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°	2514	2514	2514
5°	2523	2487	2502
10°	2509	2462	2474
15°	2477	2430	2427
20°	2433	2382	2379
25°	2390	2323	2323
30°	2333	2269	2249
35°	2281	2204	2172
40°	2215	2139	2099
45°	2150	2075	2024
50°	2079	2008	1937
55°	2006	1930	1859
60°	1924	1837	1770
65°	1836	1745	1665
70°	1725	1633	1555
75°	1568	1503	1467
80°	1393	1350	1280
85°	1138	1083	971

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
Vertical Angle: 45°
Luminance: 2150 cd/sqm

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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	14.48	16.10	14.85	16.41	16.72	14.04	15.65	14.40	15.96	16.28
	3H	16.24	17.69	16.61	18.02	18.38	15.74	17.20	16.12	17.52	17.89
	4H	16.88	18.25	17.28	18.60	18.97	16.39	17.76	16.78	18.10	18.48
	6H	17.35	18.62	17.76	18.98	19.37	16.85	18.12	17.26	18.48	18.87
	8H	17.49	18.70	17.92	19.09	19.49	16.99	18.20	17.42	18.59	18.99
	12H	17.58	18.74	18.01	19.13	19.55	17.07	18.23	17.50	18.61	19.04
4H	2H	15.05	16.41	15.44	16.76	17.14	14.69	16.06	15.09	16.41	16.79
	3H	17.02	18.17	17.43	18.56	18.96	16.61	17.76	17.02	18.16	18.56
	4H	17.80	18.83	18.23	19.25	19.68	17.37	18.41	17.80	18.82	19.26
	6H	18.39	19.30	18.85	19.74	20.20	17.96	18.87	18.42	19.31	19.76
	8H	18.58	19.43	19.04	19.87	20.34	18.14	18.99	18.61	19.43	19.90
	12H	18.71	19.47	19.20	19.95	20.42	18.26	19.02	18.74	19.50	19.97
8H	4H	18.07	18.92	18.53	19.36	19.82	17.70	18.54	18.16	18.99	19.45
	6H	18.78	19.49	19.28	19.98	20.45	18.40	19.11	18.90	19.59	20.07
	8H	19.04	19.67	19.55	20.18	20.67	18.65	19.28	19.16	19.79	20.28
	12H	19.24	19.80	19.75	20.29	20.85	18.83	19.39	19.34	19.88	20.44
12H	4H	18.10	18.86	18.58	19.33	19.80	17.73	18.49	18.21	18.97	19.44
	6H	18.83	19.46	19.34	19.97	20.45	18.46	19.09	18.97	19.60	20.09
	8H	19.14	19.70	19.65	20.19	20.75	18.77	19.32	19.27	19.81	20.38