

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: P929816

Luminaire Tested: DFN2DS-4P2F0-030DS930-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P929816
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P333882)
Test Lab: INNOVATION CENTER
Issue Date: 11/20/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DS-4P2F0-030DS930-RLL
Description: 2 foot, 90deg - 4way Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

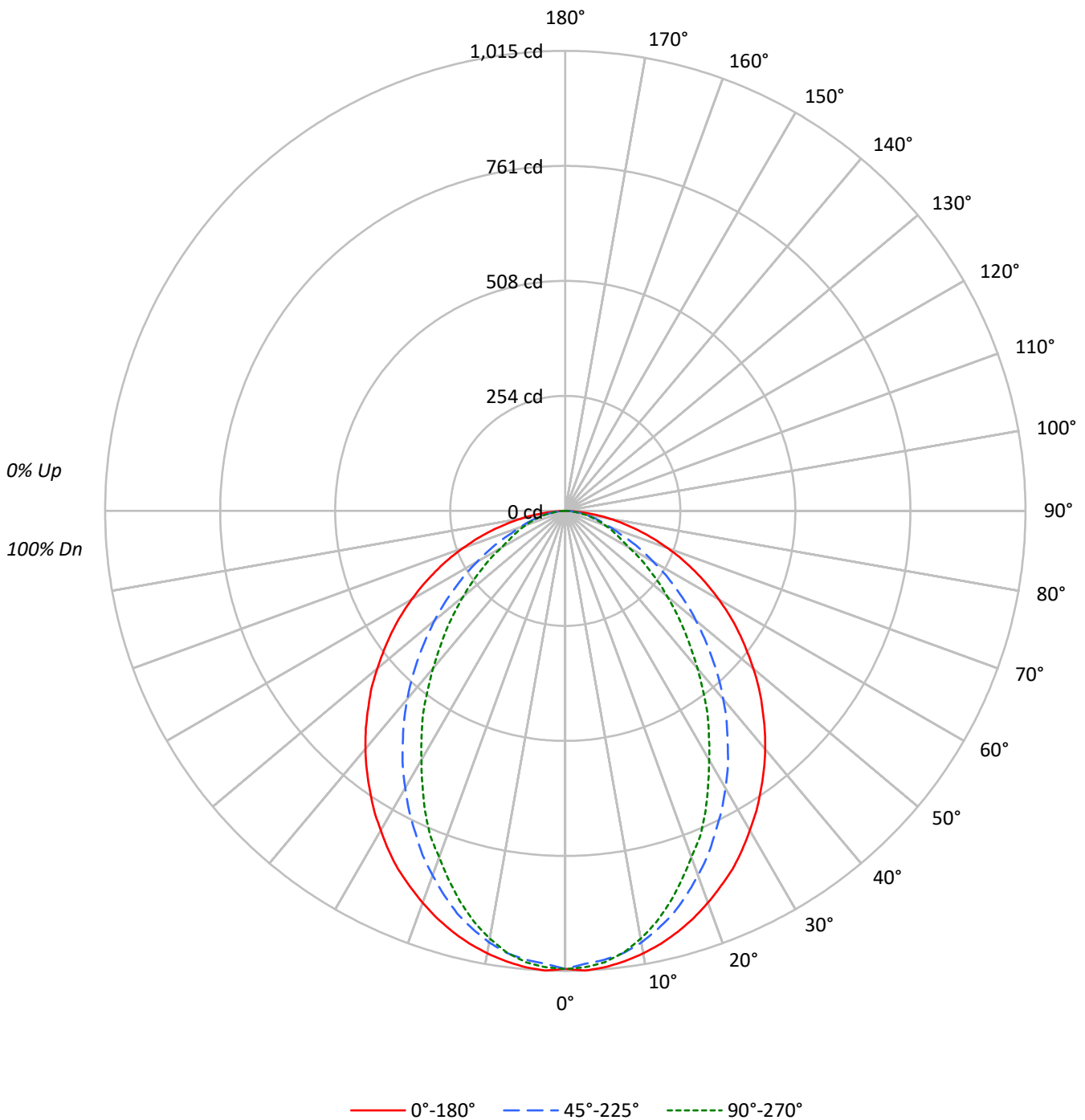
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2078.2 lumens
Efficiency: N/A
Efficacy: 68.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 2.07' x L: 2.07' x H: 0')
CIE Type: Direct

Input Watts (W): 30.3
Input Voltage (V):
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

TEST NUMBER: P929816
CATALOG NUMBER: DFN2DS-4P2F0-030DS930-RLL

Luminous Intensity Polar Plot





TEST NUMBER: P929816

CATALOG NUMBER: DFN2DS-4P2F0-030DS930-RLL

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				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	50	30	10	0
RCR																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	102	102	100
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	88	88	88	86
2	101	94	87	82	98	92	86	81	88	83	79	85	81	78	82	79	76	76	76	76	74
3	93	83	76	70	90	82	75	69	79	73	68	76	71	67	74	69	66	66	66	66	64
4	86	75	66	60	83	73	66	60	71	64	59	69	63	58	66	62	57	57	57	57	55
5	79	67	59	53	77	66	58	52	64	57	52	62	56	51	60	55	51	51	51	51	49
6	74	61	53	47	72	60	52	46	58	51	46	57	50	46	55	50	45	45	45	45	43
7	68	56	47	42	67	55	47	42	53	46	41	52	46	41	51	45	41	41	41	41	39
8	64	51	43	38	62	51	43	37	49	42	37	48	42	37	47	41	37	37	37	37	35
9	60	47	39	34	59	47	39	34	46	39	34	44	38	34	44	38	34	34	34	34	32
10	56	44	36	31	55	43	36	31	42	36	31	41	35	31	41	35	31	31	31	31	29

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2530	2530	2530
5°	2540	2499	2512
10°	2520	2458	2437
15°	2491	2385	2316
20°	2452	2281	2166
25°	2411	2163	2021
30°	2353	2041	1835
35°	2298	1909	1672
40°	2242	1773	1483
45°	2176	1619	1311
50°	2109	1464	1144
55°	2040	1297	982
60°	1960	1122	815
65°	1869	943	742
70°	1761	776	682
75°	1627	708	638
80°	1438	632	581
85°	1129	500	500

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2176 cd/sqm



TEST NUMBER: P929816
 CATALOG NUMBER: DFN2DS-4P2F0-030DS930-RLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	94.7	4.6
10°-20°	260.0	12.5
20°-30°	365.0	17.6
30°-40°	397.9	19.1
40°-50°	365.7	17.6
50°-60°	287.2	13.8
60°-70°	186.9	9.0
70°-80°	96.2	4.6
80°-90°	24.6	1.2
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°	719.7	34.6
0°-40°	1117.6	53.8
0°-60°	1770.5	85.2
0°-90°	2078.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2078.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1010	1010	1010	1010	1010	
5°	1010	1006	994	1002	1000	96
15°	961	951	920	903	894	271
25°	872	843	783	745	732	401
35°	752	705	625	567	547	471
45°	615	553	457	392	370	475
55°	467	396	297	242	225	418
65°	316	241	159	128	125	313
75°	168	104	73	67	66	178
85°	39	20	17	17	17	47
90°	0	0	0	0	0	



TEST NUMBER: P929816

CATALOG NUMBER: DFN2DS-4P2F0-030DS930-RLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1010.5	1010.5	1010.5	1010.5	1010.5
2.5°	1015.1	1010.5	1000.4	1009.6	1007.8
5°	1010.5	1006.0	994.1	1002.3	999.5
7.5°	1002.3	996.8	984.0	987.6	983.1
10°	991.3	984.9	966.7	963.8	958.4
12.5°	977.6	969.4	944.7	939.2	929.1
15°	961.1	951.0	920.0	902.6	893.5
17.5°	941.9	927.3	888.8	868.8	854.1
20°	920.0	901.6	855.9	833.2	813.0
22.5°	896.3	875.1	822.1	791.0	777.3
25°	872.5	843.1	782.8	745.3	731.5
27.5°	844.1	813.0	746.2	703.3	682.2
30°	813.9	779.1	706.0	659.4	634.6
32.5°	784.6	742.5	667.6	612.7	589.8
35°	751.8	705.1	624.6	567.0	546.9
37.5°	719.7	669.4	584.4	521.2	498.5
40°	685.9	631.1	542.3	477.3	453.6
42.5°	651.1	592.7	500.2	432.5	409.7
45°	614.6	553.2	457.3	392.3	370.3
47.5°	579.8	514.9	416.1	351.1	331.1
50°	541.4	476.4	375.9	312.7	293.6
52.5°	503.8	435.3	337.5	277.1	259.7
55°	467.2	395.9	297.1	242.4	225.0
57.5°	429.8	356.6	261.6	210.4	195.7
60°	391.4	318.3	224.0	177.4	162.8
62.5°	354.0	280.8	192.0	148.2	140.9
65°	315.5	241.4	159.1	128.0	125.3
67.5°	279.0	204.8	128.0	112.5	109.7
70°	240.5	169.2	106.0	96.9	93.2
72.5°	203.9	136.2	88.7	81.4	79.5
75°	168.2	104.2	73.2	66.7	65.9
77.5°	132.6	74.0	57.6	54.0	52.1
80°	99.7	53.1	43.8	40.3	40.3
82.5°	69.4	35.7	30.2	28.4	28.4
85°	39.3	20.0	17.4	17.4	17.4
87.5°	14.7	7.3	7.3	6.4	6.4
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P929816

CATALOG NUMBER: DFN2DS-4P2F0-030DS930-RL

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	14.46	15.98	14.82	16.29	16.61	10.42	11.94	10.79	12.26	12.57
	3H	16.22	17.59	16.60	17.92	18.28	11.69	13.05	12.06	13.38	13.74
	4H	16.89	18.17	17.29	18.52	18.90	12.19	13.47	12.59	13.82	14.20
	6H	17.38	18.56	17.79	18.93	19.32	12.57	13.75	12.98	14.12	14.51
	8H	17.55	18.67	17.97	19.06	19.46	12.69	13.82	13.12	14.21	14.61
	12H	17.65	18.73	18.08	19.11	19.54	12.78	13.85	13.21	14.24	14.67
4H	2H	14.56	15.84	14.96	16.19	16.57	11.12	12.40	11.52	12.75	13.12
	3H	16.50	17.56	16.91	17.96	18.36	12.56	13.62	12.97	14.02	14.42
	4H	17.25	18.20	17.68	18.62	19.06	13.16	14.11	13.59	14.53	14.97
	6H	17.84	18.67	18.30	19.11	19.57	13.65	14.48	14.10	14.92	15.38
	8H	18.05	18.83	18.52	19.27	19.74	13.81	14.59	14.27	15.03	15.50
	12H	18.21	18.90	18.69	19.38	19.85	13.93	14.62	14.41	15.10	15.57
8H	4H	17.27	18.05	17.73	18.49	18.96	13.51	14.29	13.98	14.73	15.20
	6H	17.91	18.55	18.40	19.04	19.52	14.10	14.74	14.60	15.23	15.71
	8H	18.16	18.73	18.67	19.24	19.73	14.32	14.90	14.84	15.41	15.90
	12H	18.36	18.87	18.87	19.36	19.93	14.50	15.01	15.01	15.50	16.07
12H	4H	17.25	17.95	17.74	18.43	18.90	13.56	14.25	14.04	14.73	15.20
	6H	17.89	18.47	18.40	18.98	19.46	14.16	14.74	14.68	15.25	15.74
	8H	18.17	18.68	18.68	19.18	19.74	14.44	14.95	14.95	15.44	16.00