

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: P929852

Luminaire Tested: DFN2DS-4P3F0-020DS930-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P929852
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-4P3F0-020DS930-RLL
Description: 3 foot, 90deg - 4way Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

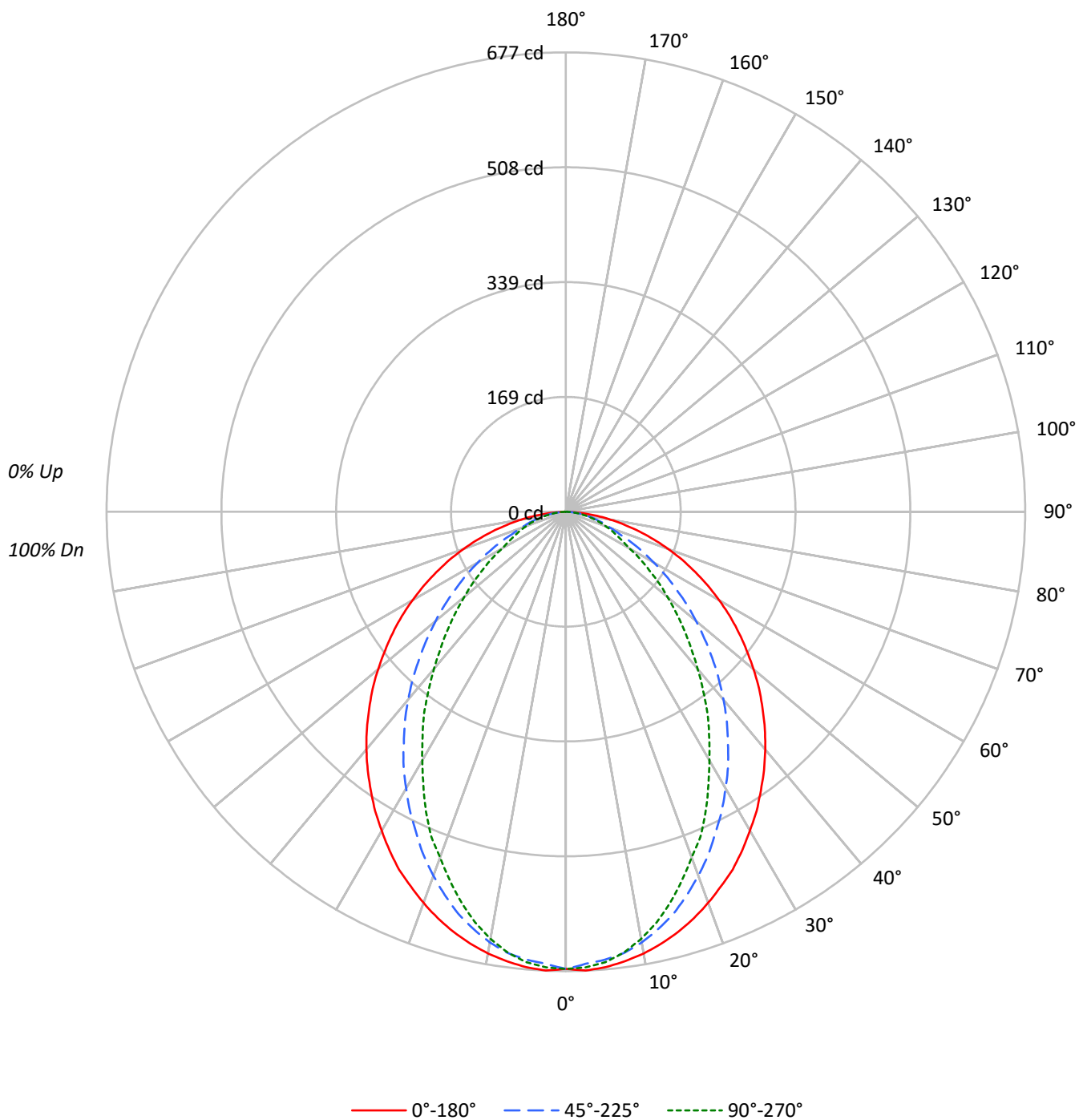
Lumens per Lamp: N/A
Luminaire Lumens: 1385.5 lumens
Efficiency: N/A
Efficacy: 74.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 3.07' x L: 3.07' x H: 0')
CIE Type: Direct

Input Watts (W): 18.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9951
Total Harmonic Distortion (THDi): 0.07
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P929852

CATALOG NUMBER: DFN2DS-4P3F0-020DS930-RLL

Luminous Intensity Polar Plot



TEST NUMBER: P929852

CATALOG NUMBER: DFN2DS-4P3F0-020DS930-RLL

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	768	768	768
5°	771	758	762
10°	765	746	739
15°	756	724	703
20°	744	692	657
25°	731	656	613
30°	714	619	557
35°	697	579	507
40°	680	538	450
45°	660	491	398
50°	640	444	347
55°	619	394	298
60°	595	341	248
65°	567	286	225
70°	534	236	207
75°	494	214	193
80°	436	192	176
85°	343	152	152

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 660 cd/sqm

TEST NUMBER: P929852

CATALOG NUMBER: DFN2DS-4P3F0-020DS930-RLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	63.1	4.6
10°-20°	173.3	12.5
20°-30°	243.3	17.6
30°-40°	265.3	19.1
40°-50°	243.8	17.6
50°-60°	191.5	13.8
60°-70°	124.6	9.0
70°-80°	64.1	4.6
80°-90°	16.4	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°	479.8	34.6
0°-40°	745.1	53.8
0°-60°	1180.4	85.2
0°-90°	1385.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1385.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	674	674	674	674	674	
5°	674	671	663	668	666	64
15°	641	634	613	602	596	181
25°	582	562	522	497	488	268
35°	501	470	416	378	364	314
45°	410	369	305	262	247	316
55°	312	264	198	162	150	278
65°	210	161	106	85	84	209
75°	112	69	49	44	44	119
85°	26	13	12	12	12	31
90°	0	0	0	0	0	

TEST NUMBER: P929852

CATALOG NUMBER: DFN2DS-4P3F0-020DS930-RLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	673.7	673.7	673.7	673.7	673.7
2.5°	676.7	673.7	666.9	673.1	671.9
5°	673.7	670.7	662.7	668.2	666.3
7.5°	668.2	664.6	656.0	658.4	655.3
10°	660.9	656.6	644.4	642.5	639.0
12.5°	651.8	646.2	629.8	626.2	619.4
15°	640.8	634.0	613.3	601.7	595.7
17.5°	628.0	618.2	592.6	579.1	569.4
20°	613.3	601.1	570.7	555.4	542.0
22.5°	597.5	583.5	548.1	527.4	518.3
25°	581.7	562.1	521.8	496.9	487.7
27.5°	562.8	542.0	497.5	468.8	454.8
30°	542.6	519.4	470.7	439.6	423.1
32.5°	523.1	495.0	445.1	408.5	393.2
35°	501.1	470.1	416.5	378.0	364.5
37.5°	479.8	446.2	389.6	347.5	332.3
40°	457.2	420.7	361.5	318.3	302.4
42.5°	434.1	395.1	333.5	288.3	273.2
45°	409.7	368.8	304.9	261.5	246.9
47.5°	386.6	343.3	277.4	234.1	220.7
50°	361.0	317.7	250.6	208.5	195.8
52.5°	335.9	290.1	224.9	184.8	173.2
55°	311.5	264.0	198.1	161.6	150.0
57.5°	286.6	237.7	174.4	140.3	130.5
60°	261.0	212.1	149.4	118.3	108.6
62.5°	235.9	187.2	128.0	98.8	93.9
65°	210.4	161.0	106.1	85.4	83.5
67.5°	186.0	136.5	85.4	75.0	73.2
70°	160.3	112.8	70.7	64.6	62.2
72.5°	135.9	90.8	59.1	54.3	53.1
75°	112.1	69.4	48.7	44.5	43.9
77.5°	88.4	49.4	38.4	35.9	34.7
80°	66.4	35.4	29.3	26.8	26.8
82.5°	46.3	23.8	20.1	18.9	18.9
85°	26.2	13.4	11.6	11.6	11.6
87.5°	9.8	4.9	4.9	4.2	4.2
90°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P929852

CATALOG NUMBER: DFN2DS-4P3F0-020DS930-RLL

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	10.31	11.84	10.68	12.15	12.46	6.28	7.80	6.64	8.12	8.43
	3H	12.08	13.45	12.46	13.77	14.14	7.54	8.91	7.92	9.24	9.60
	4H	12.75	14.03	13.15	14.38	14.75	8.05	9.33	8.45	9.68	10.05
	6H	13.24	14.42	13.65	14.78	15.18	8.43	9.61	8.84	9.98	10.37
	8H	13.40	14.53	13.83	14.92	15.32	8.55	9.68	8.98	10.07	10.47
	12H	13.50	14.58	13.93	14.96	15.39	8.63	9.71	9.06	10.09	10.52
4H	2H	10.42	11.70	10.82	12.05	12.43	6.97	8.26	7.37	8.60	8.98
	3H	12.35	13.42	12.76	13.82	14.22	8.42	9.48	8.83	9.88	10.28
	4H	13.10	14.06	13.53	14.47	14.91	9.02	9.97	9.45	10.39	10.83
	6H	13.69	14.53	14.15	14.97	15.43	9.50	10.34	9.96	10.78	11.24
	8H	13.91	14.69	14.37	15.13	15.60	9.66	10.44	10.13	10.89	11.35
	12H	14.06	14.76	14.54	15.23	15.71	9.78	10.48	10.26	10.96	11.43
8H	4H	13.13	13.90	13.59	14.35	14.81	9.37	10.15	9.83	10.59	11.06
	6H	13.76	14.41	14.26	14.90	15.37	9.95	10.60	10.45	11.09	11.57
	8H	14.01	14.59	14.53	15.10	15.59	10.18	10.75	10.69	11.26	11.75
	12H	14.22	14.73	14.73	15.22	15.78	10.36	10.87	10.87	11.36	11.92
12H	4H	13.11	13.80	13.59	14.28	14.75	9.41	10.11	9.90	10.59	11.06
	6H	13.74	14.32	14.26	14.83	15.32	10.02	10.60	10.53	11.11	11.59
	8H	14.03	14.54	14.54	15.03	15.60	10.29	10.80	10.80	11.29	11.86

END OF REPORT