

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: P929940

Luminaire Tested: DFN2DS-4P4F0-030DS927-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P929940
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-4P4F0-030DS927-RLL
Description: 4 foot, 90deg - 4way Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

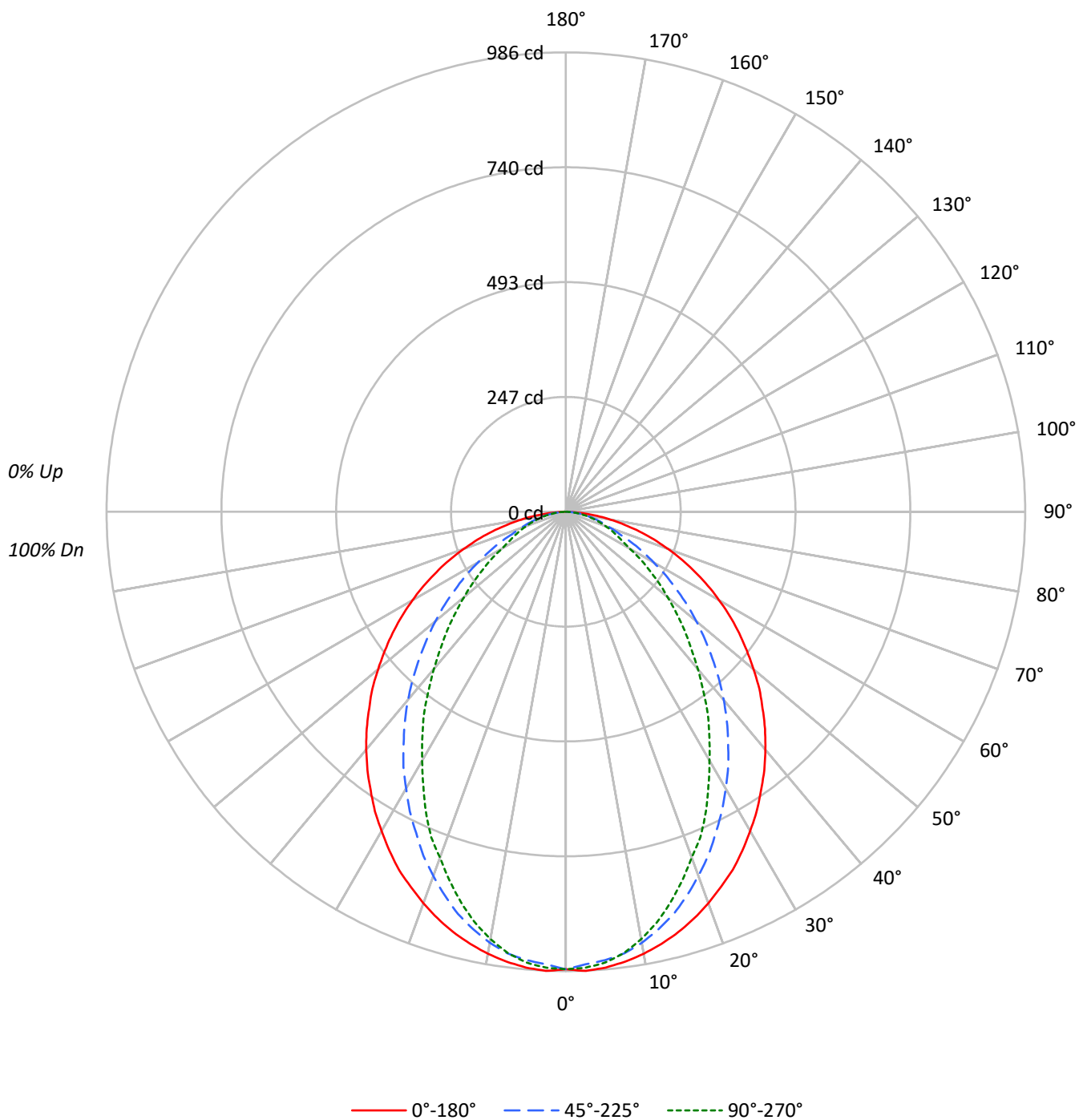
Lumens per Lamp: N/A
Luminaire Lumens: 2019.6 lumens
Efficiency: N/A
Efficacy: 71.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 4.07' x L: 4.07' x H: 0')
CIE Type: Direct

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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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	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°	637	637	637
5°	639	629	633
10°	635	619	614
15°	627	600	583
20°	617	574	545
25°	607	545	509
30°	593	514	462
35°	579	481	421
40°	564	446	373
45°	548	408	330
50°	531	369	288
55°	514	327	247
60°	493	282	205
65°	471	237	187
70°	443	195	172
75°	410	178	160
80°	362	159	146
85°	284	126	126

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 548 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	92.0	4.6
10°-20°	252.7	12.5
20°-30°	354.7	17.6
30°-40°	386.7	19.1
40°-50°	355.4	17.6
50°-60°	279.1	13.8
60°-70°	181.6	9.0
70°-80°	93.5	4.6
80°-90°	23.9	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°	699.4	34.6
0°-40°	1086.1	53.8
0°-60°	1720.5	85.2
0°-90°	2019.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2019.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	982	982	982	982	982	
5°	982	978	966	974	971	93
15°	934	924	894	877	868	263
25°	848	819	761	724	711	390
35°	730	685	607	551	531	457
45°	597	538	444	381	360	461
55°	454	385	289	236	219	406
65°	307	235	155	124	122	304
75°	164	101	71	65	64	173
85°	38	20	17	17	17	46
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	982.0	982.0	982.0	982.0	982.0
2.5°	986.4	982.0	972.2	981.1	979.4
5°	982.0	977.6	966.0	974.0	971.3
7.5°	974.0	968.7	956.3	959.7	955.3
10°	963.3	957.1	939.4	936.6	931.4
12.5°	950.0	942.0	918.0	912.7	902.9
15°	934.0	924.2	894.0	877.1	868.3
17.5°	915.3	901.1	863.8	844.3	830.0
20°	894.0	876.2	831.8	809.7	790.0
22.5°	871.0	850.4	798.9	768.7	755.4
25°	847.8	819.3	760.7	724.3	710.9
27.5°	820.3	790.0	725.2	683.4	662.9
30°	791.0	757.2	686.0	640.8	616.7
32.5°	762.5	721.6	648.8	595.4	573.2
35°	730.5	685.2	607.0	551.0	531.4
37.5°	699.4	650.5	567.9	506.5	484.4
40°	666.5	613.2	527.0	463.9	440.8
42.5°	632.7	575.9	486.1	420.3	398.1
45°	597.2	537.6	444.4	381.2	359.9
47.5°	563.4	500.4	404.4	341.2	321.7
50°	526.1	463.0	365.3	303.9	285.3
52.5°	489.6	423.0	328.0	269.3	252.4
55°	454.1	384.8	288.8	235.5	218.7
57.5°	417.7	346.6	254.2	204.4	190.2
60°	380.3	309.3	217.7	172.4	158.2
62.5°	344.0	272.8	186.6	144.0	136.9
65°	306.6	234.6	154.6	124.4	121.7
67.5°	271.1	199.0	124.4	109.3	106.6
70°	233.7	164.4	103.0	94.2	90.6
72.5°	198.2	132.3	86.2	79.1	77.3
75°	163.5	101.3	71.1	64.9	64.0
77.5°	128.9	71.9	56.0	52.4	50.6
80°	96.9	51.6	42.6	39.1	39.1
82.5°	67.5	34.7	29.3	27.6	27.6
85°	38.2	19.5	16.9	16.9	16.9
87.5°	14.3	7.0	7.0	6.3	6.3
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	9.67	11.19	10.03	11.50	11.82	5.63	7.15	5.99	7.46	7.78
	3H	11.43	12.80	11.81	13.13	13.49	6.89	8.26	7.27	8.59	8.95
	4H	12.10	13.38	12.50	13.73	14.11	7.40	8.68	7.79	9.02	9.40
	6H	12.59	13.77	13.00	14.14	14.53	7.78	8.96	8.19	9.33	9.72
	8H	12.75	13.88	13.18	14.27	14.67	7.90	9.03	8.33	9.42	9.82
	12H	12.86	13.94	13.29	14.32	14.75	7.98	9.06	8.41	9.44	9.87
4H	2H	9.77	11.05	10.17	11.40	11.78	6.32	7.60	6.72	7.95	8.33
	3H	11.71	12.77	12.12	13.17	13.57	7.77	8.83	8.18	9.23	9.63
	4H	12.45	13.41	12.89	13.83	14.27	8.37	9.32	8.80	9.74	10.18
	6H	13.05	13.88	13.50	14.32	14.78	8.85	9.69	9.31	10.13	10.59
	8H	13.26	14.04	13.72	14.48	14.95	9.02	9.79	9.48	10.24	10.71
	12H	13.41	14.11	13.90	14.59	15.06	9.13	9.83	9.62	10.31	10.78
8H	4H	12.48	13.26	12.94	13.70	14.17	8.72	9.50	9.18	9.94	10.41
	6H	13.12	13.76	13.61	14.25	14.73	9.31	9.95	9.80	10.44	10.92
	8H	13.37	13.94	13.88	14.45	14.94	9.53	10.10	10.04	10.61	11.10
	12H	13.57	14.08	14.08	14.57	15.14	9.71	10.22	10.22	10.71	11.27
12H	4H	12.46	13.16	12.95	13.64	14.11	8.76	9.46	9.25	9.94	10.41
	6H	13.10	13.68	13.61	14.18	14.67	9.37	9.95	9.88	10.46	10.94
	8H	13.38	13.89	13.89	14.38	14.95	9.64	10.15	10.15	10.65	11.21

END OF REPORT