

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: P929869

Luminaire Tested: DFN2DS-4P3F0-030DS930-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P929869
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-4P3F0-030DS930-FLL
Description: 3 foot, 90deg - 4way Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

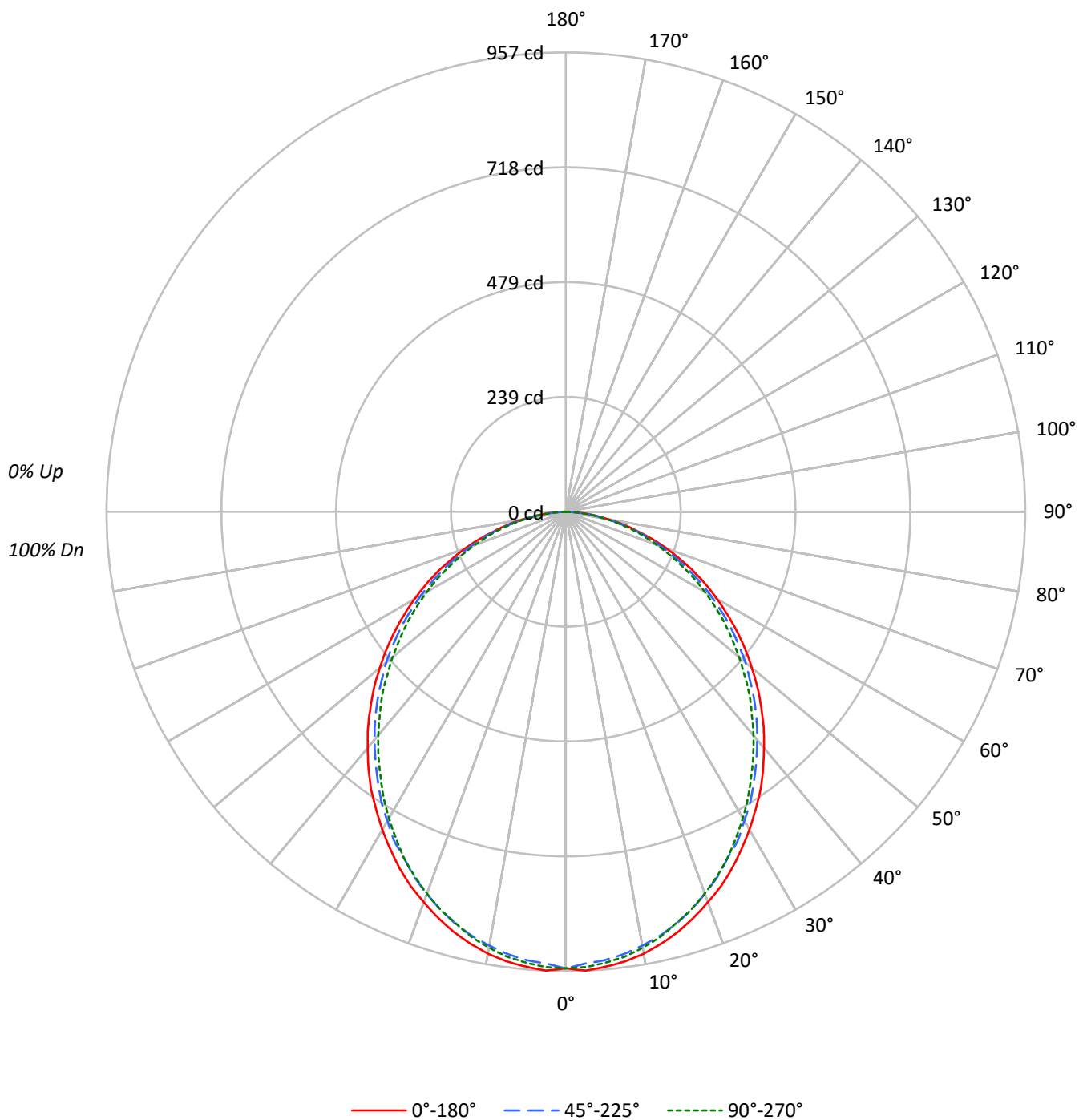
Lumens per Lamp: N/A
Luminaire Lumens: 2420.6 lumens
Efficiency: N/A
Efficacy: 83.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.07' x L: 3.07' x H: 0')
CIE Type: Direct

Input Watts (W): 28.9
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9933
Total Harmonic Distortion (THDi): 0.066
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°	1084	1084	1084
5°	1088	1073	1079
10°	1082	1062	1067
15°	1068	1048	1047
20°	1049	1027	1026
25°	1031	1002	1002
30°	1006	979	970
35°	984	951	937
40°	955	923	905
45°	927	895	873
50°	897	866	835
55°	865	832	802
60°	830	792	763
65°	792	753	718
70°	744	704	671
75°	676	649	633
80°	600	582	553
85°	490	467	418

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 927 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.5	3.7
10°-20°	251.9	10.4
20°-30°	370.2	15.3
30°-40°	430.0	17.8
40°-50°	429.5	17.7
50°-60°	374.5	15.5
60°-70°	276.9	11.4
70°-80°	156.6	6.5
80°-90°	41.3	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°	711.7	29.4
0°-40°	1141.7	47.2
0°-60°	1945.8	80.4
0°-90°	2420.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2420.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	951	951	951	951	951	
5°	951	948	938	945	943	90
15°	906	900	888	892	887	255
25°	820	812	797	799	797	377
35°	707	698	683	678	673	442
45°	576	569	555	545	542	444
55°	436	430	419	408	404	389
65°	294	288	279	271	266	290
75°	154	152	147	142	144	164
85°	38	37	36	33	32	44
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	951.3	951.3	951.3	951.3	951.3
2.5°	956.9	952.3	942.2	951.3	949.6
5°	951.3	947.8	937.7	945.0	943.2
7.5°	945.0	939.5	929.4	936.8	935.0
10°	935.0	928.5	917.6	924.9	922.2
12.5°	921.2	915.7	904.8	909.3	907.5
15°	905.6	900.2	888.3	891.9	887.4
17.5°	886.4	881.0	869.0	873.6	869.0
20°	865.4	859.9	847.1	849.8	846.2
22.5°	844.4	836.2	824.2	824.2	822.3
25°	819.6	812.4	796.8	798.6	796.8
27.5°	792.2	785.7	773.9	771.2	766.7
30°	764.8	757.5	743.8	741.0	737.3
32.5°	735.5	730.1	715.4	709.9	706.2
35°	707.2	698.0	683.4	677.8	673.3
37.5°	675.1	666.9	652.2	645.8	641.2
40°	642.2	634.9	620.2	612.1	608.4
42.5°	610.2	602.9	588.3	579.1	573.6
45°	575.5	569.0	555.3	545.2	541.6
47.5°	541.6	535.2	520.5	510.4	505.0
50°	505.9	501.3	488.5	475.7	471.2
52.5°	471.2	464.7	452.9	442.8	436.4
55°	435.5	430.0	419.0	408.1	403.5
57.5°	399.8	395.2	383.3	372.3	368.6
60°	364.1	360.5	347.7	337.6	334.9
62.5°	329.3	322.9	313.8	304.6	301.0
65°	293.7	288.2	279.1	270.8	266.3
67.5°	257.1	252.5	244.3	237.9	234.2
70°	223.2	219.6	211.3	204.9	201.3
72.5°	188.5	184.8	180.2	173.8	171.1
75°	153.6	151.9	147.3	141.8	143.7
77.5°	122.6	118.9	117.0	114.3	111.7
80°	91.5	90.5	88.7	86.0	84.2
82.5°	62.2	62.2	61.4	57.6	57.6
85°	37.5	36.6	35.7	32.9	32.0
87.5°	16.5	14.7	12.8	10.1	9.1
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	11.56	13.17	11.93	13.49	13.80	11.12	12.73	11.48	13.04	13.36
	3H	13.31	14.77	13.69	15.09	15.46	12.82	14.28	13.20	14.60	14.96
	4H	13.96	15.33	14.36	15.68	16.05	13.46	14.83	13.86	15.18	15.56
	6H	14.43	15.70	14.84	16.06	16.45	13.93	15.20	14.34	15.56	15.95
	8H	14.57	15.78	15.00	16.17	16.57	14.07	15.28	14.49	15.67	16.07
	12H	14.66	15.82	15.09	16.20	16.63	14.15	15.31	14.58	15.69	16.12
4H	2H	12.12	13.49	12.52	13.84	14.22	11.77	13.14	12.17	13.49	13.86
	3H	14.10	15.25	14.51	15.64	16.04	13.69	14.84	14.10	15.24	15.64
	4H	14.88	15.91	15.31	16.33	16.76	14.45	15.49	14.88	15.90	16.34
	6H	15.47	16.38	15.93	16.82	17.27	15.04	15.94	15.49	16.39	16.84
	8H	15.66	16.51	16.12	16.95	17.42	15.22	16.07	15.68	16.51	16.98
	12H	15.79	16.55	16.27	17.03	17.50	15.34	16.10	15.82	16.58	17.05
8H	4H	15.15	16.00	15.61	16.44	16.90	14.77	15.62	15.24	16.06	16.53
	6H	15.86	16.57	16.36	17.05	17.53	15.48	16.18	15.98	16.67	17.15
	8H	16.12	16.75	16.63	17.26	17.75	15.73	16.36	16.24	16.87	17.35
	12H	16.32	16.88	16.83	17.37	17.93	15.91	16.47	16.42	16.96	17.52
12H	4H	15.17	15.93	15.65	16.41	16.88	14.81	15.57	15.29	16.05	16.52
	6H	15.91	16.54	16.42	17.05	17.53	15.54	16.17	16.05	16.68	17.16
	8H	16.22	16.78	16.73	17.27	17.83	15.84	16.40	16.35	16.89	17.45