

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: P929873

Luminaire Tested: DFN2DS-4P3F0-030DS940-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P929873
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-4P3F0-030DS940-FLL
Description: 3 foot, 90deg - 4way Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

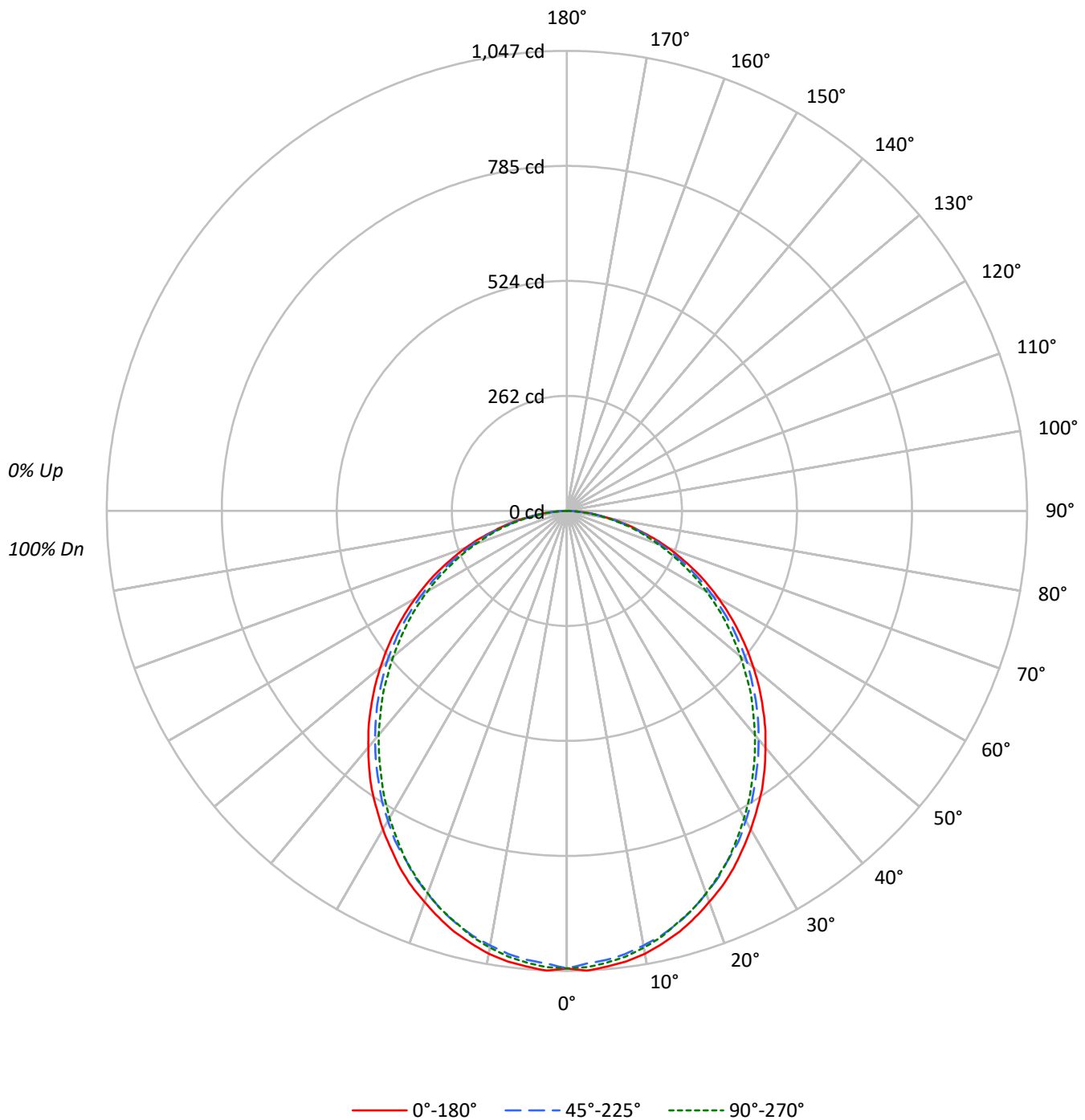
Lumens per Lamp: N/A
Luminaire Lumens: 2649.3 lumens
Efficiency: N/A
Efficacy: 91.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.07' x L: 3.07' x H: 0')
CIE Type: Direct

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°	1187	1187	1187
5°	1191	1174	1181
10°	1184	1162	1168
15°	1169	1147	1146
20°	1149	1124	1123
25°	1128	1097	1097
30°	1102	1071	1062
35°	1077	1040	1025
40°	1046	1010	991
45°	1015	979	955
50°	982	948	914
55°	947	911	877
60°	908	867	835
65°	867	824	786
70°	814	771	734
75°	740	710	693
80°	658	637	604
85°	536	511	459

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1015 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	98.0	3.7
10°-20°	275.7	10.4
20°-30°	405.2	15.3
30°-40°	470.6	17.8
40°-50°	470.1	17.7
50°-60°	409.9	15.5
60°-70°	303.0	11.4
70°-80°	171.4	6.5
80°-90°	45.3	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°	779.0	29.4
0°-40°	1249.6	47.2
0°-60°	2129.6	80.4
0°-90°	2649.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2649.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1041	1041	1041	1041	1041	
5°	1041	1037	1026	1034	1032	99
15°	991	985	972	976	971	279
25°	897	889	872	874	872	413
35°	774	764	748	742	737	483
45°	630	623	608	597	593	486
55°	477	471	459	447	442	426
65°	322	315	305	296	291	318
75°	168	166	161	155	157	180
85°	41	40	39	36	35	48
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1041.2	1041.2	1041.2	1041.2	1041.2
2.5°	1047.3	1042.3	1031.2	1041.2	1039.4
5°	1041.2	1037.3	1026.2	1034.3	1032.3
7.5°	1034.3	1028.3	1017.2	1025.4	1023.3
10°	1023.3	1016.3	1004.3	1012.2	1009.3
12.5°	1008.2	1002.3	990.3	995.2	993.2
15°	991.2	985.3	972.2	976.2	971.2
17.5°	970.1	964.3	951.1	956.1	951.1
20°	947.1	941.1	927.1	930.1	926.2
22.5°	924.2	915.2	902.1	902.1	900.0
25°	897.1	889.1	872.1	874.1	872.1
27.5°	867.0	860.0	847.0	844.1	839.1
30°	837.1	829.0	814.0	811.0	807.0
32.5°	805.0	799.1	783.0	776.9	772.9
35°	774.0	764.0	747.9	741.9	736.9
37.5°	738.9	729.9	713.9	706.8	701.8
40°	702.9	694.9	678.8	669.9	665.9
42.5°	667.8	659.8	643.8	633.8	627.8
45°	629.8	622.8	607.7	596.7	592.7
47.5°	592.7	585.8	569.7	558.7	552.7
50°	553.7	548.7	534.7	520.7	515.7
52.5°	515.7	508.6	495.7	484.6	477.6
55°	476.7	470.6	458.6	446.6	441.6
57.5°	437.5	432.5	419.5	407.5	403.5
60°	398.5	394.5	380.5	369.5	366.5
62.5°	360.5	353.4	343.4	333.4	329.4
65°	321.5	315.4	305.4	296.4	291.4
67.5°	281.4	276.3	267.3	260.4	256.4
70°	244.3	240.3	231.3	224.2	220.3
72.5°	206.3	202.2	197.2	190.3	187.3
75°	168.1	166.3	161.2	155.2	157.3
77.5°	134.2	130.1	128.1	125.1	122.2
80°	100.2	99.1	97.0	94.1	92.1
82.5°	68.1	68.1	67.2	63.1	63.1
85°	41.0	40.1	39.1	36.0	35.1
87.5°	18.0	16.1	14.0	11.1	10.0
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	11.88	13.49	12.24	13.80	14.12	11.43	13.04	11.80	13.36	13.67
	3H	13.63	15.08	14.00	15.41	15.77	13.14	14.59	13.51	14.92	15.28
	4H	14.27	15.64	14.67	15.99	16.37	13.78	15.15	14.18	15.50	15.87
	6H	14.74	16.01	15.15	16.38	16.77	14.24	15.51	14.65	15.87	16.27
	8H	14.89	16.10	15.31	16.49	16.88	14.38	15.59	14.81	15.98	16.38
	12H	14.98	16.14	15.41	16.52	16.95	14.46	15.62	14.89	16.01	16.43
4H	2H	12.44	13.81	12.84	14.15	14.53	12.08	13.45	12.48	13.80	14.18
	3H	14.41	15.56	14.82	15.96	16.36	14.01	15.15	14.42	15.55	15.95
	4H	15.19	16.22	15.62	16.64	17.07	14.77	15.80	15.20	16.22	16.65
	6H	15.79	16.69	16.24	17.13	17.59	15.35	16.26	15.81	16.70	17.16
	8H	15.97	16.82	16.44	17.26	17.73	15.54	16.38	16.00	16.83	17.29
	12H	16.11	16.87	16.59	17.34	17.81	15.66	16.42	16.14	16.89	17.36
8H	4H	15.46	16.31	15.92	16.75	17.22	15.09	15.94	15.55	16.38	16.84
	6H	16.18	16.88	16.67	17.37	17.84	15.80	16.50	16.29	16.99	17.46
	8H	16.44	17.07	16.95	17.57	18.06	16.04	16.68	16.55	17.18	17.67
	12H	16.64	17.19	17.14	17.68	18.25	16.22	16.78	16.73	17.27	17.83
12H	4H	15.49	16.25	15.97	16.72	17.19	15.12	15.88	15.60	16.36	16.83
	6H	16.22	16.85	16.73	17.36	17.85	15.85	16.49	16.36	16.99	17.48
	8H	16.54	17.09	17.04	17.58	18.15	16.16	16.72	16.67	17.21	17.77