

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: P929850

Luminaire Tested: DFN2DS-4P3F0-020DS927-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P929850
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-4P3F0-020DS927-RLL
Description: 3 foot, 90deg - 4way Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

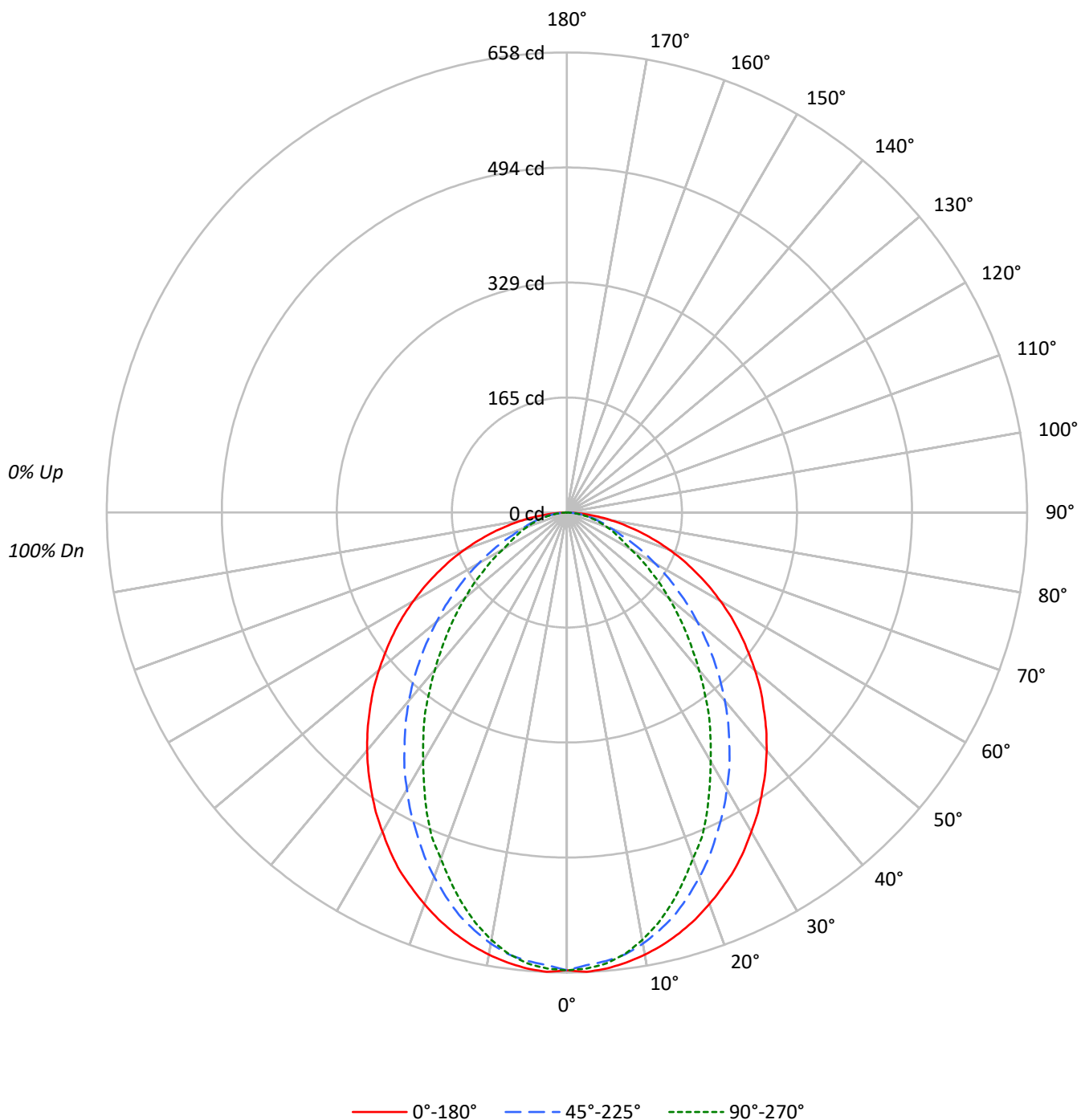
Lumens per Lamp: N/A
Luminaire Lumens: 1346.4 lumens
Efficiency: N/A
Efficacy: 72.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 3.07' x L: 3.07' x H: 0')
CIE Type: Direct

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

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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°	746	746	746
5°	749	737	741
10°	743	725	718
15°	735	703	683
20°	723	673	639
25°	711	638	596
30°	694	602	541
35°	678	563	493
40°	661	523	437
45°	642	478	387
50°	622	432	337
55°	601	382	289
60°	578	331	240
65°	551	278	219
70°	519	229	201
75°	480	209	188
80°	423	186	171
85°	332	146	146

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 642 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	61.4	4.6
10°-20°	168.4	12.5
20°-30°	236.5	17.6
30°-40°	257.8	19.1
40°-50°	236.9	17.6
50°-60°	186.1	13.8
60°-70°	121.1	9.0
70°-80°	62.3	4.6
80°-90°	15.9	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°	466.3	34.6
0°-40°	724.0	53.8
0°-60°	1147.0	85.2
0°-90°	1346.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1346.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	655	655	655	655	655	
5°	655	652	644	649	648	62
15°	623	616	596	585	579	175
25°	565	546	507	483	474	260
35°	487	457	405	367	354	305
45°	398	358	296	254	240	307
55°	303	256	192	157	146	271
65°	204	156	103	83	81	203
75°	109	68	47	43	43	115
85°	25	13	11	11	11	31
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	654.7	654.7	654.7	654.7	654.7
2.5°	657.6	654.7	648.1	654.1	652.9
5°	654.7	651.7	644.0	649.4	647.5
7.5°	649.4	645.8	637.5	639.9	636.8
10°	642.2	638.0	626.2	624.4	620.9
12.5°	633.4	628.0	612.0	608.5	601.9
15°	622.7	616.1	596.0	584.7	578.9
17.5°	610.2	600.7	575.9	562.8	553.4
20°	596.0	584.1	554.6	539.7	526.7
22.5°	580.6	567.0	532.6	512.5	503.6
25°	565.3	546.2	507.1	482.9	473.9
27.5°	546.9	526.7	483.4	455.6	441.9
30°	527.3	504.7	457.4	427.2	411.1
32.5°	508.3	481.1	432.5	397.0	382.1
35°	487.0	456.8	404.7	367.3	354.3
37.5°	466.3	433.6	378.6	337.7	322.9
40°	444.3	408.8	351.3	309.3	293.8
42.5°	421.8	384.0	324.1	280.2	265.5
45°	398.1	358.4	296.3	254.2	239.9
47.5°	375.6	333.6	269.6	227.5	214.5
50°	350.8	308.7	243.5	202.6	190.2
52.5°	326.4	282.0	218.6	179.5	168.3
55°	302.7	256.5	192.5	157.1	145.7
57.5°	278.5	231.0	169.5	136.3	126.8
60°	253.6	206.2	145.2	115.0	105.5
62.5°	229.3	181.9	124.4	96.0	91.2
65°	204.4	156.4	103.1	83.0	81.2
67.5°	180.7	132.7	83.0	72.9	71.1
70°	155.8	109.6	68.7	62.8	60.4
72.5°	132.1	88.2	57.4	52.7	51.6
75°	109.0	67.5	47.4	43.2	42.7
77.5°	85.9	48.0	37.3	34.9	33.7
80°	64.5	34.4	28.4	26.1	26.1
82.5°	45.0	23.1	19.6	18.4	18.4
85°	25.4	13.0	11.2	11.2	11.2
87.5°	9.5	4.8	4.8	4.1	4.1
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	10.22	11.74	10.58	12.05	12.37	6.18	7.70	6.54	8.01	8.33
	3H	11.98	13.35	12.36	13.67	14.04	7.44	8.81	7.82	9.14	9.50
	4H	12.65	13.93	13.05	14.28	14.66	7.95	9.23	8.35	9.57	9.95
	6H	13.14	14.32	13.55	14.69	15.08	8.33	9.51	8.74	9.88	10.27
	8H	13.30	14.43	13.73	14.82	15.22	8.45	9.58	8.88	9.97	10.37
	12H	13.40	14.48	13.83	14.86	15.29	8.53	9.61	8.96	9.99	10.42
4H	2H	10.32	11.60	10.72	11.95	12.33	6.87	8.15	7.27	8.50	8.88
	3H	12.25	13.32	12.66	13.72	14.12	8.32	9.38	8.73	9.78	10.18
	4H	13.00	13.96	13.44	14.37	14.81	8.92	9.87	9.35	10.29	10.73
	6H	13.59	14.43	14.05	14.87	15.33	9.40	10.24	9.86	10.68	11.14
	8H	13.81	14.59	14.27	15.03	15.50	9.57	10.34	10.03	10.79	11.25
	12H	13.96	14.66	14.44	15.13	15.61	9.68	10.38	10.16	10.86	11.33
8H	4H	13.03	13.80	13.49	14.25	14.72	9.27	10.05	9.73	10.49	10.96
	6H	13.66	14.31	14.16	14.80	15.28	9.86	10.50	10.35	10.99	11.47
	8H	13.91	14.49	14.43	15.00	15.49	10.08	10.65	10.59	11.16	11.65
	12H	14.12	14.63	14.63	15.12	15.68	10.26	10.77	10.77	11.26	11.82
12H	4H	13.01	13.71	13.49	14.18	14.66	9.31	10.01	9.79	10.49	10.96
	6H	13.65	14.22	14.16	14.73	15.22	9.92	10.50	10.43	11.01	11.49
	8H	13.93	14.44	14.44	14.93	15.50	10.19	10.70	10.70	11.20	11.76

END OF REPORT