

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: P929795

Luminaire Tested: DFN2DS-4P2F0-020DS927-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P929795
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-4P2F0-020DS927-FLL
Description: 2 foot, 90deg - 4way Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

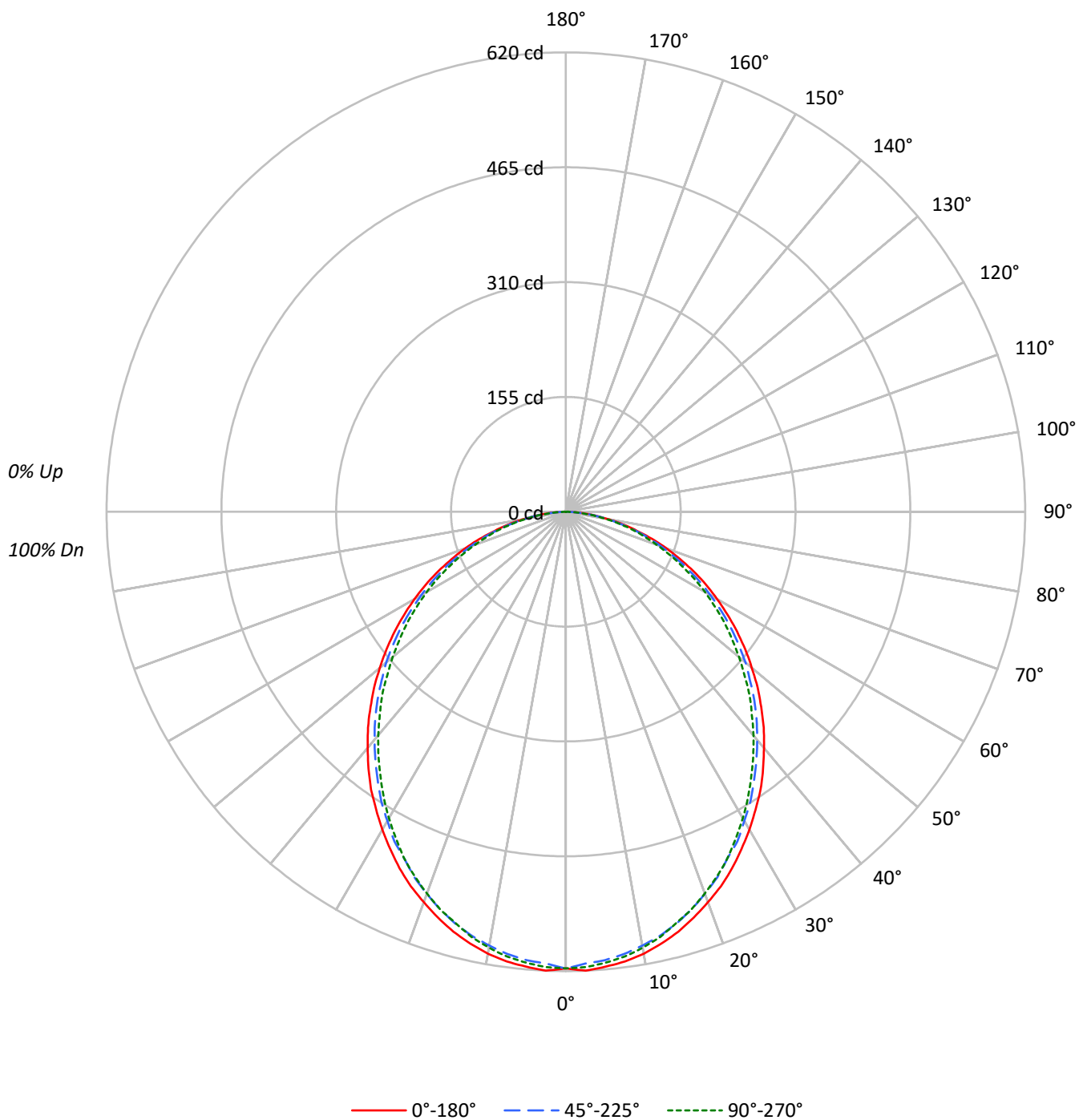
Lumens per Lamp: N/A
Luminaire Lumens: 1568.2 lumens
Efficiency: N/A
Efficacy: 81.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 2.07' x L: 2.07' x H: 0')
CIE Type: Direct

Input Watts (W): 19.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9967
Total Harmonic Distortion (THDi): 0.063
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°	1543	1543	1543
5°	1549	1527	1536
10°	1540	1512	1519
15°	1521	1492	1490
20°	1494	1462	1461
25°	1467	1426	1426
30°	1433	1393	1381
35°	1401	1353	1333
40°	1360	1313	1288
45°	1320	1274	1243
50°	1277	1233	1189
55°	1232	1185	1141
60°	1181	1128	1086
65°	1127	1071	1022
70°	1059	1002	955
75°	964	923	901
80°	855	829	786
85°	695	664	598

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1320 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	58.0	3.7
10°-20°	163.2	10.4
20°-30°	239.9	15.3
30°-40°	278.6	17.8
40°-50°	278.2	17.7
50°-60°	242.6	15.5
60°-70°	179.3	11.4
70°-80°	101.5	6.5
80°-90°	26.8	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°	461.1	29.4
0°-40°	739.7	47.2
0°-60°	1260.6	80.4
0°-90°	1568.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1568.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	616	616	616	616	616	
5°	616	614	608	612	611	59
15°	587	583	576	578	575	165
25°	531	526	516	517	516	244
35°	458	452	443	439	436	286
45°	373	369	360	353	351	288
55°	282	278	271	264	261	252
65°	190	187	181	175	172	188
75°	100	98	95	92	93	106
85°	24	24	23	21	21	29
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	616.3	616.3	616.3	616.3	616.3
2.5°	619.9	617.0	610.4	616.3	615.2
5°	616.3	614.0	607.5	612.2	611.0
7.5°	612.2	608.7	602.2	606.9	605.7
10°	605.7	601.6	594.5	599.1	597.4
12.5°	596.8	593.3	586.2	589.1	587.9
15°	586.7	583.2	575.5	577.8	574.9
17.5°	574.3	570.8	563.0	566.0	563.0
20°	560.7	557.1	548.8	550.6	548.2
22.5°	547.0	541.7	534.0	534.0	532.8
25°	531.0	526.3	516.2	517.3	516.2
27.5°	513.2	509.1	501.4	499.7	496.7
30°	495.5	490.7	481.9	480.1	477.7
32.5°	476.5	473.0	463.5	459.9	457.5
35°	458.2	452.2	442.7	439.2	436.2
37.5°	437.4	432.0	422.5	418.4	415.4
40°	416.0	411.3	401.8	396.6	394.1
42.5°	395.3	390.5	381.1	375.2	371.6
45°	372.8	368.7	359.7	353.2	350.9
47.5°	350.9	346.7	337.2	330.7	327.2
50°	327.7	324.8	316.5	308.2	305.2
52.5°	305.2	301.0	293.4	286.9	282.7
55°	282.1	278.5	271.4	264.4	261.4
57.5°	259.0	256.1	248.3	241.2	238.8
60°	235.9	233.6	225.2	218.7	216.9
62.5°	213.4	209.2	203.3	197.4	195.0
65°	190.2	186.7	180.8	175.4	172.5
67.5°	166.6	163.5	158.2	154.1	151.7
70°	144.6	142.2	136.9	132.7	130.4
72.5°	122.1	119.8	116.7	112.6	110.9
75°	99.6	98.4	95.4	91.9	93.1
77.5°	79.4	77.1	75.8	74.1	72.3
80°	59.3	58.7	57.5	55.7	54.5
82.5°	40.3	40.3	39.8	37.4	37.4
85°	24.2	23.7	23.1	21.3	20.8
87.5°	10.7	9.5	8.3	6.6	5.9
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	12.79	14.40	13.16	14.72	15.03	12.35	13.96	12.71	14.27	14.58
	3H	14.54	16.00	14.92	16.32	16.68	14.05	15.50	14.43	15.83	16.19
	4H	15.19	16.56	15.59	16.90	17.28	14.69	16.06	15.09	16.41	16.78
	6H	15.66	16.92	16.07	17.29	17.68	15.15	16.42	15.57	16.79	17.18
	8H	15.80	17.01	16.22	17.40	17.80	15.30	16.51	15.72	16.90	17.29
	12H	15.89	17.05	16.32	17.43	17.86	15.38	16.54	15.81	16.92	17.35
4H	2H	13.35	14.72	13.75	15.07	15.44	13.00	14.37	13.40	14.71	15.09
	3H	15.33	16.47	15.74	16.87	17.27	14.92	16.06	15.33	16.46	16.86
	4H	16.10	17.14	16.53	17.55	17.99	15.68	16.71	16.11	17.13	17.56
	6H	16.70	17.60	17.15	18.05	18.50	16.27	17.17	16.72	17.61	18.07
	8H	16.89	17.74	17.35	18.18	18.64	16.45	17.30	16.91	17.74	18.20
	12H	17.02	17.78	17.50	18.26	18.73	16.57	17.33	17.05	17.80	18.27
8H	4H	16.38	17.22	16.84	17.67	18.13	16.00	16.85	16.46	17.29	17.76
	6H	17.09	17.79	17.58	18.28	18.76	16.71	17.41	17.20	17.90	18.38
	8H	17.35	17.98	17.86	18.49	18.97	16.96	17.59	17.47	18.10	18.58
	12H	17.55	18.11	18.06	18.60	19.16	17.14	17.69	17.64	18.19	18.75
12H	4H	16.40	17.16	16.88	17.64	18.11	16.04	16.80	16.52	17.27	17.74
	6H	17.14	17.77	17.65	18.27	18.76	16.77	17.40	17.28	17.91	18.39
	8H	17.45	18.01	17.96	18.50	19.06	17.07	17.63	17.58	18.12	18.68

END OF REPORT

FIELD PERFORMANCE MAY DIFFER FROM LABORATORY PERFORMANCE

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