

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: P929825

Luminaire Tested: DFN2DS-4P2F0-040DS835-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P929825
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-4P2F0-040DS835-FLL
Description: 2 foot, 90deg - 4way Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

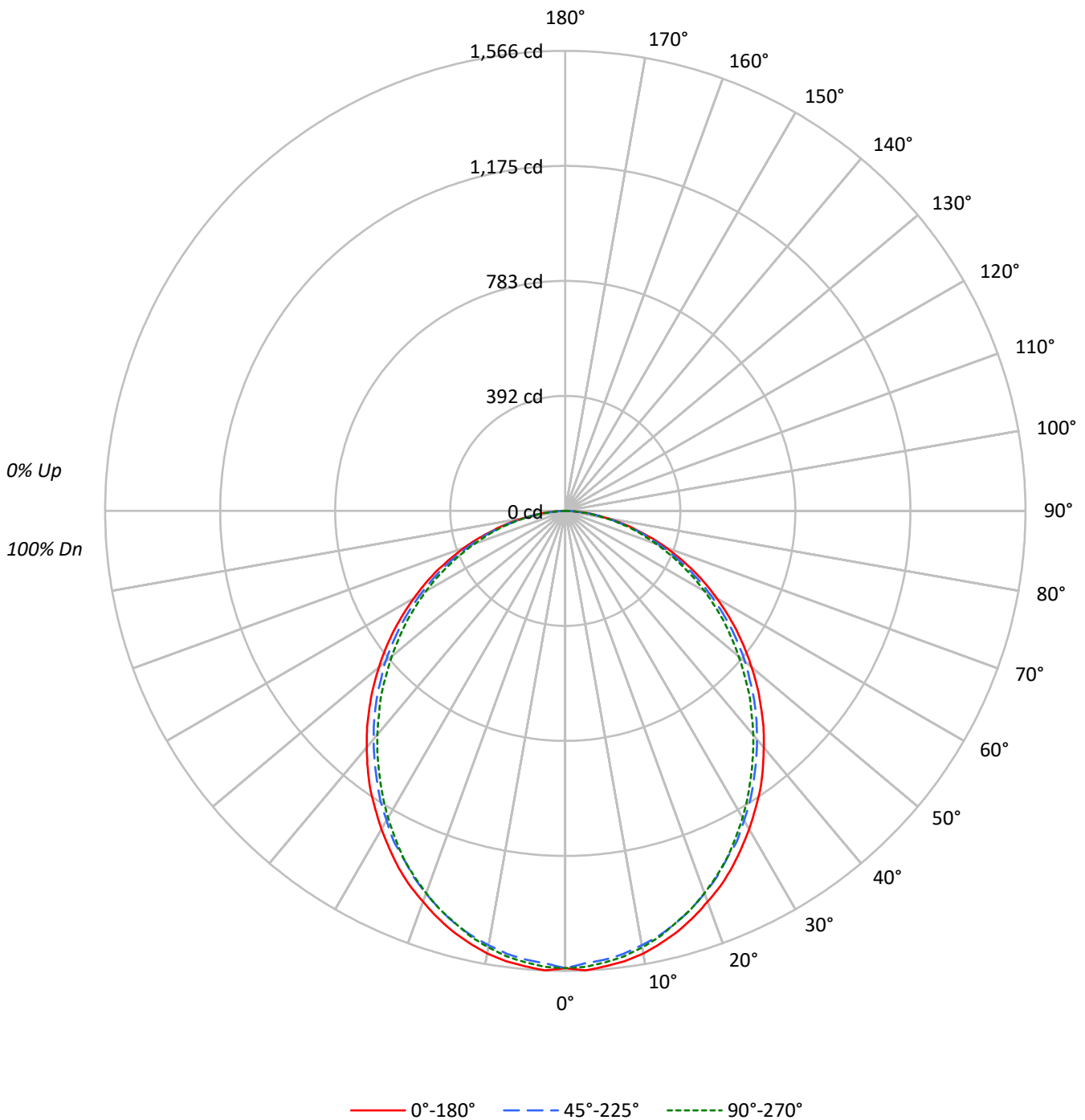
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3960.0 lumens
Efficiency: N/A
Efficacy: 91.9 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): 43.1
Input Voltage (V): 120
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

TEST NUMBER: P929825
CATALOG NUMBER: DFN2DS-4P2F0-040DS835-FLL

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			0	
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	102	102	100
1	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	86	86	86	84
2	99	91	85	79	97	89	83	78	86	81	76	83	78	74	80	76	73	73	73	73	71
3	91	80	72	66	88	79	71	65	76	69	64	73	68	63	71	66	62	62	62	62	60
4	83	71	63	56	81	70	62	56	68	61	55	65	59	54	63	58	54	54	54	54	51
5	77	64	55	49	75	63	55	48	61	53	48	59	52	47	57	51	47	47	47	47	45
6	71	58	49	43	69	57	48	42	55	48	42	53	47	42	52	46	41	41	41	41	39
7	66	52	44	38	64	52	43	38	50	43	37	49	42	37	47	41	37	37	37	37	35
8	61	48	40	34	60	47	39	34	46	39	33	45	38	33	44	38	33	33	33	33	31
9	57	44	36	30	56	43	36	30	42	35	30	41	35	30	40	34	30	30	30	30	28
10	54	41	33	28	53	40	33	28	39	32	27	38	32	27	37	32	27	27	27	27	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3897	3897	3897
5°	3912	3856	3879
10°	3889	3817	3836
15°	3841	3767	3764
20°	3772	3693	3689
25°	3705	3602	3602
30°	3618	3518	3488
35°	3536	3418	3367
40°	3434	3316	3253
45°	3334	3217	3137
50°	3224	3113	3002
55°	3110	2993	2882
60°	2983	2849	2743
65°	2847	2705	2581
70°	2674	2531	2411
75°	2432	2331	2274
80°	2159	2092	1986
85°	1761	1678	1505

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3334 cd/sqm



TEST NUMBER: P929825
 CATALOG NUMBER: DFN2DS-4P2F0-040DS835-FLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	146.5	3.7
10°-20°	412.2	10.4
20°-30°	605.7	15.3
30°-40°	703.5	17.8
40°-50°	702.6	17.7
50°-60°	612.7	15.5
60°-70°	452.9	11.4
70°-80°	256.2	6.5
80°-90°	67.6	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°	1164.4	29.4
0°-40°	1867.9	47.2
0°-60°	3183.2	80.4
0°-90°	3960.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3960.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1556	1556	1556	1556	1556	
5°	1556	1550	1534	1546	1543	148
15°	1482	1473	1453	1459	1452	417
25°	1341	1329	1304	1306	1304	617
35°	1157	1142	1118	1109	1102	722
45°	941	931	908	892	886	727
55°	712	703	686	668	660	637
65°	480	471	456	443	436	475
75°	251	248	241	232	235	268
85°	61	60	58	54	52	72
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1556.4	1556.4	1556.4	1556.4	1556.4
2.5°	1565.5	1558.0	1541.5	1556.4	1553.6
5°	1556.4	1550.5	1534.0	1545.9	1543.1
7.5°	1545.9	1537.0	1520.5	1532.6	1529.6
10°	1529.6	1519.1	1501.2	1513.1	1508.6
12.5°	1507.0	1498.1	1480.2	1487.7	1484.6
15°	1481.6	1472.7	1453.2	1459.2	1451.8
17.5°	1450.2	1441.3	1421.8	1429.2	1421.8
20°	1415.7	1406.8	1385.9	1390.3	1384.5
22.5°	1381.4	1367.9	1348.4	1348.4	1345.4
25°	1340.9	1329.0	1303.6	1306.5	1303.6
27.5°	1296.0	1285.5	1266.2	1261.7	1254.3
30°	1251.2	1239.2	1216.8	1212.3	1206.3
32.5°	1203.3	1194.4	1170.4	1161.4	1155.3
35°	1156.9	1142.0	1118.0	1109.0	1101.5
37.5°	1104.5	1091.0	1067.0	1056.6	1049.1
40°	1050.7	1038.6	1014.6	1001.3	995.3
42.5°	998.3	986.2	962.4	947.3	938.4
45°	941.4	931.0	908.4	892.1	886.0
47.5°	886.0	875.5	851.6	835.1	826.2
50°	827.6	820.1	799.2	778.2	770.7
52.5°	770.7	760.3	740.9	724.4	713.9
55°	712.5	703.4	685.5	667.5	660.1
57.5°	654.0	646.6	627.0	609.1	603.1
60°	595.6	589.7	568.8	552.3	547.8
62.5°	538.8	528.3	513.4	498.4	492.4
65°	480.5	471.4	456.5	443.0	435.6
67.5°	420.6	413.0	399.7	389.2	383.2
70°	365.2	359.2	345.7	335.2	329.3
72.5°	308.4	302.3	294.9	284.4	279.9
75°	251.4	248.5	240.9	232.0	235.0
77.5°	200.5	194.5	191.5	187.0	182.6
80°	149.7	148.1	145.1	140.7	137.7
82.5°	101.8	101.8	100.4	94.3	94.3
85°	61.3	59.9	58.4	53.8	52.4
87.5°	27.0	24.0	21.0	16.5	14.9
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	16.01	17.62	16.37	17.93	18.25	15.56	17.18	15.93	17.49	17.80
	3H	17.76	19.21	18.14	19.54	19.90	17.27	18.72	17.64	19.05	19.41
	4H	18.41	19.77	18.80	20.12	20.50	17.91	19.28	18.31	19.63	20.00
	6H	18.87	20.14	19.29	20.51	20.90	18.37	19.64	18.78	20.01	20.40
	8H	19.02	20.23	19.44	20.62	21.02	18.51	19.73	18.94	20.11	20.51
	12H	19.11	20.27	19.54	20.65	21.08	18.60	19.76	19.02	20.14	20.57
4H	2H	16.57	17.94	16.97	18.29	18.66	16.22	17.59	16.61	17.93	18.31
	3H	18.54	19.69	18.95	20.09	20.49	18.14	19.28	18.55	19.68	20.08
	4H	19.32	20.36	19.75	20.77	21.21	18.90	19.93	19.33	20.35	20.78
	6H	19.92	20.82	20.37	21.26	21.72	19.48	20.39	19.94	20.83	21.29
	8H	20.11	20.95	20.57	21.40	21.86	19.67	20.52	20.13	20.96	21.42
	12H	20.24	21.00	20.72	21.47	21.94	19.79	20.55	20.27	21.02	21.49
8H	4H	19.59	20.44	20.05	20.88	21.35	19.22	20.07	19.68	20.51	20.97
	6H	20.31	21.01	20.80	21.50	21.97	19.93	20.63	20.42	21.12	21.59
	8H	20.57	21.20	21.08	21.70	22.19	20.18	20.81	20.69	21.31	21.80
	12H	20.77	21.33	21.27	21.82	22.38	20.35	20.91	20.86	21.40	21.96
12H	4H	19.62	20.38	20.10	20.86	21.33	19.26	20.02	19.74	20.49	20.96
	6H	20.35	20.99	20.86	21.49	21.98	19.98	20.62	20.49	21.12	21.61
	8H	20.67	21.23	21.17	21.72	22.28	20.29	20.85	20.80	21.34	21.90