

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: P929861

Luminaire Tested: DFN2DS-4P3F0-030DS835-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P929861
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-4P3F0-030DS835-FLL
Description: 3 foot, 90deg - 4way Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

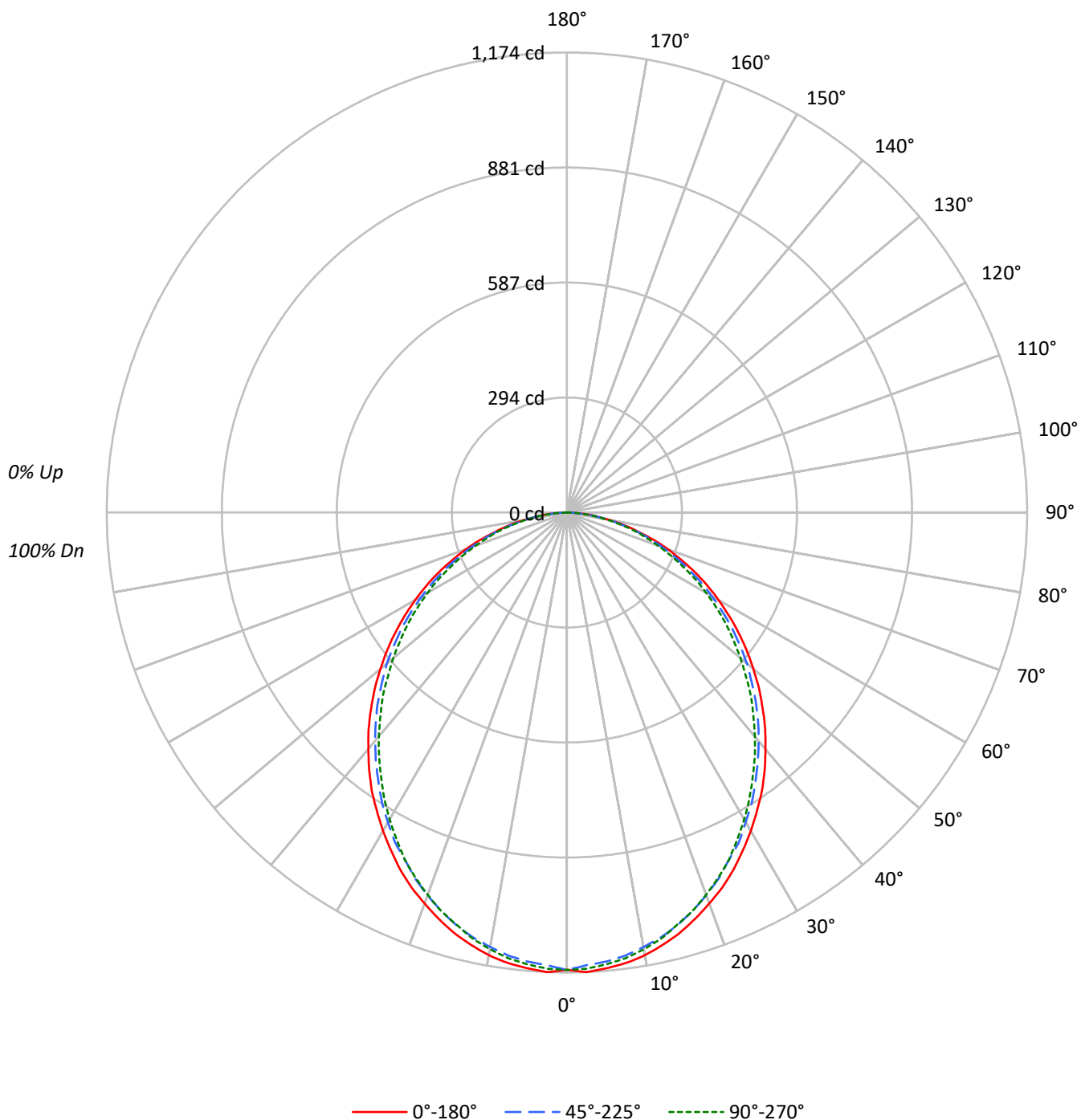
Lumens per Lamp: N/A
Luminaire Lumens: 2970.0 lumens
Efficiency: N/A
Efficacy: 102.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.07' x L: 3.07' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P929861

CATALOG NUMBER: DFN2DS-4P3F0-030DS835-FLL

Luminous Intensity Polar Plot



TEST NUMBER: P929861

CATALOG NUMBER: DFN2DS-4P3F0-030DS835-FLL

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°	1330	1330	1330
5°	1335	1316	1324
10°	1328	1303	1309
15°	1311	1286	1285
20°	1288	1261	1259
25°	1265	1229	1229
30°	1235	1201	1190
35°	1207	1167	1149
40°	1172	1132	1111
45°	1138	1098	1071
50°	1100	1063	1025
55°	1062	1021	984
60°	1018	972	937
65°	972	923	881
70°	913	864	823
75°	830	796	776
80°	737	714	678
85°	601	573	514

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1138 cd/sqm

TEST NUMBER: P929861

CATALOG NUMBER: DFN2DS-4P3F0-030DS835-FLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	109.9	3.7
10°-20°	309.1	10.4
20°-30°	454.3	15.3
30°-40°	527.6	17.8
40°-50°	527.0	17.7
50°-60°	459.5	15.5
60°-70°	339.7	11.4
70°-80°	192.2	6.5
80°-90°	50.7	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°	873.3	29.4
0°-40°	1400.9	47.2
0°-60°	2387.4	80.4
0°-90°	2970.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2970.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1167	1167	1167	1167	1167	
5°	1167	1163	1150	1160	1157	111
15°	1111	1105	1090	1094	1089	313
25°	1006	997	978	980	978	463
35°	868	856	838	832	826	542
45°	706	698	681	669	664	545
55°	534	528	514	501	495	478
65°	360	354	342	332	327	356
75°	188	186	181	174	176	201
85°	46	45	44	40	39	54
90°	0	0	0	0	0	

TEST NUMBER: P929861

CATALOG NUMBER: DFN2DS-4P3F0-030DS835-FLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1167.3	1167.3	1167.3	1167.3	1167.3
2.5°	1174.1	1168.5	1156.1	1167.3	1165.2
5°	1167.3	1162.9	1150.5	1159.5	1157.3
7.5°	1159.5	1152.8	1140.4	1149.5	1147.2
10°	1147.2	1139.3	1125.9	1134.8	1131.5
12.5°	1130.3	1123.6	1110.2	1115.7	1113.5
15°	1111.2	1104.6	1089.9	1094.4	1088.8
17.5°	1087.6	1081.0	1066.3	1071.9	1066.3
20°	1061.8	1055.1	1039.4	1042.7	1038.3
22.5°	1036.1	1026.0	1011.3	1011.3	1009.0
25°	1005.7	996.8	977.7	979.9	977.7
27.5°	972.0	964.1	949.6	946.3	940.7
30°	938.4	929.4	912.6	909.2	904.7
32.5°	902.5	895.8	877.8	871.0	866.5
35°	867.7	856.5	838.5	831.7	826.1
37.5°	828.4	818.3	800.3	792.4	786.8
40°	788.0	779.0	761.0	751.0	746.5
42.5°	748.7	739.7	721.8	710.5	703.8
45°	706.1	698.2	681.3	669.0	664.5
47.5°	664.5	656.7	638.7	626.3	619.6
50°	620.7	615.1	599.4	583.7	578.1
52.5°	578.1	570.2	555.7	543.3	535.4
55°	534.4	527.6	514.1	500.7	495.1
57.5°	490.5	484.9	470.3	456.8	452.3
60°	446.7	442.3	426.6	414.2	410.9
62.5°	404.1	396.2	385.0	373.8	369.3
65°	360.4	353.6	342.4	332.3	326.7
67.5°	315.5	309.8	299.7	291.9	287.4
70°	273.9	269.4	259.3	251.4	247.0
72.5°	231.3	226.7	221.1	213.3	210.0
75°	188.5	186.4	180.7	174.0	176.3
77.5°	150.4	145.9	143.6	140.3	137.0
80°	112.3	111.1	108.8	105.5	103.3
82.5°	76.3	76.3	75.3	70.7	70.7
85°	46.0	44.9	43.8	40.4	39.3
87.5°	20.2	18.0	15.7	12.4	11.2
90°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P929861

CATALOG NUMBER: DFN2DS-4P3F0-030DS835-FLL

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	12.27	13.88	12.64	14.20	14.51	11.83	13.44	12.19	13.75	14.07
	3H	14.02	15.48	14.40	15.81	16.17	13.53	14.99	13.91	15.31	15.67
	4H	14.67	16.04	15.07	16.39	16.76	14.18	15.54	14.57	15.89	16.27
	6H	15.14	16.41	15.55	16.77	17.16	14.64	15.91	15.05	16.27	16.66
	8H	15.28	16.49	15.71	16.88	17.28	14.78	15.99	15.20	16.38	16.78
	12H	15.37	16.53	15.80	16.91	17.34	14.86	16.02	15.29	16.40	16.83
4H	2H	12.83	14.20	13.23	14.55	14.93	12.48	13.85	12.88	14.20	14.57
	3H	14.81	15.96	15.22	16.35	16.75	14.40	15.55	14.81	15.95	16.35
	4H	15.59	16.62	16.02	17.04	17.47	15.16	16.20	15.59	16.61	17.05
	6H	16.18	17.09	16.64	17.53	17.98	15.75	16.66	16.20	17.10	17.55
	8H	16.37	17.22	16.83	17.66	18.13	15.93	16.78	16.39	17.22	17.69
	12H	16.50	17.26	16.98	17.74	18.21	16.05	16.81	16.53	17.29	17.76
8H	4H	15.86	16.71	16.32	17.15	17.61	15.49	16.33	15.95	16.77	17.24
	6H	16.57	17.28	17.07	17.77	18.24	16.19	16.90	16.69	17.38	17.86
	8H	16.83	17.46	17.34	17.97	18.46	16.44	17.07	16.95	17.58	18.06
	12H	17.03	17.59	17.54	18.08	18.64	16.62	17.18	17.13	17.67	18.23
12H	4H	15.89	16.65	16.37	17.12	17.59	15.52	16.28	16.00	16.76	17.23
	6H	16.62	17.25	17.13	17.76	18.24	16.25	16.88	16.76	17.39	17.88
	8H	16.93	17.49	17.44	17.98	18.54	16.56	17.11	17.06	17.60	18.16