

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: P929835

Luminaire Tested: DFN2DS-4P2F0-040DS935-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P929835
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-4P2F0-040DS935-FLL
Description: 2 foot, 90deg - 4way Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

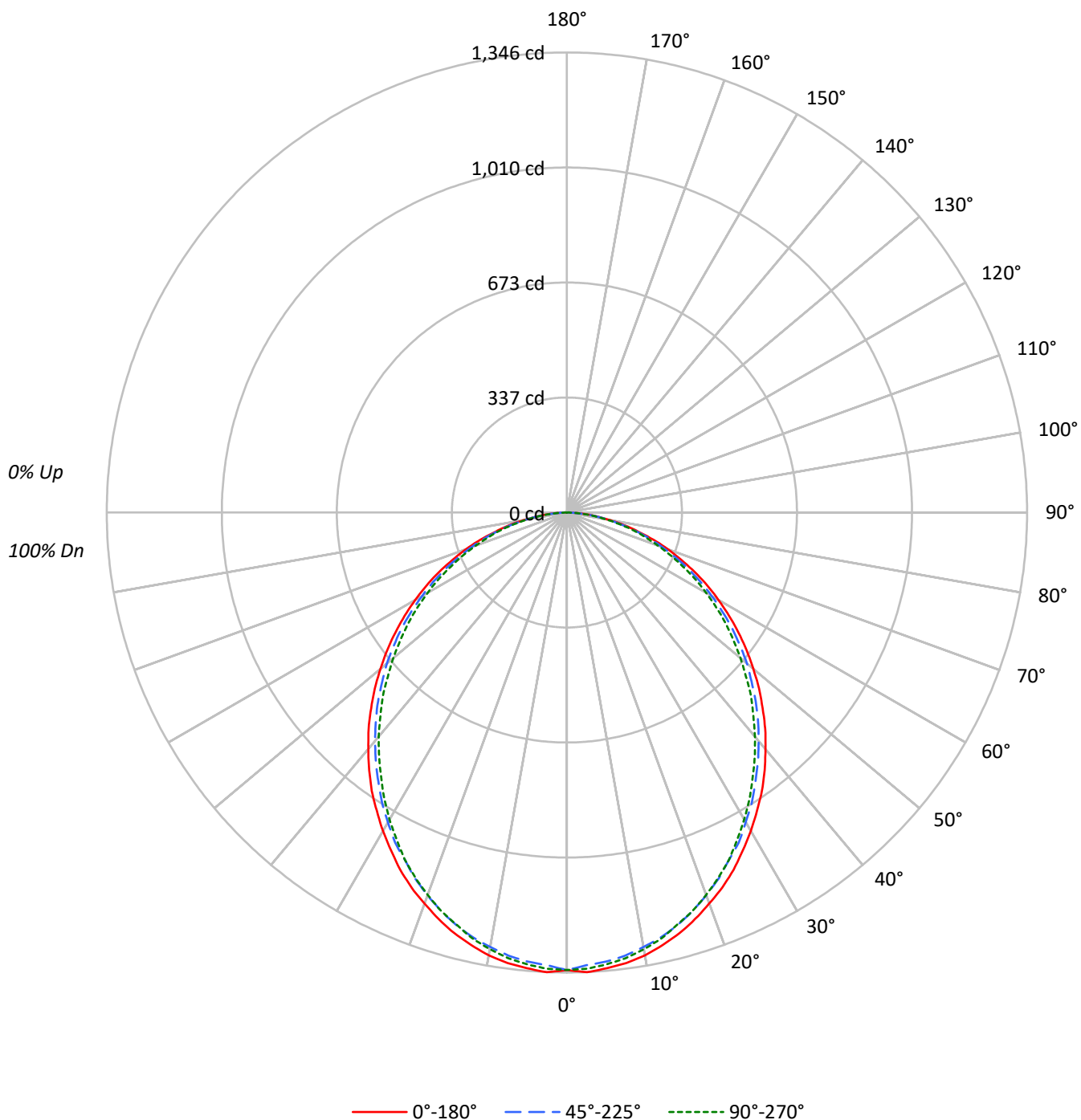
Lumens per Lamp: N/A
Luminaire Lumens: 3405.6 lumens
Efficiency: N/A
Efficacy: 79.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 2.07' x L: 2.07' x H: 0')
CIE Type: Direct

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

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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°	3352	3352	3352
5°	3364	3316	3336
10°	3345	3283	3299
15°	3303	3240	3237
20°	3244	3176	3173
25°	3186	3097	3097
30°	3111	3026	2999
35°	3041	2939	2896
40°	2954	2852	2798
45°	2867	2766	2698
50°	2772	2677	2582
55°	2675	2574	2478
60°	2565	2450	2359
65°	2448	2326	2219
70°	2300	2177	2073
75°	2092	2005	1955
80°	1856	1800	1707
85°	1514	1442	1296

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2867 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	126.0	3.7
10°-20°	354.5	10.4
20°-30°	520.9	15.3
30°-40°	605.0	17.8
40°-50°	604.3	17.7
50°-60°	526.9	15.5
60°-70°	389.5	11.4
70°-80°	220.4	6.5
80°-90°	58.2	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°	1001.4	29.4
0°-40°	1606.4	47.2
0°-60°	2737.6	80.4
0°-90°	3405.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3405.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1338	1338	1338	1338	1338	
5°	1338	1333	1319	1330	1327	127
15°	1274	1266	1250	1255	1248	359
25°	1153	1143	1121	1124	1121	531
35°	995	982	962	954	947	621
45°	810	801	781	767	762	625
55°	613	605	590	574	568	548
65°	413	405	393	381	375	409
75°	216	214	207	200	202	231
85°	53	52	50	46	45	62
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1338.5	1338.5	1338.5	1338.5	1338.5
2.5°	1346.3	1339.9	1325.7	1338.5	1336.1
5°	1338.5	1333.4	1319.2	1329.5	1327.1
7.5°	1329.5	1321.8	1307.6	1318.0	1315.5
10°	1315.5	1306.4	1291.0	1301.3	1297.4
12.5°	1296.0	1288.4	1273.0	1279.4	1276.8
15°	1274.2	1266.5	1249.8	1254.9	1248.5
17.5°	1247.2	1239.5	1222.7	1229.1	1222.7
20°	1217.5	1209.8	1191.9	1195.7	1190.7
22.5°	1188.0	1176.4	1159.6	1159.6	1157.0
25°	1153.2	1142.9	1121.1	1123.6	1121.1
27.5°	1114.6	1105.5	1088.9	1085.1	1078.7
30°	1076.0	1065.7	1046.4	1042.6	1037.4
32.5°	1034.8	1027.2	1006.5	998.8	993.6
35°	994.9	982.1	961.5	953.7	947.3
37.5°	949.9	938.3	917.6	908.7	902.2
40°	903.6	893.2	872.6	861.1	856.0
42.5°	858.5	848.1	827.7	814.7	807.0
45°	809.6	800.7	781.2	767.2	762.0
47.5°	762.0	752.9	732.4	718.2	710.5
50°	711.7	705.3	687.3	669.3	662.8
52.5°	662.8	653.9	637.2	623.0	614.0
55°	612.8	604.9	589.5	574.0	567.7
57.5°	562.4	556.1	539.2	523.8	518.7
60°	512.2	507.1	489.2	475.0	471.1
62.5°	463.4	454.3	441.5	428.6	423.5
65°	413.2	405.4	392.6	381.0	374.6
67.5°	361.7	355.2	343.7	334.7	329.6
70°	314.1	308.9	297.3	288.3	283.2
72.5°	265.2	260.0	253.6	244.6	240.7
75°	216.2	213.7	207.2	199.5	202.1
77.5°	172.4	167.3	164.7	160.8	157.0
80°	128.7	127.4	124.8	121.0	118.4
82.5°	87.5	87.5	86.3	81.1	81.1
85°	52.7	51.5	50.2	46.3	45.1
87.5°	23.2	20.6	18.1	14.2	12.8
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	15.48	17.10	15.85	17.41	17.72	15.04	16.65	15.41	16.96	17.28
	3H	17.23	18.69	17.61	19.02	19.38	16.74	18.20	17.12	18.52	18.89
	4H	17.88	19.25	18.28	19.60	19.97	17.39	18.76	17.78	19.10	19.48
	6H	18.35	19.62	18.76	19.98	20.37	17.85	19.12	18.26	19.48	19.87
	8H	18.49	19.70	18.92	20.09	20.49	17.99	19.20	18.41	19.59	19.99
	12H	18.58	19.74	19.01	20.12	20.55	18.07	19.23	18.50	19.61	20.04
4H	2H	16.05	17.41	16.44	17.76	18.14	15.69	17.06	16.09	17.41	17.79
	3H	18.02	19.17	18.43	19.56	19.96	17.61	18.76	18.02	19.16	19.56
	4H	18.80	19.83	19.23	20.25	20.68	18.37	19.41	18.80	19.82	20.26
	6H	19.39	20.30	19.85	20.74	21.19	18.96	19.87	19.42	20.31	20.76
	8H	19.58	20.43	20.04	20.87	21.34	19.14	19.99	19.61	20.43	20.90
	12H	19.71	20.47	20.19	20.95	21.42	19.26	20.02	19.74	20.50	20.97
8H	4H	19.07	19.92	19.53	20.36	20.82	18.70	19.54	19.16	19.98	20.45
	6H	19.78	20.49	20.28	20.98	21.45	19.40	20.11	19.90	20.59	21.07
	8H	20.04	20.67	20.55	21.18	21.67	19.65	20.28	20.16	20.79	21.28
	12H	20.24	20.80	20.75	21.29	21.85	19.83	20.39	20.34	20.88	21.44
12H	4H	19.10	19.86	19.58	20.33	20.80	18.73	19.49	19.21	19.97	20.44
	6H	19.83	20.46	20.34	20.97	21.45	19.46	20.09	19.97	20.60	21.09
	8H	20.14	20.70	20.65	21.19	21.75	19.77	20.32	20.27	20.81	21.38