

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: P929889

Luminaire Tested: DFN2DS-4P3F0-040DS935-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P929889
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-4P3F0-040DS935-FLL
Description: 3 foot, 90deg - 4way Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

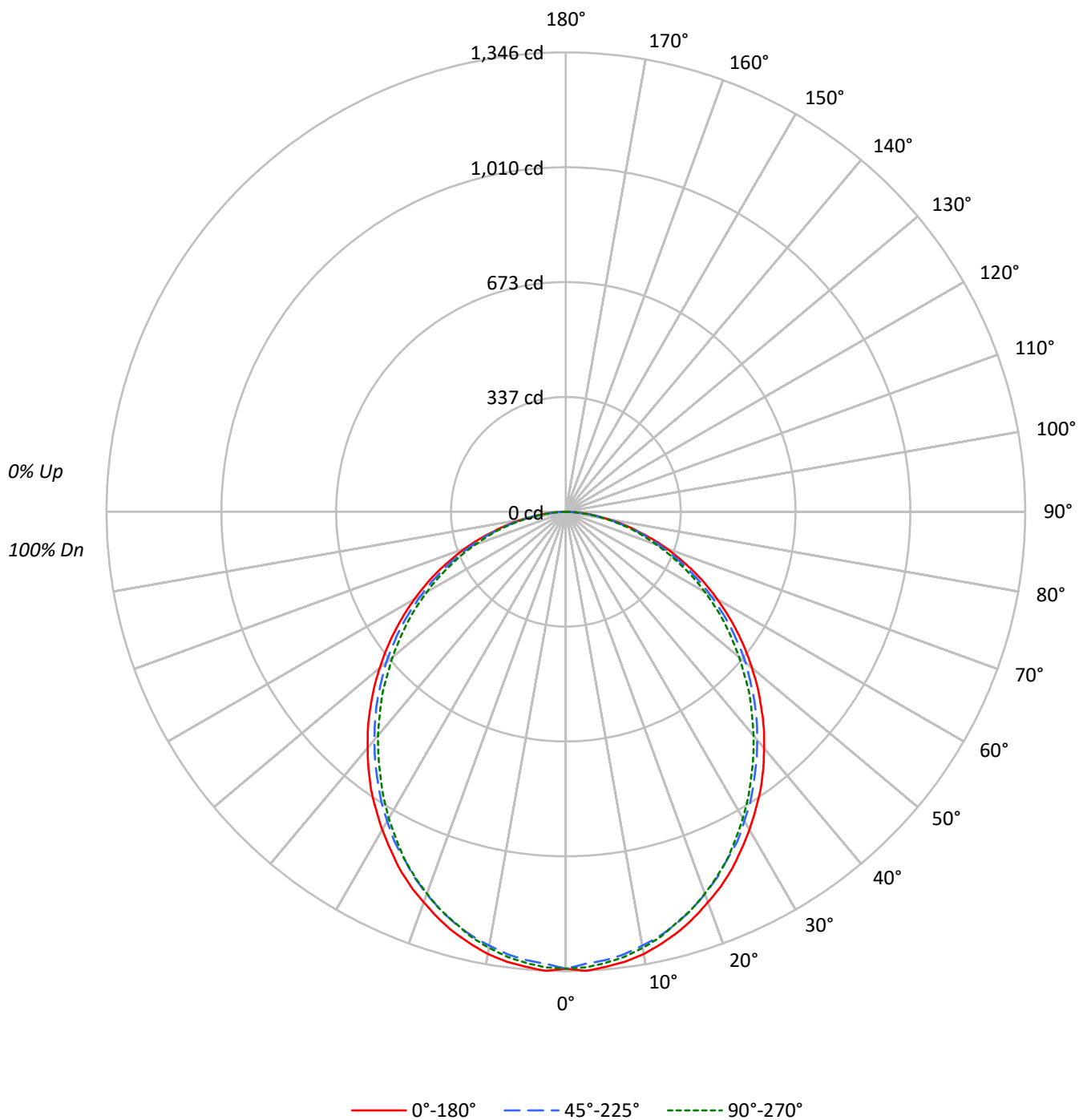
Lumens per Lamp: N/A
Luminaire Lumens: 3405.6 lumens
Efficiency: N/A
Efficacy: 83.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.07' x L: 3.07' x H: 0')
CIE Type: Direct

Input Watts (W): 40.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9789
Total Harmonic Distortion (THDi): 0.074
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°	1525	1525	1525
5°	1531	1509	1518
10°	1522	1494	1501
15°	1503	1475	1473
20°	1477	1445	1444
25°	1450	1410	1410
30°	1416	1377	1365
35°	1384	1338	1318
40°	1344	1298	1273
45°	1305	1259	1228
50°	1262	1219	1175
55°	1218	1171	1128
60°	1167	1115	1074
65°	1114	1059	1010
70°	1047	991	944
75°	952	912	890
80°	845	819	777
85°	689	656	590

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
Vertical Angle: 45°
Luminance: 1305 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	12.75	14.36	13.11	14.67	14.99	12.31	13.92	12.67	14.23	14.54
	3H	14.50	15.95	14.88	16.28	16.64	14.01	15.46	14.39	15.79	16.15
	4H	15.15	16.52	15.54	16.86	17.24	14.65	16.02	15.05	16.37	16.74
	6H	15.61	16.88	16.03	17.25	17.64	15.11	16.38	15.52	16.75	17.14
	8H	15.76	16.97	16.18	17.36	17.76	15.26	16.47	15.68	16.85	17.25
	12H	15.85	17.01	16.28	17.39	17.82	15.34	16.50	15.77	16.88	17.31
4H	2H	13.31	14.68	13.71	15.03	15.40	12.96	14.33	13.36	14.67	15.05
	3H	15.29	16.43	15.69	16.83	17.23	14.88	16.02	15.29	16.42	16.82
	4H	16.06	17.10	16.49	17.51	17.95	15.64	16.67	16.07	17.09	17.52
	6H	16.66	17.56	17.11	18.00	18.46	16.23	17.13	16.68	17.57	18.03
	8H	16.85	17.69	17.31	18.14	18.60	16.41	17.26	16.87	17.70	18.16
	12H	16.98	17.74	17.46	18.21	18.68	16.53	17.29	17.01	17.76	18.23
8H	4H	16.34	17.18	16.80	17.62	18.09	15.96	16.81	16.42	17.25	17.72
	6H	17.05	17.75	17.54	18.24	18.72	16.67	17.37	17.16	17.86	18.33
	8H	17.31	17.94	17.82	18.45	18.93	16.92	17.55	17.43	18.05	18.54
	12H	17.51	18.07	18.02	18.56	19.12	17.10	17.65	17.60	18.14	18.70
12H	4H	16.36	17.12	16.84	17.60	18.07	16.00	16.76	16.48	17.23	17.70
	6H	17.09	17.73	17.60	18.23	18.72	16.73	17.36	17.24	17.86	18.35
	8H	17.41	17.97	17.92	18.46	19.02	17.03	17.59	17.54	18.08	18.64