

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: P930645

Luminaire Tested: DFN2DS-PN4F0-040DS935-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930645
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-PN4F0-040DS935-FLL
Description: 4 foot, Pentagon Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

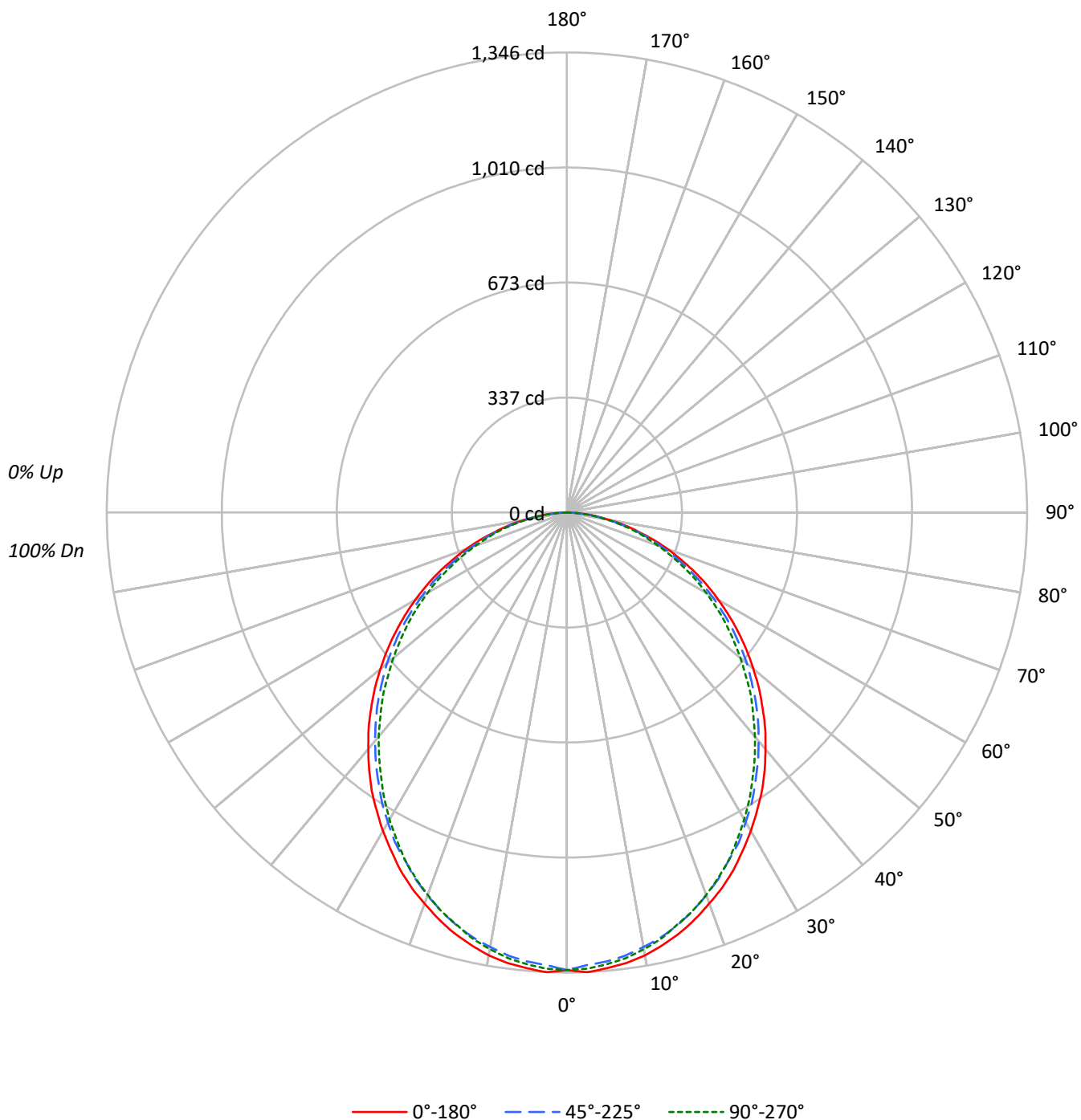
Lumens per Lamp: N/A
Luminaire Lumens: 3405.6 lumens
Efficiency: N/A
Efficacy: 89.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.94' x L: 3.74' x H: 0')
CIE Type: Direct

Input Watts (W): 38.1
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9968
Total Harmonic Distortion (THDi): 0.064
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°	977	977	977
5°	981	967	972
10°	975	957	962
15°	963	944	944
20°	946	926	925
25°	929	903	903
30°	907	882	874
35°	887	857	844
40°	861	831	816
45°	836	806	787
50°	808	781	753
55°	780	750	722
60°	748	714	688
65°	714	678	647
70°	670	635	604
75°	610	584	570
80°	541	525	498
85°	441	420	378

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 836 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	11.20	12.81	11.57	13.13	13.44	10.76	12.37	11.12	12.68	13.00
	3H	12.95	14.41	13.33	14.73	15.09	12.46	13.92	12.84	14.24	14.60
	4H	13.60	14.97	14.00	15.32	15.69	13.10	14.47	13.50	14.82	15.20
	6H	14.07	15.34	14.48	15.70	16.09	13.57	14.83	13.98	15.20	15.59
	8H	14.21	15.42	14.63	15.81	16.21	13.71	14.92	14.13	15.31	15.71
	12H	14.30	15.46	14.73	15.84	16.27	13.79	14.95	14.22	15.33	15.76
4H	2H	11.76	13.13	12.16	13.48	13.86	11.41	12.78	11.81	13.13	13.50
	3H	13.74	14.88	14.15	15.28	15.68	13.33	14.48	13.74	14.87	15.27
	4H	14.51	15.55	14.95	15.96	16.40	14.09	15.13	14.52	15.54	15.98
	6H	15.11	16.02	15.56	16.46	16.91	14.68	15.58	15.13	16.02	16.48
	8H	15.30	16.15	15.76	16.59	17.05	14.86	15.71	15.32	16.15	16.62
	12H	15.43	16.19	15.91	16.67	17.14	14.98	15.74	15.46	16.22	16.68
8H	4H	14.79	15.63	15.25	16.08	16.54	14.41	15.26	14.87	15.70	16.17
	6H	15.50	16.20	16.00	16.69	17.17	15.12	15.82	15.61	16.31	16.79
	8H	15.76	16.39	16.27	16.90	17.38	15.37	16.00	15.88	16.51	16.99
	12H	15.96	16.52	16.47	17.01	17.57	15.55	16.11	16.05	16.60	17.16
12H	4H	14.81	15.57	15.29	16.05	16.52	14.45	15.21	14.93	15.68	16.15
	6H	15.55	16.18	16.06	16.69	17.17	15.18	15.81	15.69	16.32	16.80
	8H	15.86	16.42	16.37	16.91	17.47	15.48	16.04	15.99	16.53	17.09